

The logo for ThermoEnergy features the word "THERMO" in dark blue, a stylized circular icon with a white star and blue swoosh, and the word "ENERGY" in light blue. The text is centered over a background of overlapping light blue and grey circles.

THERMOENERGY

Investor Presentation

September 2011

Disclosures

This presentation contains statements that are considered forward-looking statements. Forward-looking statements give the current expectations of forecasts of future events of the Company. All statements other than statements of current or historical fact contained in this annual report, including statements regarding the Company's future financial position, business strategy, budgets, projected costs and plans and objectives of management for future operations, are forward-looking statements. These statements are based on the Company's current plans and certain assumptions by the Company's management about future conditions, and the Company's actual future activities and results of operations may be materially different from those set forth in the forward-looking statements. These forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from the statements made. These include, but are not limited to, the risks and uncertainties associated with statements relating to: (i) the ability of the Company to fund its continued operations and development activities; (ii) the Company's ability to commercialize its technologies; (iii) changes in government policy and in legislation and regulation that adversely affect the Company's business prospects; and (iv) general economic and market conditions.

Corporate Information

- 🌐 Founded in 1988 to commercialize water and energy technologies



- 🌐 Headquartered in Worcester, MA; Sales offices in San Francisco, New York, and Atlanta
- 🌐 Publicly traded (OTCBB:TMEN) with a fully diluted market capitalization of ~\$40M
- 🌐 Company divided into two distinct business units:
 - Clean Water Division: CASTion wastewater technology
 - Clean Energy Division: ZEBS technology development

Business Unit Highlights

CASTion

- ⌚ Water Technologies Division with ~70 systems in operation
 - ⌚ Controlled Atmosphere Separation Technology
 - ⌚ Large, growing domestic market opportunity: Industrial (\$7B+) and Municipal (\$5B+) as well as internationally.
 - ⌚ Large NYC contract – Signed in June '10 and strong pipeline
 - ⌚ Significant competitive advantage: IP, low cost provider
 - ⌚ Market leading partners such as AECOM
 - ⌚ New Partnership with Contego to address airport market
 - ⌚ Attractive margins, multiyear revenue streams
-

ZEBS

- ⌚ Clean Energy Division – Joint venture with Babcock Power called BTCC (Babcock Thermoenergy Clean Combustion, LLC)
- ⌚ Leading carbon capture technology utilizing Zero Emissions Boiler System (“ZEBS”) technology – pressurized oxy-fuel
- ⌚ Supported by a strong IP portfolio. Babcock provides plant construction and engineering experience
- ⌚ \$1T+ market opportunity
- ⌚ Significant long-term value creation potential

Management Team

Very experienced and balanced team with outstanding technical expertise

🕒 **Cary Bullock, President and Chief Executive Officer**

- 30+ years developing advanced energy and infrastructure technologies
- GreenFuel Technologies, Excelergy, KENETECH, Xenergy, FPL Energy Services, NSP Power Services
- AB, Amherst College, BS, MS, Massachusetts Institute of Technology

🕒 **Ted Klowan, Jr., Executive Vice President and Chief Financial Officer**

- Extensive public company and technology company experience
- Certified Public Accountant , MBA (International Finance)
- Ernst & Young, Waters Corporation, Helix Technology

🕒 **David Delasanta, Vice President, U.S. Business Development**

- Shaw Group, AECOM, Kaiser Engineering
- Over 35 years of environmental management, startup, and M&A experience
- BS Physics, MS Environmental Engineering, and MBA

🕒 **Patrick Scalli, Vice President of Sales**

- Over 30 years of experience selling large industrial capital equipment contracts in the energy, water, and wastewater industries
- Led national sales efforts at ExxonMobil, Johnson Controls, Xenergy, and Veolia Energy
- Sold over \$1 billion of contracts

🕒 **Bob Marrs, Vice President, International Business Development**

- Extensive experience in international chemical and capital equipment industries
- Prior experience includes Linde Group, BOC, and Praxair
- BS in Materials Science Engineering from Lehigh, double MBAs from UCONN in Finance & Marketing.

🕒 **Steve Brown, Chief Engineer and CTO**

- Over 15 years of experience with CASTion and predecessor company (Cellini Purification)
- 25+ years in water engineering
- Umass Amherst, WPI, MIT Industrial Liaison Program

Company Poised to Create Value

2010/2011 *Highlights*

- ⌚ New Management Team
- ⌚ Recapitalized the Company raising \$14 million
- ⌚ Strengthened Balance by eliminating most of our debt
- ⌚ Resolved Legacy Issues
- ⌚ Re-listed on OTC BB
- ⌚ Developed major Product Extensions and Enhancements opening new agricultural and industrial markets globally
- ⌚ Began \$27.1M CAST NYC ARP Project
- ⌚ Added MIT Professor, Dr. Ahmed F. Ghoniem to the Board of Advisors.
- ⌚ TMEN entered into a strategic alliance with Contego Systems to recover and recycle airport deicing fluid

2012 *Outlook*

- ⌚ Convert robust domestic pipeline into bookings growing sales several multiples from past history.
- ⌚ Grow our global rep and direct sales organization while managing expenses wisely
- ⌚ Sign new business in foreign markets.
- ⌚ Obtain additional sales, and strategic partners.
- ⌚ Begin DBOO business model
- ⌚ Have our Babcock-Thermo Carbon Capture, LLC (BTCC) joint venture sign agreement to build pilot plant with our ZEBS technology.
- ⌚ Reach cash flow breakeven by the end of the year.

Market Drivers & Value Proposition

- ☉ **Water Technology adoption is being driven by government regulation and corporate focus on cost savings**
 - Corporations are being forced to evaluate and adopt waste water treatment methodologies
 - New York City fined over \$14M for failure to implement higher nitrogen removal standards
- ☉ **CASTion provides key competitive advantages versus other waste water treatment options**
 - Low cost path to compliance
 - Rapidly implemented and reliable technology
 - Offers a better use of valuable resources (e.g., land, energy, water)
 - High ROI
- ☉ **ZEBS business represents an opportunity to be a leader in the \$1T+ zero emissions and carbon management power market**

CAST Overview



Business

🕒 Deploying Controlled Atmosphere Separation Technology (CAST)

- Flash vacuum distillation platform technology used to recover valuable renewable resources from wastewater
- Disposition or recycle of resources recovered
- Reuse of the water rather than discharge it (Zero discharge use)
- Other water based technology patents

Technology Features

🕒 Features

- Proprietary technology
- As platform technology can be combined with other OTS technologies to create new intellectual property (IP)
- Applicable to many industrial chemical extraction problems
- Low cost (Capex and Opex) compared to alternatives
- Other qualitative benefits (Small footprint, low energy, no odor, ease of maintenance)
- Payback in less than two years in most applications

Competitive Advantage: CAST ARP

Parameter	SHARON	TEC CAST
Technology	Biological	Chemical
Capital Cost (\$M)	\$60	\$30
Operating Costs (\$M/y)	\$6.2	\$2.7
System footprint (gsf)	26,500	7,000
Temp Dependency	High	None
Time to Equilibrium	Weeks	1 hour
Tolerance to Temp Swings	Low	High
Residency time required (hrs)	60	0.5
Sludge produced (t/y)	252	None
Odor	Significant	None

Based on same 1.5 mgpd system

Partner Profile: AECOM

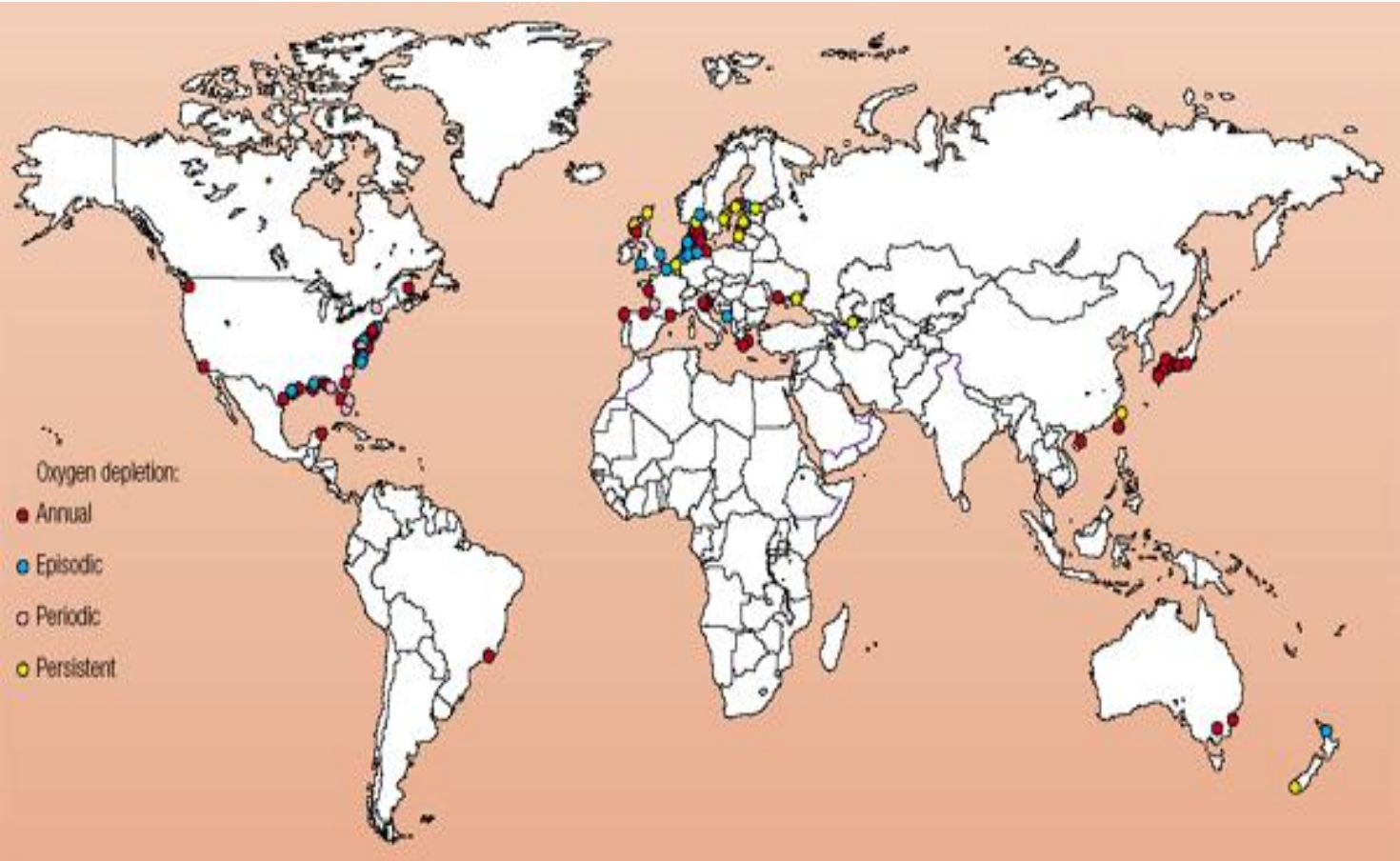


- **Partnership: Market & Deploy CAST for Municipal ARP**
- **AECOM (NYSE: ACM)** an Engineering, Technical & Management Leader In All Key Markets That It Serves (www.aecom.com)
 - \$7.7 Billion in Fiscal 2011 Revenues
 - 45,000 Employees / Operating in 125 Countries, Providing Such Services As:
 - Wastewater Treatment
 - Sustainable Economic Development
 - Highways & Bridges
 - Power Generation
 - Operations & Maintenance
 - Municipal Infrastructure
 - Remediation and Waste Management
 - #1 Out of Top 500 Design Firms
 - #2 Out of Top 25 Wastewater Treatment
 - #2 Out of Top 25 Sewerage & Solid Waste
 - Global Headquarters Is In Los Angeles, CA



A Global Market Opportunity

Dead Zones are a growing global problem in both the old and new world



Dead zones are increasingly a worldwide problem, providing tremendous upside for CASTion water treatment systems

Domestic Addressable Market

CAST Market (\$M) – 8,000+ systems and \$16B in Industrial and Municipal opportunities (Domestic only)

Sector	ARP	Metals	PG/EG	Sugar	Total	%
Industrial	\$7,203	\$2,145	\$550	\$446	\$10,345	65%
Municipal	5,475	NA	NA	NA	5,475	35%
Total	\$12,678	\$2,145	\$550	\$446	\$15,820	100%
<i>% Total</i>	<i>80%</i>	<i>14%</i>	<i>3%</i>	<i>3%</i>	<i>100%</i>	

Our Technology: ZEBS



Key Points

- Most efficient and cost effective carbon capture combustion technology
- Repowered coal plants competitive with new gas power plant
- Cost at a slight premium to conventional coal plant¹
- Collects liquid CO₂
- Captures other noxious elements (mercury, sulfur, etc.) for disposal
- 2 US patents & 8 foreign patents issued / 2 foreign patents pending

¹ Study by Canadian government (CANMET)

Babcock-Thermo Carbon Capture LLC (BTCC)

🌀 Babcock-Thermo Carbon Capture LLC

- 50/50 Joint Venture with Babcock Power Inc.
- Develop & Commercialize New Advanced Power Plant Design - **ZEBS**



🌀 **ZEBS**: Evolutionary in Design – Revolutionary in Performance

- **ZEBS** = Zero Emission Boiler System
- Combusts Coal / Oil / Natural Gas With Zero Air Emissions
- Captures CO₂ In Pressurized Liquid Form
- Based on oxy-fuel chemistry w/ novel twist: Pressurized Oxy-fuel
 - 2 US Patents Issued / 8 Foreign Patents Issued / 2 Foreign Patents Pending
- 99% of Process Components Are Off-The-Shelf Equipment
- Installed Cost Estimated To Approximate Conventional Pulverized Coal Plant

🌀 **Phase 1**: Established Underlying Science & Thermodynamics

- **Completed**

🌀 **Phase 2**: Design, Build & Operate Small-Scale Pilot Plant

- Generate Performance Data with an Operating System
- Sub System Design and costing of 600 MW ZEBS Power Plant - 1Q 2010

Partner Profile: Babcock Power Inc.

🌀 Partnership: Commercialize & deploy ZEBS

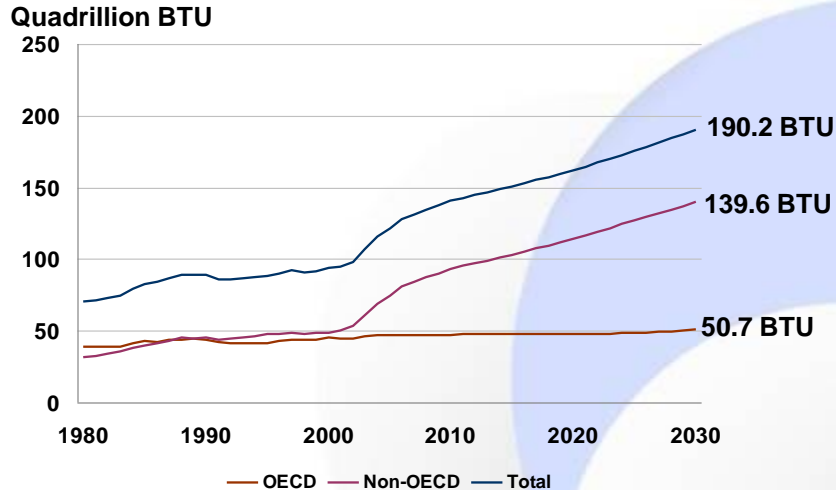
🌀 Babcock Power Inc. (www.babcockpower.com)

- Babcock Power Is a Group of Companies Providing OEM Design and Manufacturing of Major Equipment for the Power Generation Market
 - Over \$1 billion in Annual Sales
 - Over 400 Years of Combined Experience in:
 - Boiler Design and Firing for Fossil Fuel Power Plants
 - Construction
 - Environmental
 - Heat Exchangers
- State of the Art Power Plant Upgrades
 - Repowering
 - Retrofit
 - **Initial target market for ZEBS is repowering**



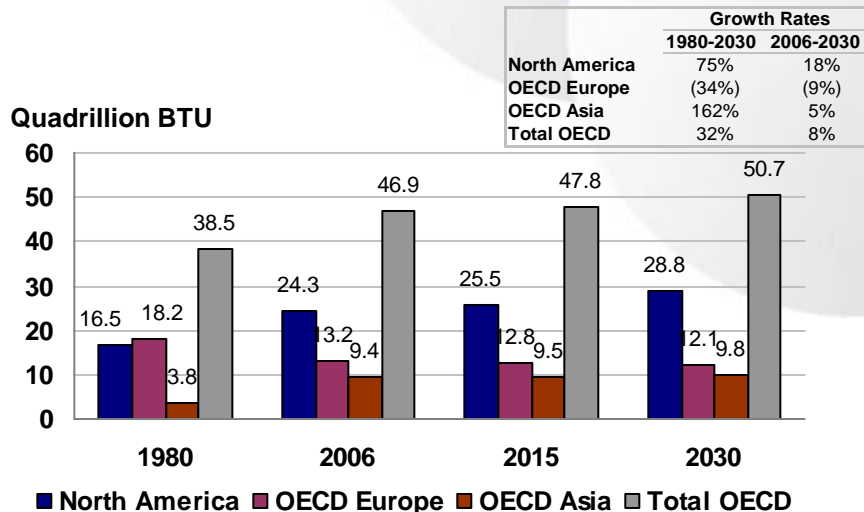
Coal Consumption: Growing Market Opportunity

World Coal Consumption

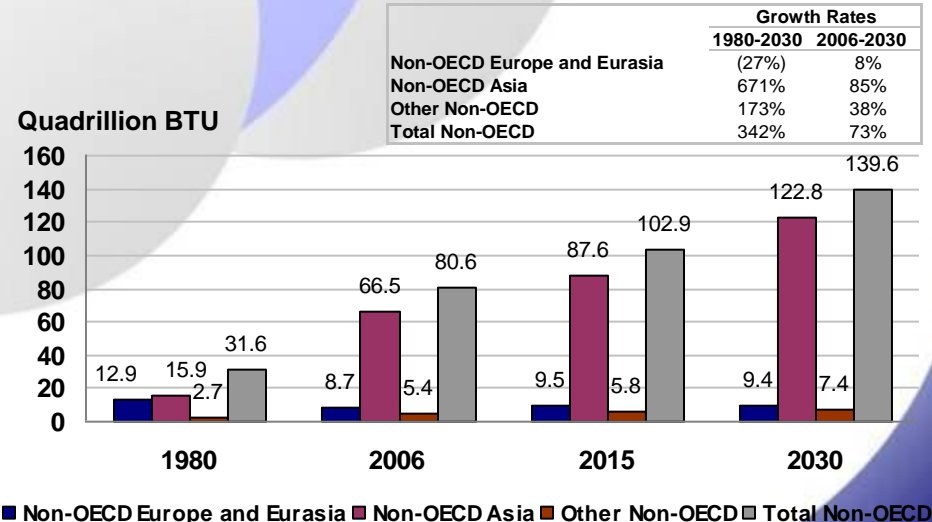


- 🔄 **World coal consumption expected to increase by 49% from 2006-2030**
 - 127.5 quadrillion BTU to 190.2 quadrillion BTU
- 🔄 **Non-OECD countries account for 94% of total growth from 2006-2030**
 - 73% increase from 2006-2030
 - 73% of world coal consumption expected in Non-OECD countries, an increase from 63% in 2006
- 🔄 **OECD coal consumption expected to increase by 8% from 2006-2030**

OECD Coal Consumption

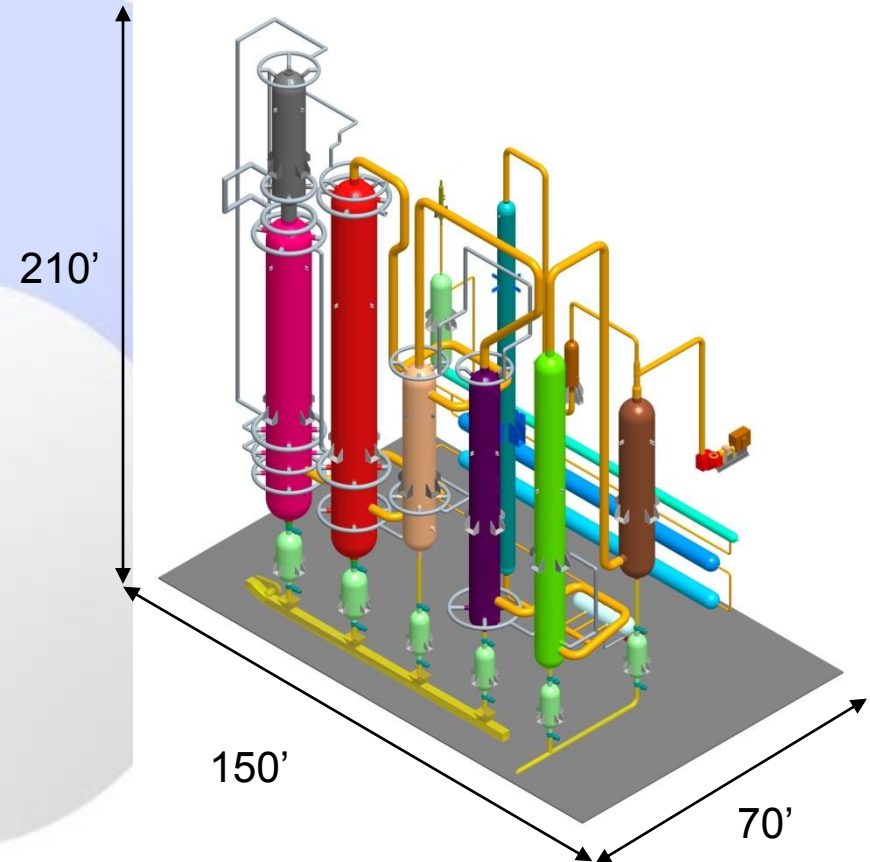


Non-OECD Coal Consumption



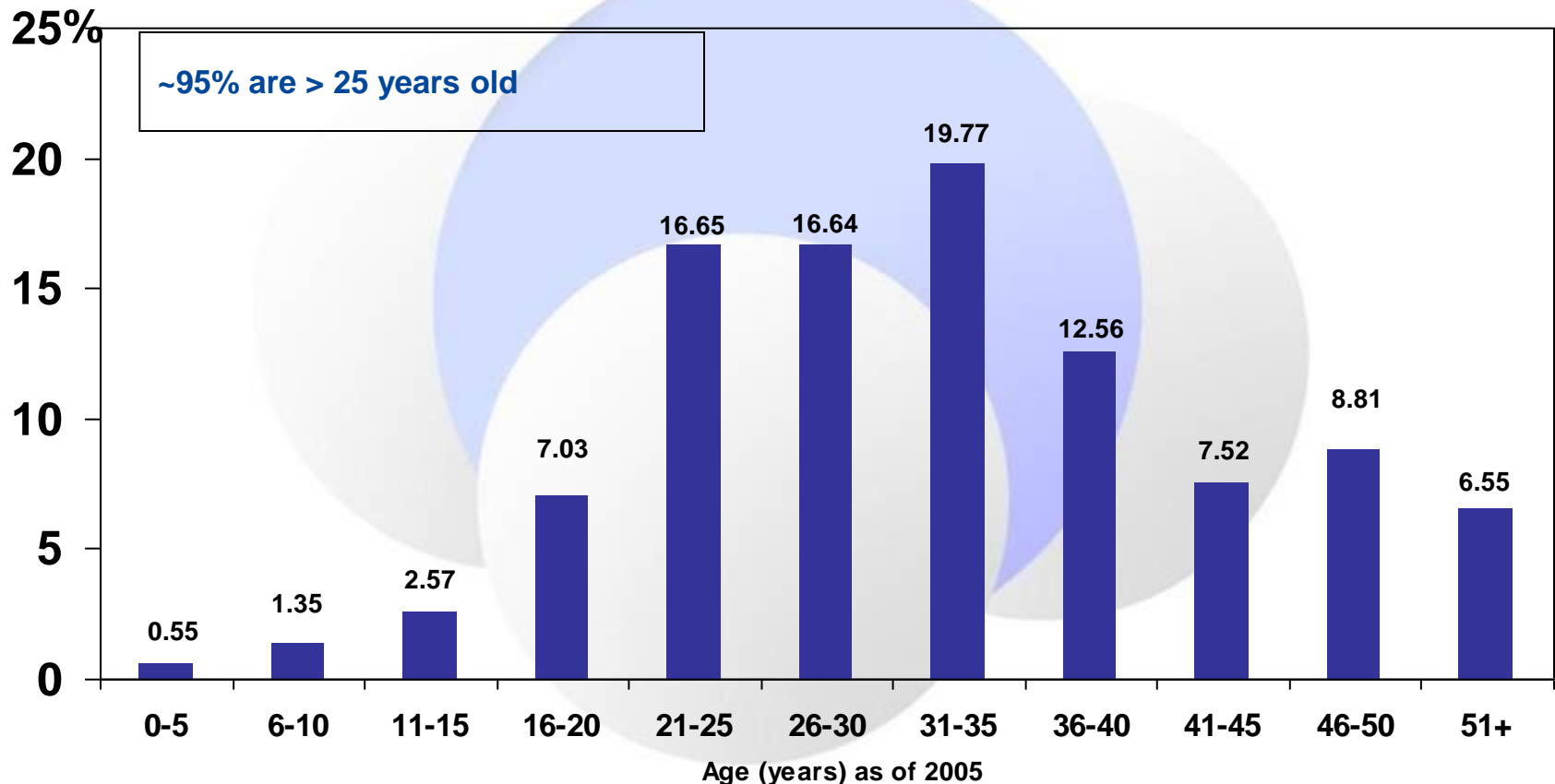
Repowering Existing Plants

- New ZEBS steam generator replaces existing boiler
- Use the existing turbines
- Size ZEBS for power plant output steam requirements
- NO production loss; no need to derate plant
- Much smaller footprint
- Capture all emissions (e.g., CO₂, S, Hg, etc.) for sale or sequestration



Repowering Opportunity

Existing U.S. Coal-Fired Capacity Percentage by Age



Source: U.S. EIA data

Low Hanging Fruit for ZEBS – U.S.

- ⌚ U.S. Retrofit/Repowering market opportunity of \$65B to \$100B for ZEBS
- ⌚ Approximately 20-30% of the 320 GW installed coal fleet
- ⌚ Older units typically >25 years
- ⌚ Smaller units typically < 300 MW
- ⌚ Units not retrofitted with NOx and SOx control

Historical Financials

<i>\$ in thousands</i>	2008	2009	2010	2011 ⁽²⁾
Revenue	\$1,730	\$4,016	\$2,874	\$2,382
COGS	2,400	4,013	2,775	2,235
Gross Profit	(\$670)	\$3	\$99	\$147
SG&A ⁽¹⁾	10,707	5,364	5,082	3,318
Operating Income	(\$11,377)	(\$5,361)	(\$4,983)	(\$3,171)

1. SG&A: Excludes non-cash option and warrant expenses, lawsuit settlements and legacy costs related to unpaid payroll taxes.

2. Year-to-date through June 30, 2011.

2012 Plan

🌀 Increase CAST Wastewater Business

- NYC Phase II and beyond
- Robust multiyear pipeline

🌀 Expand Internationally

- Several reps signed
- LOI in China already signed

🌀 Partner Deals

- Several major deals in process, some are DBOO

🌀 Commercialize ZEBS technology

- Technology developed. Pilot and funding partners are being negotiated

🌀 Recruit Top Talent

🌀 Extend our Technologies

🌀 Successful execution will result in positive cash flow in 2012

Key Investment Themes

CASSTion

- **Huge market opportunity** – \$16B addressable market
 - **Proven solution** – ~70 deployments and blue chip customer base
 - **Strong market momentum** – NYC contract signed in June '10, growing industrial pipeline
 - **AECOM Partnership** – Building momentum in the municipal market
 - **Significant Competitive Advantages** – Cost effective, rapidly deployable, High ROI
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BTCC

- **Huge market opportunity** – Market estimated to be \$1T+
- **Unique Opportunity** – TMEN provides a vehicle to invest NOW in a leading edge carbon capture technology
- **Leading IP Portfolio** – Pressurized oxy-fuel is a leading solution for zero emissions carbon management power plants
- **Strong partnership** – TMEN and Babcock provide the combined expertise necessary for a leading clean technology power plant business

The logo for ThermoEnergy features the word "THERMOENERGY" in a bold, sans-serif font. The "THERMO" part is in dark blue, and the "ENERGY" part is in a lighter blue. The letter "O" in "THERMO" is replaced by a circular icon containing a white starburst. The logo is centered over a background of three overlapping circles: a light blue circle at the top, a light grey circle at the bottom, and a white circle in the middle. The overall design is clean and modern.

THERMOENERGY

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