

alphaDIRECT MANAGEMENT SERIES

DECEMBER 10, 2019

IN FOCUS: CAPSTONE TURBINE CORP., AND THE RENEWABLE FUTURE

This report focuses on Capstone Turbine Corporation (NASDAQ: CPST) and the renewable future.



Source: www.alphadirectadvisors.com

THE *alphaDIRECT* INSIGHT

A combination of increased corporate focus on ESG (Environmental, Social and Governance) principals, government policies, regulations and better economics are creating strong tailwinds for the broader renewable energy sectors. This plays very well into Capstone's core product offerings, in our view, as they are able to effectively and economically supply power while reducing both NOx and CO2 for its customers. Based on Capstone's analysis, the Company has a global installed power base that has managed to lower CO2 emission to the tune of approximately 350,000 tons in FY19, while simultaneously generating financial savings of approximately \$253 million dollars for its customers. We believe Capstone's energy systems are highly complementary to these broader megatrends and actively support the EPA's Natural Gas STAR program focused on reducing methane emissions within our domestic oil and gas operations while also supporting energy efficiency initiatives through CHP and the Department of Energy's regional CHP Technical Assistance Partnership. It is also noteworthy that Capstone's products can run on biogas or renewable natural gas, which we believe is a growing component in the market and can enable customers to generate power with essentially a net-zero cargo footprint.

CPST Business Snapshot

HQ: Van Nuys, California
NASDAQ Ticker: CPST (NASDAQ)
Full Time Employees: 160
Stock Price: \$3.65*
Market Cap: \$30.04M*
Website: www.capstoneturbine.com
 *As of December 9, 2019



About *alphaDIRECT* Advisors

alphaDIRECT Advisors is an investor intelligence firm that creates and implements digital content and programs to help investors better understand a company's key drivers including industry dynamics, technology, strategy, outlook and risks as well as the impact they could have on the stock price. *alphaDIRECT*'s expertise encompasses a variety of sectors including Clean Transportation, Emerging EnergyTech, Energy Services, Smart Buildings, Solar, Water Value Chain and Industrial. *alphaDIRECT* was founded by Wall Street veteran and research analyst, Shawn Severson, after seeing a significant shift in the investment industry that resulted in less fundamental research conducted on small cap companies and a significant decline in information available to all investors. *alphaDIRECT*'s mission is to bridge that information gap and engage companies and investors in a way that opens information flow and analytical insights.

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Participants

Mr. James “Jim” Crouse Chief Revenue Officer Capstone Turbine Corp.

Mr. Crouse was appointed as Chief Revenue Officer for Capstone Turbine Corporation (a public NASDAQ corporation) on December 1, 2019, where he will provide strategic direction of overall business development with a heavy focus on top-line revenue growth by managing direct sales in developing National Accounts sales and Key Account relationships. Mr. Crouse served as the Company's Executive Vice President of Sales and Marketing from February 2007- November 2019, where he led the company's sales, marketing, and distributor efforts globally. During his tenure, he has led a global distributor development effort that added 65+ distributors in 73 countries and was responsible for bringing several new clean energy and renewable energy microturbine products to the market. Prior to joining Capstone, Mr. Crouse spent 20 years developing distributed generation projects including oil and gas; CHP; biogas; thermal energy storage; solar and wind. In addition to his executive career, Mr. Crouse has served on several advisory boards and board of directors and has testified before Congress on a number of renewable energy and energy efficiency issues on multiple occasions.

Mr. Shawn Severson Founder and CEO alphaDIRECT Advisors

Mr. Severson is the founding partner and CEO of alphaDIRECT Advisors (ADA). He has over 20 years of experience as a senior research analyst covering the technology and cleantech industries. Prior to founding ADA, he led the Energy, Environmental and Industrial Technologies practice at the Blueshirt Group. Mr. Severson was frequently ranked as a top research analyst including one of the Wall Street Journal's "Best on the Street" stock pickers and multiple awards as Starmine's top three stock pickers.

ABOUT CAPSTONE TURBINE CORPORATION

Capstone Turbine Corporation is the world's leading developer and manufacturer of clean-and-green microturbine power generation systems and was first to market with its high-efficiency air bearing turbine technology. Capstone has shipped thousands of microturbines to customers worldwide. These innovative and award-winning systems have logged millions of documented runtime operating hours and are compliant with current and future emissions regulations.

With 88 distributors and Original Equipment Manufacturers (OEMs) worldwide, Capstone's low-emission microturbines serve multiple vertical markets with industry-leading reliability and efficiency. Capstone offers a comprehensive product lineup, providing scalable solutions from 30 kW to 10 MW. Capstone microturbines can also operate on a variety of gaseous or liquid fuels and are the ideal solution for today's distributed generation needs.

Capstone is a member of the U.S. Environmental Protection Agency's Combined Heat and Power Partnership, which is committed to improving the efficiency of the nation's energy infrastructure and reducing emissions of pollutants and greenhouse gases. A DQS-Certified ISO 9001:2015 and ISO 14001:2015 certified company, Capstone is headquartered in the Los Angeles area with sales and/or service centers in the United States, Latin America, Europe, Middle East and Asia.



*James "Jim" Crouse
Chief Revenue Officer*

Shawn Severson: First, I would like to thank you, Jim, for taking the time to speak with alphaDIRECT again today. Last time we spoke, we discussed the microgrid opportunity and drivers and how this sector is impacting Capstone. Today's focus will be on Capstone's renewable future. A couple of weeks ago, there was a climate strike march in New York City that received worldwide attention. Can you start by talking a bit about the imminent change in global energy and the global change in the energy market, and also how people's attitudes are changing?

Jim Crouse: Climate change and renewable energy are in our daily news cycles, and for good reason as energy creation and its environmental impacts are important topics both locally and globally. While the path to a 100% renewable future will be debated for many years to come, it is a fact that governmental policy and regulations are going to continue to drive toward renewable and decarbonization of all energy consumption. This drive is partly the result of rapidly changing attitudes around the world—for example, a recent UK study showed that 84% of people support or strongly support the use of renewable energy to provide electricity, fuel and heat. As a result, governments at all levels, from countries to cities, are setting targets or goals for carbon reduction. This drive now also includes companies large and small, with some adding dedicated employees or teams of employees focused on finding ways to achieve these goals. People are looking for products and services that can cost-effectively help meet these targets and goals in the timelines that have been established.

Shawn Severson: Thank you, Jim. Can you discuss your energy systems and mention some of the main customer benefits and

especially the annual carbon savings and how you manage to reduce carbon emissions?

Jim Crouse: Yes, Capstone has developed very low emission power generators that when used in a combined heat and power (CHP) application, reduce both criteria pollutants like NOx as well as CO2. In FY19 Capstone's calculation for our global installed systems represents a reduction of 350,000 tons of CO2.

Shawn Severson: So clearly, there are green benefits, but does this in any way compromise the economics for the customer?

Jim Crouse: Not at all, in fact in that same period, FY19, we calculated that this global fleet of clean and green Capstone microturbines provided financial savings of \$253 million dollars for our customers, a true win-win.

Shawn Severson: How important is the “green aspect” of your microturbine energy systems and also touch on renewable fuel options?

Jim Crouse: I can say that the majority of our customers are very interested in the environmental aspect of using our advanced technology, but at the end of the day, it has to meet both the financial goals as well as the environmental goal of the customer. The exciting news for us is that a growing number of customers are placing an increased importance on meeting their environmental or sustainability goals allowing for projects with longer paybacks to still be considered. Renewable fuels are expected to become an increasing part of our business, and customers see the value in using renewable natural gas a better alternative in a CHP

application, but many are asking about the availability of renewable fuels and our ability to operate on these fuels. Biogas is the most common renewable fuel today, but we are seeing the introduction of other fuels, and we are developing products that will run on these new fuels such as hydrogen.

Shawn Severson: Are you currently actively working to raise climate change awareness amongst your customers? Can you discuss how you are actively trying to change people's attitudes and actions, and are there any government or regulatory actions you would cite?

Jim Crouse: Customers have different drivers for their purchasing decisions, but we do see more of an environmental or sustainability lens with many of them. When we talk to CHP customers, we discuss the greater efficiency of fuel use compared to the baseline alternative of a separate boiler and grid power. When we talk to standalone power or microgrid customers, we review the resiliency and emissions profile of standard diesel backup generators. Our customers seek out our technology in part because being green saves them money. Higher efficiency means lower fuel costs. Lower emissions means low or no permitting costs and often lower maintenance costs. Doing right by the environment is an additional benefit. Capstone and its distribution network participate in several industry associations that educate and advocate for energy efficiency through CHP, growth of the biogas market, and resilient microgrid development. We have also supported the EPA's Natural Gas STAR program, which seeks to reduce methane emissions with U.S. oil and gas operations, and the Department of Energy's regional CHP Technical Assistance Partnerships (TAPs). These CHP TAPs serve to

analyze U.S. CHP market opportunities, educate state and local policymakers, regulators, and end-users on benefits and applications of CHP and provide technical assistance to end-users to help them consider CHP.

Shawn Severson: Do you see certain markets or geographies being more aware of the current environmental climate and the important changes that need to happen?

Jim Crouse: There is a general global awareness of climate issues, but markets in the U.S., Europe, Australia, and parts of Asia have increased awareness as well as policies and overall economic conditions that allow the installation of technologies to address climate issues. Large corporate customers are also taking a proactive role in helping to install products to improve their environmental footprint on a more global basis, independent of governmental policies. Capstone has identified many of these companies, and we are working to educate them on how we can help them achieve their environmental goals with Capstone CHP systems.

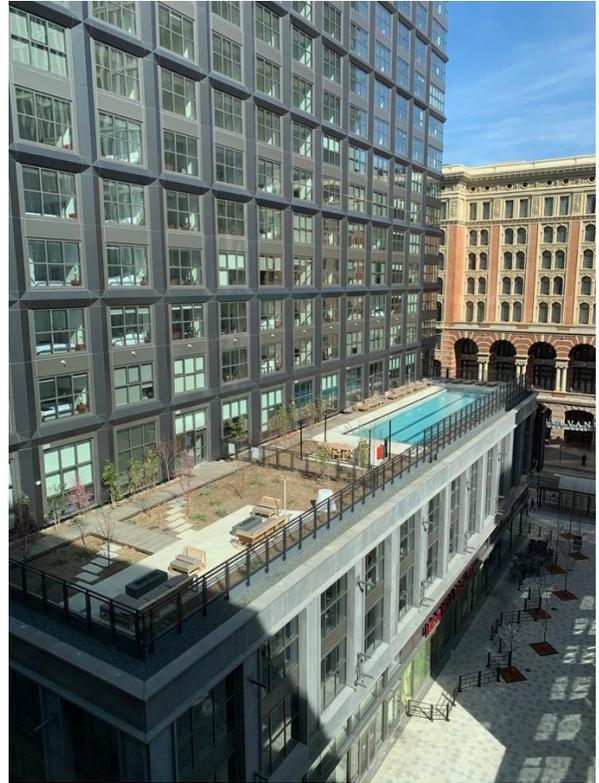
Shawn Severson: One of the most important topics on the climate change agenda is the rise of CO2 emissions worldwide. Can you discuss your energy systems and their low/reduced emissions qualities and also mention the no exhaust aftertreatment features?

Jim Crouse: Yes, but as I mentioned earlier, there are two emission issues, the first is the local issues of criteria pollutants, primarily NOx and particulate matter. These emissions affect the air quality of the local residents of a particular area; our turbines have very clean exhaust emissions and much cleaner

than most alternatives, including utility power, with no exhaust aftertreatment! The second issue, CO2 or Carbon, is the global issue, CHP significantly improves the efficiency of how customers consume energy. The most efficient use of energy is at its point of generation, which is why we are seeing such a huge shift toward distributed generation technologies. The efficiency of our systems installed at a customer location can be higher than 90%; this is versus grid power, and a boiler or burner that on a good day is 60%.

Shawn Severson: Can you talk about the free clean waste heat and provide us with a couple of examples of how the generated thermal energy is used by your customers?

Jim Crouse: Certainly, one of the additional benefits of our technology is that not only is the exhaust clean, but the recoverable thermal energy is all in one place, our exhaust. Other products like internal combustion engines have multiple thermal sources such as jacket water, lube oil, intercooler, or in the case of a fuel cell, almost no thermal energy to be recovered. Our exhaust heat is easy to recover and can be used to make hot water, steam, chilled water, and in some cases, used directly in a process.



The Girard.

For Capstone's latest case study about CHP, please click the link: <http://bit.ly/2DKg4A6>



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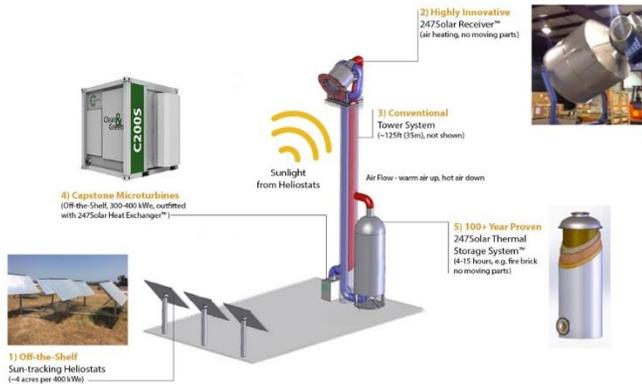
Please click the link for the latest steam application case study - <http://bit.ly/2rlcZE4>



Capstone's C200S application. Source: www.capstoneturbine.com

Shawn Severson: You have talked about the current solutions Capstone can provide, and it sounds very compelling. Is Capstone working on new products that you can talk about?

Jim Crouse: We certainly are, we have several exciting projects that will be 100% renewable. Through one of our new customers, 247 Solar, we are installing a solar-powered microturbine at a test site in Morocco



Capstone's solar-powered microturbine.
Source: www.capstoneturbine.com

This is actually our second project using concentrated solar energy to expand superheated air across our turbine to generate 100% renewable power with our microturbines. Once completed, 247 has a host of additional opportunities, and we see the potential for this to be one of our larger market segments in a few years. Another 100% renewable project is with a German company, B+K, that is using wood waste to generate superheated air and also expanding it across the Capstone microturbine. B+K has been operating a pilot project for more than a year and is moving into commercial sales, with several projects planned in 2020. Two additional areas for renewable power are the use of hydrogen in our turbine as a fuel source. Today we have operated on blended natural gas and hydrogen, and we have a plan to release a commercial 100% hydrogen fuel capable microturbine over the next couple of years. Lastly, but also very exciting is the use of

methanol as a fuel for our turbines. We have been working with a Swiss company for several years, operating our C30 on methanol. They have just completed a multi-year test program, and we are exploring with them the use of our C65 and C200 turbines as they move from product development into the commercial deployment of their products.

Shawn Severson: Do you consider the current administration as a challenge, and how much is Capstone impacted by the “not so friendly” political environment, mainly domestically?

Jim Crouse: The global geopolitical situation is challenging and constantly changing. Domestically there are policies that are helpful and some not so helpful; the same can be said for many of our international markets. The good news for Capstone is that in many parts of the U.S. and the world, our product has excellent returns for customers, and they are able to justify the investment independent of government policy or regulations. The best markets are ones where there is a clear long-term direction for energy policy and prices, independent of which party is in power. To the extent we have the human and financial resources available, we focus on education; it is important that elected officials, regulators, and energy agencies understand the value of distributed generation with microturbines and CHP.

Shawn Severson: Thank you very much, Jim, for your time today. We look forward to speaking with Capstone again in the near future.

Jim Crouse: My pleasure, Shawn

SHAWN SEVERSON FOUNDING PARTNER

Mr. Severson founded *alphaDIRECT* Advisors, a division of EnergyTech Investor, LLC, in 2016 after seeing a significant communication and information gap developing between companies and the financial community. Mr. Severson has over 20 years of experience as a senior research analyst covering the technology and cleantech industries. Previously, he was Managing Director at the Blueshirt Group where he was the head of the Energy, Environmental and Industrial Technologies practice. Prior to the Blueshirt Group, Mr. Severson was at JMP Securities where he was a Senior Equity Research Analyst and Managing Director of the firm's Energy, Environmental & Industrial Technologies research team. Before joining JMP, he held senior positions at ThinkEquity, Robert W. Baird (London) and Raymond James. He began his career as an Equity Research Associate at Kemper Securities. He was frequently ranked as a top research analyst including one of the Wall Street Journal's "Best on the Street" stock pickers and multiple awards as Starmine's top three stock pickers.



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