

# **NYSE AMEX:TGEN**

Investor Presentation
June 2025









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events. As a result, actual results, performance, or achievements may differ materially from those expressed or implied by these forward-looking statements. These statements may be identified by the use of words
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**Tecogen Overview** 



**Natural Gas Driven Cooling** 



**On-Site Cogeneration** 



Service

Company Financial





# Data Center Cooling Opportunity

# **Current Problem With A Typical AI Data Center**



# **Illustrative Power Consumption Within Al Data Cente**



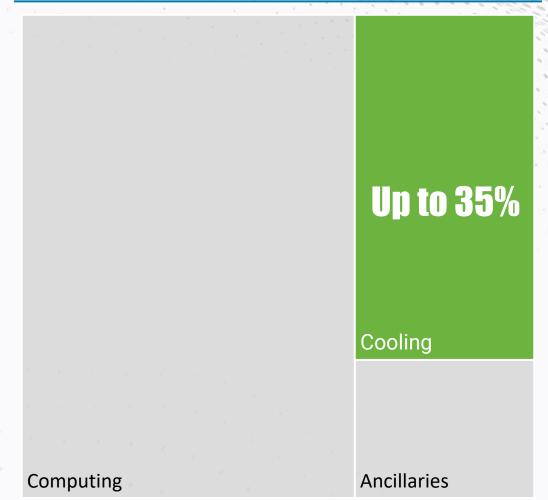
Al Data centers need significant amounts of power for computing



Data Center Cooling systems tie up significant amounts of the available power as they are designed for peak cooling conditions (120F outside and full Al load)



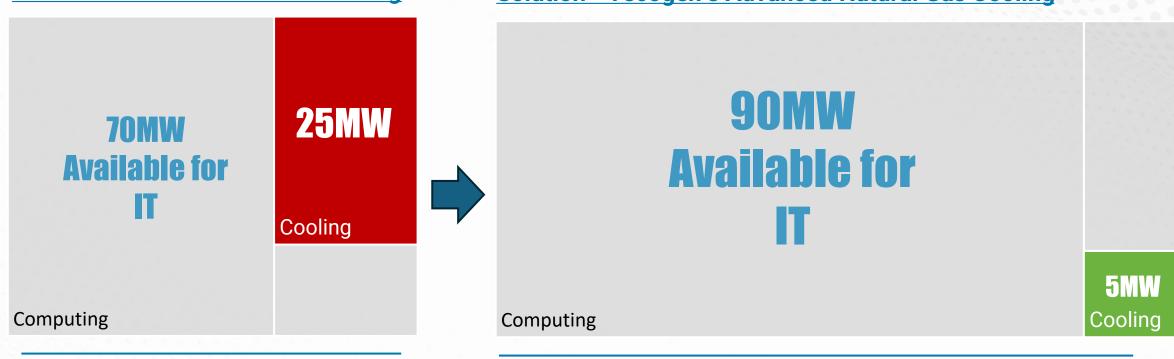
Electrical Power allocated to cooling cannot be used for computing as the cooling system may need to be used at any time, limiting the revenue and growth potential of a data center

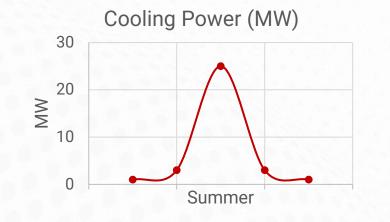


# **Current Problem With A Typical AI Data Center**

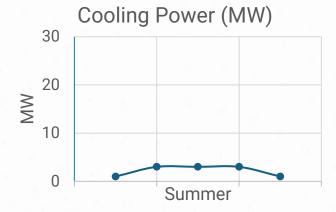
# **Current Problem - Electrical Cooling**

# Solution - Tecogen's Advanced Natural Gas Cooling









# **Tecogen's Solution**

**Advanced Natural Gas Cooling** 





# **Increases Available Power for Computing**

 Switching from electricity-driven to natural gasdriven chillers will increase power available for computing

# Fast and Easy Installation for existing and new data centers

- Like-for-like replacement of electric chillers with natural gas chillers
- Modular for easy future expansion

# **Improved Emissions and Water Usage**

- Ultra clean emissions for simplified air-permits
- Can minimize water usage with dry coolers

# **Tecogen Chillers Compared To Alternatives**











Than competing gas cooling technologies

**Up to 50% Lower Cost of Operation** 02 Compared to an electric chiller



**Electrical Power Needed** 

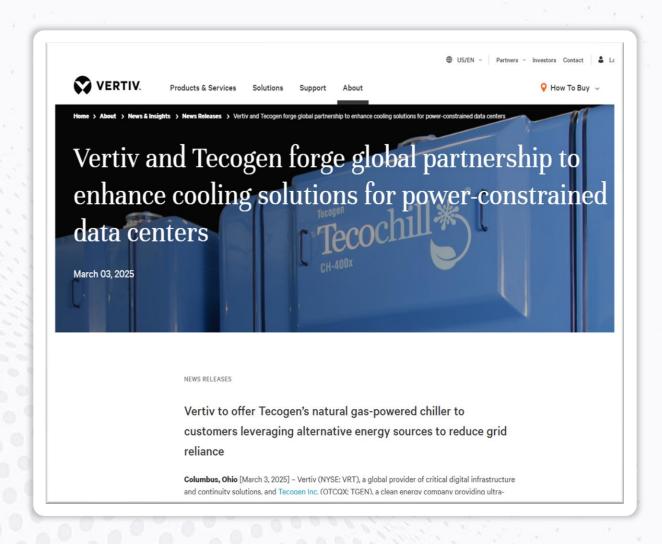
03

Less susceptible to tariffs

Made in the USA

# **Proven Market Traction**





# Signed Global Partnership With Vertiv For Data Center Cooling

- Vertiv is No.1 globally in thermal management for data centers<sup>1</sup>
- Marketing agreement signed Feb 2025
- Product and Service supply agreement in negotiation

## **Data Center Pilot Sites (Power Generation)**

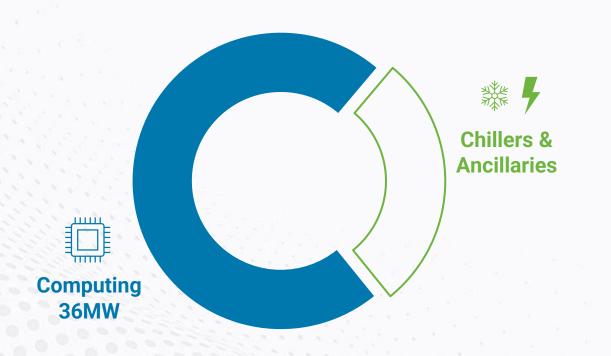
- Enterprise data center in Manhattan (Installed 2023/4)
- Cloudsmart Data Center in CT (Expected Install 2025)

**Expect multiple new data center projects in H2 2025** 

# **Financial Impact Of Data Center Wins For Tecogen**



# Illustrative Example of Small Al Data Center<sup>1</sup>



# **Financial Impact to Tecogen**

Revenue Impact



11,000 tons of chillers => \$13M in Incremental Revenue

Profitability Impact

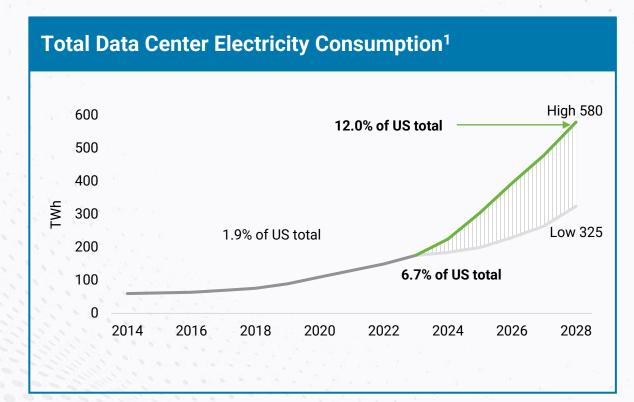


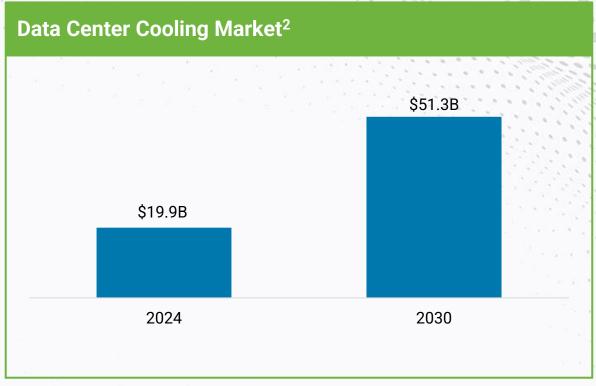
- 2024 Gross Profit Margin: >43%
- Current Adjusted EBITDA breakeven point approximately \$30M
- A single small/medium data center cooling order will drive Tecogen to profitability

A SINGLE SMALL/MEDIUM DATA CENTER COOLING ORDER WILL DRIVE TECOGEN TO PROFITABILITY

# **Favorable market trends**









Electricity consumption for data centers are forecast to increase to 6.7% - 12% of the total US electricity consumption making available power a key limiting factor in data center growth.



As Al chips become more powerful, they will need more cooling. The data center cooling market is forecast to more than double by 2030.

<sup>1</sup> Berkeley Lab Analysis 2024 United States Data Center Energy Usage Report 2 Research and Markets Data Center Cooling - Global Strategic Business Report

# **Investment Highlights**



01

# **Significant Revenue Growth Opportunity**

We believe a single small to medium data center win can double Tecogen's product revenue

02

# **Collaboration with Vertiv (VRT)**

Vertiv is marketing Tecogen's gas-powered chillers as a part of its data center offering worldwide

03

# **Significant Industry Tailwinds**

Well-Positioned to address the mega trends of data center power demand, and electrical capacity constraints of other large power users 04

### Made in the USA

The company manufactures in Billerica, MA and has a predominantly US based supply chain

05

# **Poised for Profitability**

Tecogen has 43% gross margin and its current EBITDA breakeven is \$30 million of revenue. The company has \$18 million of recurring services and energy revenue and \$12 million of product backlog

06

### **Ultra-low Emissions**

Underpinning Tecogen's natural gas solutions for chilling and on-site power generation are its patented Ultera technology that allows ultra-low NOX and CO2 emissions for easy air-permits





# **Company Overview**

# **Three Product Offerings**







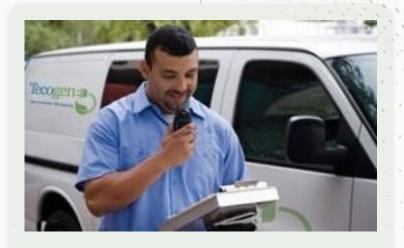
# Natural gas engine driven cooling

Increase available power by switching electrical cooling to high efficiency natural gas chillers



# **On-site power generation**

Generate power on-site using modular, easy to deploy microgrid systems



### **Service**

24/7 factory service because reliable equipment operation requires dependable maintenance

# **At A Glance**



### **Overview**

Headquartered	Billerica, MA
Founded	2000
Product Categories	Natural Gas-powered Chillers, On-site Power Generation, Service
CY 2024 Revenue	\$22.6 million
CY 2024 Gross Margin	43.8%

# **Blue Chip Customers**









# **Key Highlights**



### Made in USA

~26,000 ft<sup>2</sup>
New 2024 factory with
>2x capacity for
revenue growth



# Proven Proprietary Technologies

3,200 Units shipped 72+ Million Run Hours



# Key Global Partnerships

Marketing partnership with Vertiv - #1 in thermal management for data centers

# Tecogen Headquarters, Billerica, MA





**Cogeneration Production Line** 



**Water Cooled Chiller Line** 



**Hybrid Chiller Line** 

# **Tecogen Chillers**







### **Water Cooled Chillers**

- Water cooled chillers from 150 tons to 500 tons
- Frees up electrical capacity and has up to 50% lower operating costs compared to a similar sized electric chiller

### **Hybrid Air-Cooled Chillers**

- Two power sources for extra resiliency, such as during grid outages
- Patented Hybrid Drive Technology to seamlessly operate on natural gas, or electricity or both for energy savings and resiliency

# **Applications**

- Healthcare
- Ice Rinks & Low Temperature
- Data Centers
- Industrial
- Indoor Growing
- Breweries

# **Tecogen Cogeneration Systems**



# **Tecopower 75kW**



### InVerde e+ 125kW



### Tecopower

- On-site Power generation and hot water
- Energy efficiency savings are the primary driver

### **InVerde**

- Suited for sites with concurrent and consistent electric/heating demand;
   operates off-grid when utility power is not available
- Resiliency and energy savings are primary drivers
- Runs quiet for indoors; clean emissions for easy air-permitting

# **Applications**

- Multi-family buildings
- Ice Rinks & Low Temperature
- Industrial
- Indoor Growing
- Healthcare

# **Tecogen Cogeneration Compared To Alternatives**



Quiet, Compact, Easy to Install





Combined Efficiency & ROI

# Easy to Install in Urban Environments

Designed to meet space, air-permitting and noise constraints of urban environments

# **Modular Building Blocks**

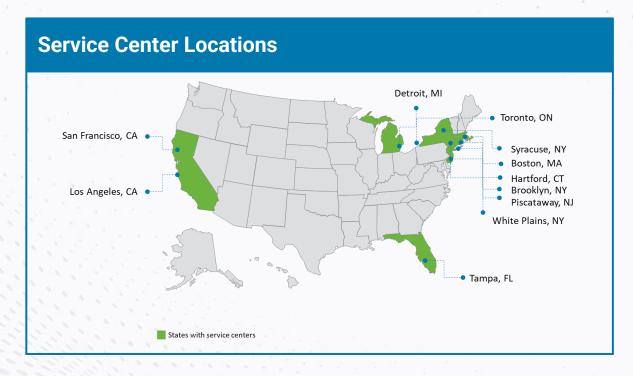
01

02

Covers wide range of building loads; additional units can be added for easy expansion

# **Service Center Business**







- 11 service centers and 55+ Tecogen service employees
- Service of both on-site power generation and chiller equipment nationwide
- 24/7 monitoring and factory service for critical applications including ice rinks, indoor agriculture and healthcare

- Products are typically sold with factory service contracts
- Each unit we place in service increases long-term recurring revenue
- Services gross margin target of 50%+

# Conclusion



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# **APPENDIX**

# **Leadership Team**





Abinand Rangesh CEO/CFO & Director



Robert Panora
President & COO

# **Members of Management**



ROGER DESCHENES
CAO



JACK WHITING
GENERAL COUNSEL

# **Board Members**

JOHN
HATSOPOULOS
LEAD DIRECTOR

EARL R LEWIS III
DIRECTOR

ANGELINA
GALITEVA
CHAIRPERSON

SUSAN HIRSCH
DIRECTOR

AHMED GHONIEM
DIRECTOR

JOHN ALBERTINE
DIRECTOR

# **Non-Executive Board Members**



### **John Hatsopoulos**

### **Lead Director**

Mr. Hatsopoulos is Lead Director of Tecogen. He has been a member of the company's board of directors since its founding in 2000, and was Tecogen's CEO until he retired in 2018, as well as CEO and a Director of American DG Energy from its inception in 2001 until the company merged with Tecogen in 2017. Mr. Hatsopoulos was also Chairman of EuroSite Power, a former affiliate of the Company, from 2009 until 2016. Mr. Hatsopoulos is a cofounder of Thermo Electron Corporation (now Thermo Fisher Scientific) and was formerly President and Vice Chairman of its board of directors.

### **Angelina Galiteva**

### Chairperson

Ms. Galiteva has been Chairperson of Tecogen's board of directors since 2005. Since 2003 she has been Chairperson of the World Council for Renewable Energy, which focuses on the development of legislative and policy relating to renewable energy technologies. Since 2004 she has been a strategic consultant with Renewable Energy Policy and Strategy Consulting, and since 2006, a principal at New Energy Options, Inc.., focusing on sustainable energy solutions. Ms. Galiteva founded and since 2008 has been Chairperson of the Renewables 100 Policy Institute, a non-profit entity dedicated to global advancements of renewable energy solutions, and since 2011 she has served on the Board of Governors of the California Independent System Operator (CA ISO), providing direction and oversight for the CA ISO which operates the

California electricity grid.

### **Ahmed ghoniem**

### Director

Dr. Ghoniem has been a member of the Company's board of directors since 2008. Dr. Ghoniem is the Ronald C. Crane Professor of Mechanical Engineering at MIT. He is also the Director of the Center for 21st Century Energy, and the head of Energy Science and Engineering at MIT, where he plays a leadership role in many energyrelated activities, initiatives and programs. Dr. Ghoniem joined MIT as an Assistant Professor in 1983, and he is an associate fellow of the American Institute of Aeronautics Astronautics and a Fellow of the American Society of Mechanical Engineers.

### **Earl R lewis III**

### Director

Mr. Lewis has served as Chairman of the Board and CEO and President of FLIR Systems from 2000 through May 2013, and since May 2013 as Chairman of the Board and as a senior consultant. Mr. Lewis also served as Chairman of the Board of Harvard Bio Science from 2013 through June 2018, and as COO of Thermo Instrument Systems in 1996, as President in 1997. and as CEO and President from 1998 to 2000. Mr. Lewis also served as CEO and President of Thermo Optek Corporation from 1994 to 1996, as President of Thermo Jarrell Corporation from 1988 to 1994, as well operations manufacturing roles at Thermo Jarrell Ash and other companies in previous vears.

### Susan Hirsch

### Director

Ms. Hirsch was formerly Managing Director and Portfolio Manager for the TIAA Large Cap Growth Fund. Over the 15 years that she managed the fund, the assets under management grew to more than \$20bn. She is presently on the board of Agenus, a publicly traded biotechnology company, and serves as a Trustee for the Baruch College Fund, and as an advisor for the High Atlas Capital Fund.

### John Albertine

### Director

Dr. Albertine has served on the Board of numerous public companies including Fruit of the Loom, Thermo Electron Corporation (now Thermo Fisher Scientific), American Precision Industries, Intersections Inc, DynaTech Corporation and Kadant inc. He has also served as the Vice Chairman of the Fruit of the Loom Company and has two Commissions under President Reagan. Presently he is the CEO of Albertine Enterprises Inc. a public policy and advocacy firm based in Washington DC. He is also the Managing Partner at JJ&B an investment banking firm.

# Appendix - How does our technology work?



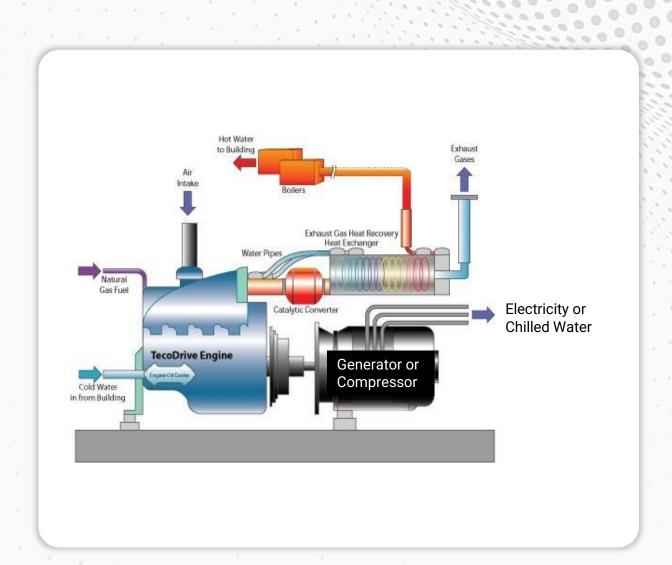
# **Mechanical Combined Heat & Power (CHP)**

- "Engine Driven Chillers"
- Chilled Water + Hot Water (reduces on-site need for electricity)

AND / OR

# **Electrical Combined Heat & Power (CHP)**

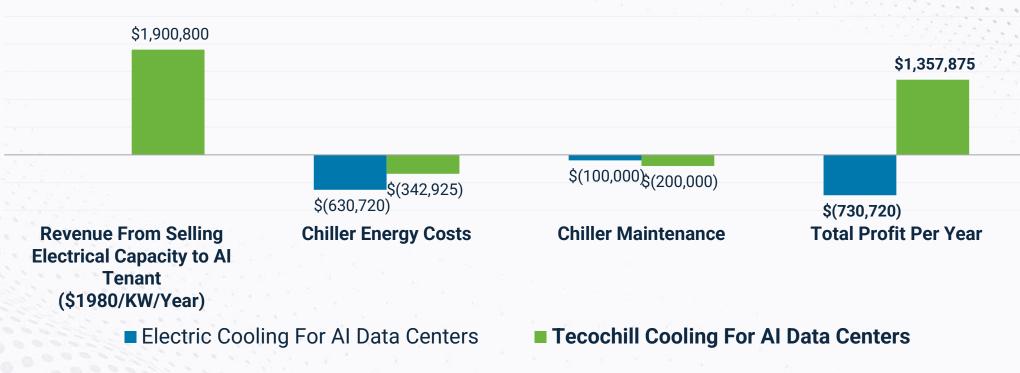
Electricity + Hot Water



# Appendix - Value Proposition to an AI data center







Tecogen's natural gas chillers enable additional electrical capacity to be allocated towards AI/computing, increasing data center profit