



ARPA-E Hybrid Systems Workshop

Reliable power when and where you need it.
Clean and simple.



Who is Capstone Turbine?



- Founded 1988 – Commercial launch in 1998
- Public Corporation 2000 (NASDAQ: CPST)
- World leader in Microturbines
- Headquartered in Chatsworth, California with two manufacturing plants
- Over 86 distribution partners and 759 dedicated distributor employees
- Approximately 9,000 units shipped worldwide
- Over 50,000,000 operating hours
- Installations in 73 countries worldwide
- Not heavily dependent on government subsidies
- Expense reductions enhance operating leverage



Darren Jamison, President and CEO of Capstone Turbine Corp., standing alongside C65 CHP units that are preparing for shipment



Global Market Verticals



Energy Efficiency



Generate on-site power capture thermal energy from the clean exhaust in CHP and CCHP applications.

- Hotels
- Large Residential Complexes
- Retail Buildings
- Office Buildings



Oil, Gas & Other Natural Resources



Produce on-site power for all phases of oil and gas production in both onshore and offshore applications.

- Drilling Operations
- Flare Gas Reduction
- Gas Compression
- Mining
- Water Conversion



Renewable Energy



Cleanly and efficiently generate onsite power operating on biogas and other waste products to create high-efficiency renewable power and heat.

- Farm Digesters
- Landfills
- Solid Waste Management
- Wastewater Treatment
- Food Waste



Critical Power Supply



Mission critical businesses have an uninterruptible power source with the world's only microturbine-powered UPS solution.

- Data Centers
- Telecom
- Power Rentals
- Hospitals



Transportation



Operate in conjunction with battery packs to provide onboard battery charging and vehicle range extension.

- Commercial Trucks
- Heavy-duty Vehicles
- Supercars
- Transit Buses
- Delivery Vehicles



Marine



Provide onboard power, vessel range extension and utilize thermal energy for onboard heating and cooling.

- Work Boats
- Cargo Ships
- Commercial Vessels
- Tour Boats



Competitive Advantages



Features

Benefits



Only one moving part

Longer service intervals, low operating cost



Patented air bearing technology

No lubricants or coolants needed



Stand alone or grid connect

Multiple applications and industries



Wide fuel range

Operates on gaseous, renewable and liquid fuels



High power density

Compact footprint, small modular design



Advanced combustion controls

Low emissions, no exhaust aftertreatment



Clean waste heat

Thermal energy for cogeneration/trigeneration

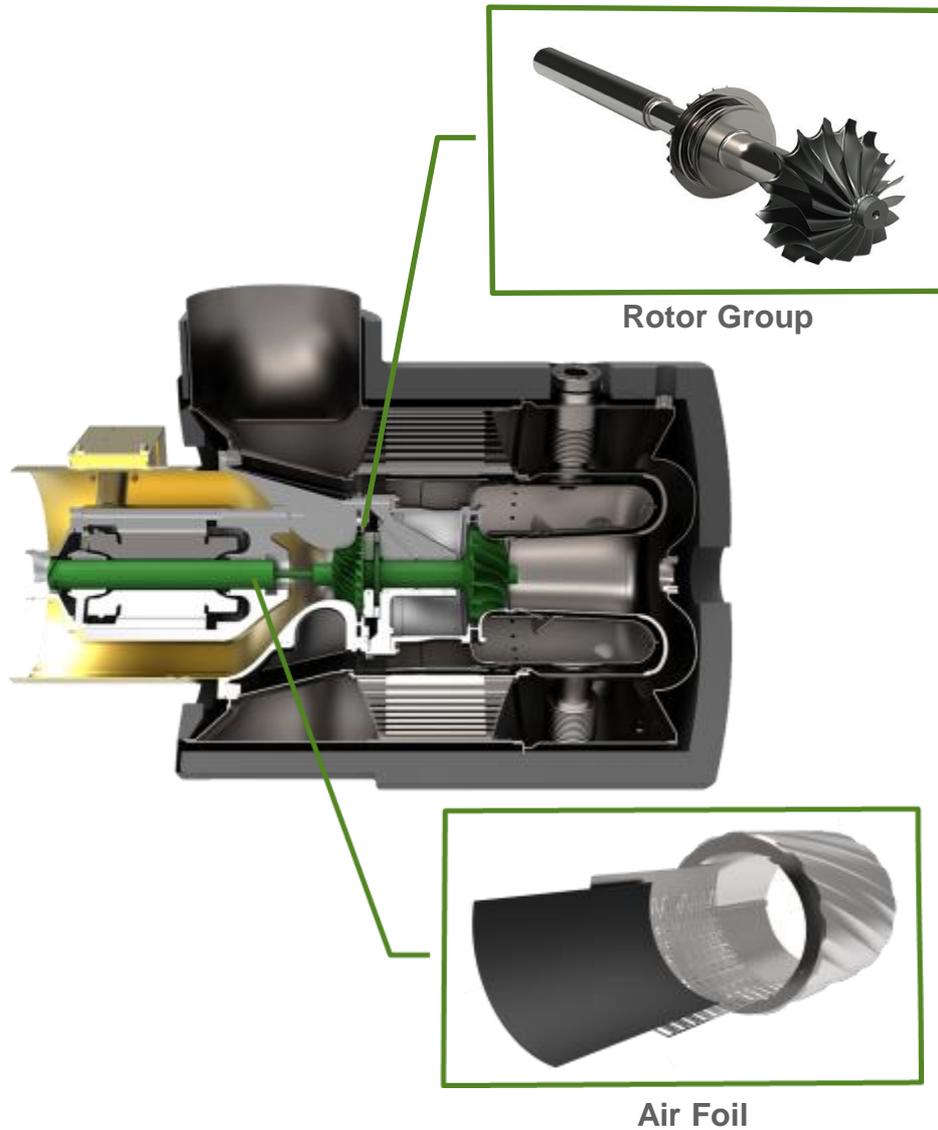


Remote monitoring

View performance and diagnostics 24/7



What is a Microturbine?



CHP/TYPE	EFFICIENCY	
	ELECTRIC	TOTAL
Hot Water	33.0%	85.0%
Steam	33.0%	60.0-95.0%
Chilled Water	33.0%	85.0%



New C1000 Signature Series



- 1.0MW Electrical Output
- 1.5MW CHP Heat Recovery
- Integrated Heat Recovery
- Two Stage Air Filtration
- Improved Enclosure Design
- Lower System Noise Level



February 2016 - First C600 Signature Series Delivery
Minneapolis, MN

- Relocated Engine Exhaust Stack
- 12 Year Marine Grade Paint
- Higher Inlet Fuel Temperature
- New System Control Platform

Design Changes to Improve Reliability



Technology to Improve Value



- Lower cost materials that still provide long life (40K to 80K hours)
- High temperature materials/coatings to improve efficiency
- Additional equipment to recover energy
- More energy efficient materials for the High Power Inverters
- Leverage previous DOE C370 project to increase power density

Increased Efficiency Through New Materials



NASDAQ: CPST

www.capstoneturbine.com