



SALES & MARKETING INFORMATION

1. Target Markets:

- CBW will initially target existing customers in the following industry segments in order of priority:
 - Food / Beverage / Agriculture
 - Hospitals / Institutional (i.e. VA hospitals, large colleges, military installations)
 - Pharmaceutical
 - Steel / Chemical / Petrochemical
- CBW will next target new prospects in the same above segments.

2. Example Target Companies:

Industry Segment	Example Target Companies (Bolded companies have TMC unit)
Food / Beverage	<ul style="list-style-type: none"> • Clement Pappas • City Brewing (<i>CBW beta unit</i>) • Richardson Brand Candies (TMC coming on line soon) • Oregon Freeze Dried (TMC coming on line soon) • Kraft Foods • Frito-Lay • Yuengling Brewery • Dannon
Hospitals / Institutional	<ul style="list-style-type: none"> • Oak Ridge National Laboratories • China Lake National Lab (TMC coming on line soon) • Rock Island Arsenal (TMC coming on line soon) • Veterans Administration • Crain Naval Base • Bangor, Washington Sub Base • Iowa Weapons Depot
Pharmaceutical	<ul style="list-style-type: none"> • Baxter Pharmaceutical
Steel / Chemical / Petrochemical	<ul style="list-style-type: none"> • Specification Rubber • US Steel • Wheeling Pittsburgh • Allegheny Ludlum • Koppers • Sonneborn • Merisol Company • Air Products and Chemicals • Linde Corporation

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3. Potential Lead Sources:

Trade Shows	<ul style="list-style-type: none"> • AHR Expo - http://www.ahrexpo.com/ • Northwest Food Processors Association Expo - http://www.nwfpa.org/
Industry Publications	<ul style="list-style-type: none"> • ASHRAE Journal - http://www.ashrae.org/ • Process Heating - http://www.process-heating.com/ • HPAC Engineering - http://hpac.com/ • Food Engineering - http://www.foodengineeringmag.com/
Miscellaneous	<ul style="list-style-type: none"> • State boiler databases – <i>CBW can provide</i> • Natural gas suppliers / providers– <i>CBW can provide</i> • LEED Program - http://www.usgbc.org/ • DOE Save Energy Now LEADER Program - http://www1.eere.energy.gov/industry/; • Database of State Incentives for Renewables & Efficiency - http://www.dsireusa.org/ • INDEED Program • SIC: 3443 • NAICS: 33241

4. Prospect Qualification Criteria:

- Natural gas burning boiler system
- 150 – 1,000 HP boilers
- Cold water stream to be heated in range of 5-70 GPM
- Over 4,000 operating hours per year
- Operating steam pressure greater than 30 psig
- Over 30% makeup water to the boiler system or an equal cold water stream
- *Future Ultramizer line extensions:*
 - *1200 HP and up boilers – expected launch date: TBD*

5. Typical Decision Maker:

- Multiple functions will typically be involved in the decision making process and may include: Plant Engineer; Financial Manager / CFO; CEO

6. Others That May be Involved in the Decision Making Process:

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- Energy Manager
- Environmental Manager
- Contracted 3rd party that performs energy audits
- Independent consulting engineer

7. Typical Decision Making Process:

- CEO / CFO establish a goal or strategic initiative to reduce emissions and/or energy costs.
- Internal / contract engineers conduct study to identify opportunities to reduce emissions / lower energy costs. May involve a facility energy audit. Engineers may also learn of energy solutions via trade organizations or networking groups.
- The boiler room manager requests a quote, perhaps with ROI data
- Internal engineering staff (or contract engineers) review proposal & write capital request
- Financial and/or Executive approval / sign-off
- Purchasing department places the order

8. Typical Needs and Objectives of Prospects:

Function / Personnel	Needs / Objectives
Boiler room personnel	<ul style="list-style-type: none"> • Improve the efficiency of the boiler room • Reduce fuel consumption • Extend the life of boiler room equipment
Engineering	<ul style="list-style-type: none"> • Fuel savings • Reduce plant emissions • Improve the overall reliability of the boiler system • Determine if new systems will physically fit in the boiler room
CFO / Executives	<ul style="list-style-type: none"> • Fuel savings to reduce plant costs • Utilize energy tax credits • Emissions trading (Cap & Trade) • Corporate sustainability • Capitalize on market benefits related to “green initiatives”
Purchasing	<ul style="list-style-type: none"> • Fuel cost reduction • Return on investment • Options / incentives related to payment terms

9. Typical Delivery Time:

- 12 weeks after receipt of drawing approval

10. Key Features & Benefits:

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Features	Parity with Key Competitors
Ceramic tubes	Negative perceived attribute
Multiple installation configurations	Same
Standardized design	Same
New technology	Negative perceived attribute
Competitively priced	Same
Benefits	Parity with Key Competitors
20% clean water capture , i.e. no treatment required <ul style="list-style-type: none"> Customers save money because they don't have to buy water from the city 	Better
94% fuel to steam efficiency which means the lowest fuel cost of boiler operation <ul style="list-style-type: none"> Less gas is required to produce steam, thus saving the customer money 	Better (<i>at least 5% better than key competitors</i>)
CBW has a strong track record with over 30 years of successful installations with the first two economizer stages <ul style="list-style-type: none"> This provides customers with peace of mind that the Ultramizer will be designed as a high quality product for their specific application 	Better
Emissions reduction <ul style="list-style-type: none"> The Ultramizer will help customers reduce their emissions and possibly generate revenue under Cap & Trade legislation. 	Better
"Green" impact <ul style="list-style-type: none"> In addition to the environmental impact of lower emissions, Ultramizer customers may also be able to take advantage of federal, state, or local tax credits 	Better
Government-backed initiative	Better
Performance-based warranty <ul style="list-style-type: none"> If the Ultramizer doesn't live up to performance promised under the warranty, CBW will repair or replace the unit 	Same
High return on investment	Same
Removable ceramic bundles allow easy maintenance <ul style="list-style-type: none"> No special training is required so any boiler operator can change out a ceramic bundle. Easy maintenance also reduces downtime and the need for outside contractors which reduces maintenance costs. A code stamp is not required for changing ceramic bundles. 	Same
High quality	Same

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- | | |
|--|--|
| <ul style="list-style-type: none">• The quality design of the Ultramizer reduces downtime and maintenance costs. | |
|--|--|

11. Elevator Speech

Studies have shown that over a 20 year period, 96% of the cost of operating a boiler system comes from fuel costs. Also, in typical boiler systems, 10% to 20% of energy input is lost in the form of heat escaping to the atmosphere. The installation of an Ultramizer helps to solve this problem. An Ultramizer is an economizer that captures heat and moisture from the stack, then returns it to a cold water system. To determine if an Ultramizer is right for your facility, look at your annual boiler fuel bill and subtract 15% of the cost. If this is a significant number to you, then you should consider adding a CBW Ultramizer. The payback will have a direct impact on your bottom line. This is one of Cannon's many products that help companies reduce overall energy consumption.

12. Value Proposition:

- Value Proposition for CFOs:

Facility owners with natural gas burning steam boilers can significantly increase boiler system efficiency with Cannon Boiler Works' Ultramizer and line of heat recovery products. The Ultramizer is unique in that it also provides clean water capture. As such, you can realize the lowest possible fuel costs and emissions, gaining as much as a 15% annual fuel savings, while reducing water costs. This not only results in a stronger bottom line, but also helps your facility take smart steps toward sustainability.

- Value Proposition for Engineers:

The Cannon Boiler Works Ultramizer System incorporates three stages of heat recovery which optimizes the process efficiency of natural gas boilers. By removing heat and water from the flue gas stream, we reduce the amount of fuel and make up water needed which provides as much as 15% in annual fuel savings. At the same time, you reduce your emissions and increase the life of the boiler. The bottom line is that Cannon's Ultramizer System will help you increase the service life of your boiler systems while having a positive impact on plant profitability.

13. Potential Competitors for a Customer's Energy Efficiency Budget:

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- Any competing energy efficiency improvement could be an indirect competitors for a prospect’s budget dollars

Key Heat Recovery Competitors

Traditional welded economizers

Competitor	Strengths	Weaknesses
Kentube	<ul style="list-style-type: none"> • Deep pockets of Fintube Technologies & U.S. Steel • Designs and manufactures large variety of economizers, air heaters, & gas-to-liquid / gas-to-heat recovery equip. • ISO 9001:2000 • Opened new fabrication facility in 2008. The plant was constructed with three 70 ft by 400 ft manufacturing bays with expanded crane capacity ranging from 15 to 30 tons. • Fintube R&D facility • On-line RFQ capability 	<ul style="list-style-type: none"> • No cold water applications • Circular design reduces repair ability • Energy savings potential less than TMC
	Value Proposition: High quality; Most effective, efficient heat recovery systems available.	
e-Tech	<ul style="list-style-type: none"> • Claims potential of <1 year payback • Promotes “Greengineering™”. Heat recovery solutions that produce efficiencies of up to 95% of the fuel dollar, while reducing pollutants in exhaust. • Complete waste heat recovery systems save up to 15% or more on overall energy costs. • 30 years of experience & 1,000s of designs for many applications 	<ul style="list-style-type: none"> • No modular design • Less extensive materials selection compared to CBW which limits their ability to compete on certain applications • Energy savings potential less than TMC
	Value Proposition: Trouble-free, cost-saving heat recovery solutions; Precisely engineered for specific application	

Condensing Economizer

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Competitor	Strengths	Weaknesses
Cain (Cleaver Brooks)	<ul style="list-style-type: none"> 12 lines & 1,350+ industrial heat transfer products Serves broad spectrum of the combustion retrofit market: diesel & gas cogeneration, boiler exhaust, & fume incineration 	<ul style="list-style-type: none"> Only sold half the number of economizers to CBW Limited customer support Energy savings potential less than TMC
	Value Proposition: High quality; Customer satisfaction	
Boilerroom Equipment, Inc. (Heat Sponge)	<ul style="list-style-type: none"> On-line sales engineer (Bruce) - helps customers select a HeatSponge economizer and generate predicted performance, pricing, and proposal on-line 	<ul style="list-style-type: none"> On-line software doesn't catch system design mistakes which can impact system safety, performance and service life Energy savings potential less than TMC
	Value Proposition: <ul style="list-style-type: none"> Simple: Economizers designed to be easy to procure, install, & operate Effective: Designed to provide high performance heat recovery Economical: Economizers are competitively priced & easy to service 	

Heat Recovery Automated Systems

Competitor	Strengths	Weaknesses
Condex	<ul style="list-style-type: none"> Condex system has ability to provide everything from low-grade to high-grade heat Payback in 6 months Products incorporate specialized metallurgy and proprietary design engineering 	<ul style="list-style-type: none"> Inability to make repairs in the field Energy savings potential less than TMC
	Value Proposition: Lower operating costs; Less exhaust gas; Less pollution; More dollar savings	
Sidel Systems USA	<ul style="list-style-type: none"> ASME-approved waste heat recovery unit Most applications realize savings of 12-15% 	<ul style="list-style-type: none"> Inability to make repairs in the field Energy savings potential less than TMC
	Value Proposition: <ul style="list-style-type: none"> System is easy to install, has no moving parts, requires no maintenance Energy efficiency and the environmental benefits help new or renovated construction achieve a higher level of L.E.E.D. certification. Potential for 95% efficient natural gas boiler 	

Direct Contact

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Competitor	Strengths	Weaknesses
Kemco Systems	<ul style="list-style-type: none"> Over 5,000 installations worldwide Product breadth beyond heat recovery Technical assistance available 24/7 	<ul style="list-style-type: none"> Water chemistry must be tested and treated Energy savings potential less than TMC
	Value Proposition: Payback in less than 2 years; Life expectancy of over 20 years; Custom designs; Exceptional quality and reliability	
SOFAME Technologies, Inc.	<ul style="list-style-type: none"> 5 Canadian patents and 4 American patents. SOFAME is sole proprietary for two of the technologies. 500 installations; over 380 customized systems Over 10 awards including two ASHRAE awards for technology innovation 	<ul style="list-style-type: none"> Water chemistry must be tested and treated Energy savings potential less than TMC
	Value Proposition: <ul style="list-style-type: none"> SOFAME's technologies deliver between 95% and 99% efficiency Minimal maintenance required. 	

14. Ultramizer Positioning Guidelines *(NOTE: At this time, the Ultramizer has no direct competition, but there could be perceived competing products)*

- Reduce boiler system operating cost
- High product quality
- Energy efficiency

15. Ultramizer Collateral Materials:

- Website landing page for Ultramizer
- Ultramizer brochure
- On-line savings calculator
- PowerPoint presentation
- 2 white papers *(in development)*
 - Cannon Boiler Works history
 - Ultramizer
- Example ROI calculation for the Ultramizer
- Ultramizer case studies *(availability TBD)*
- Webinar series and archive *(in development)*

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16. Referral Customers – *in development*

17. Case Studies – *in development*

18. Pricing Guidelines:

Product	Est. Price
Ultramizer in stack system (21GPM Max)*	\$ 175,000
Stand alone side stream Ultramizer System (21GPM Max)*	\$ 250,000

*System Price includes: THE, LTE, TMC, Controls, fan& skid (if applicable)

19. Payment Terms:

- 10% upon customer-approved drawings
- 40% upon major milestone – (to be determined by CBW and customer)
- Remaining 50% upon shipment – payment terms: net 30 days



FREQUENTLY ASKED QUESTIONS AND ANSWERS

1. How does the Ultramizer compare to current condensing systems related to cost, payback & reliability?

- **Cost:** The Ultramizer will cost 20-50% more than traditional condensing systems. However, an additional 3 – 5% in fuel savings can be achieved which can represent a substantial amount of money over the life of the system.
 - **Example:** 300 HP system operating at 94% vs. 82% efficiency
 - **Assumption:** \$9.51 / hour fuel cost savings (does not include water savings which would provide additional \$\$)
 - **Results:** \$76,098 in savings over 1 year
\$760,980 in savings over 10 years

 - **Example:** 300 HP system operating at 94% vs. 89% efficiency
 - **Assumption:** \$3.71 / hour fuel cost savings (does not include water savings which would provide additional \$\$)
 - **Results:** \$29,663 in savings over 1 year
\$290,980 in savings over 10 years

(numbers based on \$6/MCF of natural gas and 8000 operating hours at 100% FR)
- **Payback:**
 - Unit payback: 1 – 1 ½ years depending on market cost of fuel
 - Installed payback: 2 – 3 years
- **Reliability:** Reliability statistics are still being determined. However, there have been no process-related failures of the ceramic tubes to date. The first 2 stages of heat recover are traditional CBW economizers with 1,000s of successful installations and backed by over 30 years of experience. To date, the TMC 3rd stage has 1,000s of hours of testing with no process-related failures.

2. What is the life expectancy of the ceramic tubes?

CBW is currently evaluating a five year replacement plan for the ceramic tube bundles.

3. How much does the Ultramizer cost?

Product	Price
Ultramizer in stack system (21GPM Max)*	\$ 175,000
Stand alone side stream Ultramizer System (21GPM Max)*	\$ 250,000

*System Price includes: THE, LTE, TMC, Controls, fan& skid (if applicable)

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4. What is the ease of maintenance related to the Ultramizer? Will it have similar maintenance features to other CBW products?

The ceramic tube bundles in the Ultramizer are removable and easily replaceable. CBW used the same thought process for the Ultramizer design to ensure ease of maintenance.

5. How much water does the Ultramizer recover?

It's estimated that up to 20% of the moisture in the flue gas stream will be recovered.

6. What's the condition of the recovered water?

The water that the Ultramizer recovers can be immediately used in the boiler system without treatment. It should be noted that the recovered water from some competing systems require treatment prior to being used again in the boiler system.

	City Softened & Filtered TMC Inlet	TMC Outlet	Typical Condensed Exhaust*
PH	7.08	6.86	3.68
TDS	56	52	<10
Total Alkalinity	24	23	<1
Total Hardness	<1	<1	<1

All results are from a water test taken at City Brewing TMC test site

*Typical condensed boiler exhausts water quality if TMC is not used

7. What happens when I switch to another fuel, either because natural gas isn't available or the price is too high?

The first 2 economizer stages will work fine with fuels other than natural gas. At this time though, the Ultramizer has only been tested with natural gas and as such can only be used with natural gas. A bypass system has been incorporated so that customers can easily switch between different fuels. CBW is in the process of testing the Ultramizer with fuels other than natural gas. To date, no equipment damage has been seen during testing when alternate fuels were used.

8. How quickly will I receive Ultramizer spare parts?

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CBW typically maintains a stock of fin tubing and ceramic tube bundles. In-stock items can be shipped immediately. Replacement time will depend on whether or not the spare parts are in-stock. Items that must be ordered typically have a 3 week lead time.

9. What will the shipping costs be?

At this time, CBW does not have estimated shipping costs. However, Ultramizer shipments do not require over-sized loads or special permitting.

10. What are the space requirements for the Ultramizer?

CBW provides multiple installation scenarios to fit your boiler room set up. While the Ultramizer requires 50% more space than a condensing economizer system, it should take less space than direct contact water heaters.

11. What is the weight of the Ultramizer?

The weight will be similar to condensing economizer units.

12. What structural support is required for the Ultramizer?

CBW has developed multiple installation scenarios to suite most boiler room set ups. A structural support (*not provided by CBW*) will be required around the boiler to hold the Ultramizer. Floor stands and skid units are available from CBW (*a detailed site plan will be required*).

13. What installation support will CBW provide?

The majority of the installation support will be provided by CBW's local representatives, although CBW factory assistance will be available upon request.

CBW plans to provide factory service technicians for the first 10 Ultramizer installations.

14. What is the Ultramizer warranty?

CBW is in the process of rewriting its terms & conditions to include the Ultramizer. A performance warranty will be included and will be based on the boiler room operating conditions provided by the customer.



POTENTIAL OBJECTIONS AND APPROPRIATE RESPONSES

1. The Ultramizer is based on unproven technology ...

The Gas Technology Institute (GTI) and the Department of Energy have invested more than 5 years and millions of dollars in the development of the TMC Technology, through successful lab testing and field testing.

GTI and Cannon have installed 7 units to date in North America. These units cover a wide variety of TMC designs, installation applications, and control scenarios. The TMC bundle design was standardized in 2009 and small engineering optimizations continue to date.

Many of these installations are available for potential clients to view. And, as with all Cannon products, the Ultramizer comes with a warranty for materials, workmanship, and thermal performance.

2. What about the reliability of the Ultramizer's fragile, ceramic components ...

CBW is in the process of developing a safe shipping method. Currently, no in-service reliability issues have occurred. The ceramic tubes are enclosed in a stainless steel housing / casing to protect the tubes during operation. The final Ultramizer design has been standardized and is being field tested at multiple sites.

3. There's a negative image associated with the super boiler ...

The super boiler was only a test program, not a commercial product like the Ultramizer. There was no optimization of the super boiler design or efforts to reduce its production or market costs. Significant changes have been made since the first 3 TMC units so it's very difficult to make direct comparisons.

It's important to note that CBW and GTI will be conducting significantly more Ultramizer field testing than was done for the super boiler. The final Ultramizer design has been standardized and is being field tested at multiple sites.

Also, it's important to note that the TMC technology was only a small part of the overall super boiler program. The TMC portion of the super boiler was determined to provide significant benefits and could therefore become a standalone product.

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4. There's an impression that the early GTI installations failed ...

All of the GTI installations were early test units, not CBW Ultramizer Systems. These alpha tests took place while the design specifications were still in development. It's important to note that today's TMC technology, and CBW's Ultramizer, is very different from the alpha test models.

These alpha tests provided valuable information to GTI. The result is that GTI made significant design corrections to eliminate water leaks and optimize the equipment for maximum efficiency, etc. CBW is significantly benefitting from these early alpha tests and lessons learned.

5. The Ultramizer has a big price tag ...

The added benefit of water and fuel savings far outweighs the initial capital investment in the Ultramizer. CBW is in the process of developing ROI and payback data which will be available to reps prior to market launch.

The price of the GTI prototypes was initially high. However, CBW has modified the pricing of the TMC technology to be competitive.



PRODUCT COMPARISON

Instructions: To determine appropriate equipment, select fuel type, then inlet water temperature.

Fuel Type	Traditional welded economizer	FWH economizer	Condensing economizer	Direct contact economizer
Liquid Propane				
212° – 300° F	X	X	X	X
150° – 212° F		X	X	X
32° – 150° F			X	X
Natural Gas				
212° – 300° F	X	X	X	X
150° – 212° F		X	X	X
32° – 150° F			X	X
#2 Oil (diesel jet fuel / military grade fuel)				
212° – 300° F	X	X	X	X
150° – 212° F		X	X	X
32° – 150° F				X
#6 Oil				
212° – 300° F	X	X	X	
150° – 212° F				
32° – 150° F				
Landfill Gas (methane)				
212° – 300° F	X	X	X	X
150° – 212° F		X	X	X
32° – 150° F				X
Coal				
212° – 300° F	X			
150° – 212° F				
32° – 150° F				
Wood				
212° – 300° F	X			
150° – 212° F				
32° – 150° F				



INFORMATION REQUIRED FOR QUOTATION

Contact Information

Rep Company:	Rep Name:
Rep Phone:	Rep Fax:
Rep Email:	
End User Company:	Contact Name:
Address:	
Phone:	Fax:
Email:	

Available Heat Sinks (Water Streams)

	Source #1	Source #2	Source #3
Description			
Flow			
Temperature			
Constant Flow (Yes / No)			

Examples of heat sinks are: DA water, condensed return water (blended with makeup), makeup water, process water, cleanup water, snow melt glycol, etc.

Available Heat Sources (Flue Gas)

Boiler Type	
Max. Steam Capacity	
Fuel Type	
Fuel Cost	
FGR Rate	

	Peak Load	Avg. Load	Min. Load
Flue Temperature			
Excess Air			
Hours of Operation			

Multiple Boilers into Common Stack

Describe:

What Space is Available		Site Information	
In Stack		Elevation	
Sidestream		Ambient Temp. Range	
Between Combined Stacks		Ambient Humidity Range	
Roof		Freeze Potential	

**For a detailed computer evaluation of your application, please email
 (sales@cannonboilerworks.com) or fax (724-335-6511) the above information to CBW.**

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