



CEOCFO

Interviews & News!

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The Acquisition Of CASTion Has Transformed ThermoEnergy Into A Full Service Water Resources Management Company Capable Of Playing A Key Role In Addressing Clean Water Issues By Providing Cost-Effective, Environmentally Responsible Solutions For Water Conservation, Water Reuse And Water Reclamation Technologies For Its Municipal And Industrial Clients



ThermoEnergy Corporation

Industrial Goods
Waste Management
(TMEN-OTC: BB)
www.thermoenergy.com

124 West Capitol Avenue, Suite 880
Little Rock, AR 72201
Phone: 501-376-6477



Dennis C. Cossey
Chairman and CEO

BIO:

Mr. Cossey has served as CEO and a Director since the Company's inception in 1988; being elected Chairman in 1990. He is also CEO of ThermoEnergy Power Systems, LLC, a subsidiary of Ther-

moEnergy Corporation. Mr. Cossey majored in Philosophy at the University of Arkansas, and minored in economics. Mr. Cossey's professional background includes various management positions within the investment banking, data processing, and engineering/construction industries; including such companies as American Fuel and Power, Peter Kiewit, and IBM Corporation. As CEO, Mr. Cossey oversees the implementation of the Company's overall corporate strategy. He is especially active in the areas of corporate finance, joint venture partnerships, technology acquisition, overall marketing strategy, and government relations. Mr. Cossey is active in local community affairs and maintains membership in a number of business and professional organizations including, the New York Academy of Science, Association of Energy Engineers, the US Naval Institute, the American Society of Naval Engineers, the American Chemical Society, and the National Safety Council. In addition, Mr. Cossey is one of the founding members of the Asia Pacific Water Council.

Company Profile:

Founded in 1988, ThermoEnergy is a diversified technologies company engaged in the worldwide commercialization of patented and/or proprietary municipal and industrial wastewater treatment and power generation technologies. The wastewater treatment technologies are consolidated in our subsidiary, CASTion Corporation ("CASTion"), a fast growing developer and manufacturer and supplier of innovative wastewater treatment and recovery systems to industrial

and municipal clients. The systems are unique because they meet environmental regulations while providing a rapid return on investment by recovering and reusing expensive feedstocks, reducing contaminated wastewater discharge and reusing wastewater from process operations. CASTion's wastewater treatment systems have application in aerospace, food processing, metal finishing, refineries, manufacturing and municipal wastewater. We assemble and ship our waste water treatment products from our 20,000 square foot manufacturing facility in Worcester, Massachusetts. The power generation technologies are consolidated in our majority owned subsidiary, ThermoEnergy Power Systems, LLC ("TEPS"). The economic and environmental matrix of the Company's technologies represents a paradigm shift in these key infrastructure industries. The Company currently has offices in Little Rock, AR, Worcester, MA, Hudson, MA, Jacksonville, FL, Baton Rouge, LA and New York, NY.

Interview conducted by:
Lynn Fosse, Senior Editor
CEOCFOinterviews.com

CEOCFO: Mr. Cossey, what was your vision twenty years ago when the ThermoEnergy was founded, and where are you today?

Mr. Cossey: "Like any typical start-up our focus was on one particular market we planned to go after with one particular technology. That initial technology was called Sludge To Oil Reactor System, which converted municipal sewage waste into a high-energy fuel. That technology has since been superseded by our

Thermo-Fuel Process. Since those early days, our intellectual property portfolio has significantly expanded. Its breadth and depth relevant to the municipal and industrial water resources management market is significant for a company our size. A recent milestone that really altered the entire dynamic here at ThermoEnergy was the acquisition of CASTion Corporation. CASTion is a 25-year old, award winning company, based in Worcester, MA, that manufactures custom-designed, turnkey water treatment, technologies with approximately 150 industrial systems operating in the US, Canada, Mexico and Japan. With the acquisition, ThermoEnergy has gone from a virtual company with ten employees and three technologies to approximately forty people and, forty clean water process systems. We are also developing an advance power plant design that improves plant efficiency and includes carbon capture. The company has changed almost 180% since we started; however, our original vision is still there for cost-effective and environmentally responsible solutions for wastewater treatment. It is just that our market has developed into many markets now."

CEOCFO: You mentioned you have forty technologies; please explain why you have so many technologies to offer.

Mr. Cossey: "There are probably only four key technologies; the remaining technologies support the four key technologies depending on the client's particular application or need. One of these key technologies is our Zero Liquid Discharge system, which returns virtually 100% of the water back to the client at the end of the day. Another is our Ion Exchange system that is very good at removing a variety of regulated pollutants for such key industrial applications as oil refining, chemical processing, pulp & paper, food processing, and heavy manufacturing. Our ARP process, which removes and recovers nitrogen in the form of ammonia from industrial and municipal wastewater treatment plant's

which would otherwise lead to dead zones in local waterways including such notable bodies of water as the Chesapeake Bay, Long Island Sound, Puget Sound, and Jamaica Bay. Regulators associated with these as well as other protected water resource areas in the US are looking to solve this serious and growing problem. The wastewater treatment industry, whether it is municipal or industrial is driven by two principles: regulations and the cost to meet those regulations. If you have a technology that can meet the regulations at the lowest possible cost then you are the winner. Since all of our pat-

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ents are process patents, we can use a variety of off-the-shelf components from manufacturers around the world which makes our systems both reliable and cost competitive."

CEOCFO: When you initiate the process, do you then run the service or does your customer handle that aspect?

Mr. Cossey: "We do both. On the industrial side, our clients are mainly Fortune-200 companies, such as GE, Valaro, Tyco, United Technologies, and Honeywell for example. All of these companies are experts in their particular business and have specialty engineers on staff to operate these systems successfully. In that

case, we simply sell the technologies to the client and provide a site-specific license for that particular operation. The municipal market is slightly different in that they do not typically have chemical engineers on staff. What we offer the municipal client is a "package solution" concept based on the design/build/own/operate concept for the removal of ammonia and phosphate, as well as converting their solids into a high-energy fuel. For decades, the municipal wastewater treatment industry has relied on biological treatment methods to resolve both their process and regulatory issues. Biological solutions have been very effective up to a point. Over the last ten years, there has been a spate of new clean water regulations mandated by local, state, and federal governments. Many pollutants that were once exempted have now been included under the new regulations. At ThermoEnergy we use physical chemical process technologies that have been utilized in industrial applications for decades to provide more cost-effective solutions for a client that has never really for municipal clients that have not used these type system before. As such we have received a significant amount of interest in having ThermoEnergy design, build and operate these systems for them so they can take advantage of the cost-savings as well as meet the regulations. Some of

the wastewater authorities may want to operate their own, so we are flexible in this respect, but clearly build, own and operate is one of our primary business models."

CEOCFO: Please tell us about the project you are doing for New York City?

Mr. Cossey: "New York City is one of the regions of the country that has come under more stringent state and federal regulation governing the amount of ammonia that can be discharged into local waterways. The ammonia present in the plant comes from two sources, urea present in the incoming waste stream and

from biological digestion. Ammonia is water-soluble, so when plant operators dewater the digested solids to reduce the volume of solid waste it must haul off-site they put it through a centrifuge, similar to your home washing machine spin cycle. Being water soluble, the ammonia stays with the water coming off the centrifuge; this ammonia laden stream is called centrate. Historically, this centrate stream is sent back to the front of the plant where it is discharged into the local waterways. In many parts of the country, including New York, they can no longer do this. The Centrate stream contains between 800 and 2000 parts per million of ammonia; anything over 100ppm is lethal to fish and other aquatic life.

They now have to figure out what to do with this ammonia stream. While it only represents 1% of the total daily plant flow, it typically represents 80% of their regulatory headache. Our Ammonia Recovery Process system can cost-effectively treat this Centrate stream, by removing virtually all of the ammonia, then converting it into ammonium sulfate; a commercial grade fertilizer used by agriculture around the world. Not only can we accomplish this in a smaller space, we can do it at less capital and operating cost, we lower the overall plants energy requirements and significantly reduce the air emissions of greenhouse gases, including nitrous oxide which has 310 times greater warming potential than carbon dioxide. In the case of our planned facility at New York City's 26th Ward plant we will prevent several thousand tons of greenhouse gases from entering the atmosphere annually as well as 600 tons of ammonia from entering Jamaica Bay - which fits in perfectly in with Mayor Bloomberg's new sustainable program that they have entitled 'Plan NYC, promoting the reduction of energy use, carbon emissions, as well as beneficial reuse. This is why New York City selected our ARP technology as the technology of choice to deal with their nitrogen ammonia problems."

CEOCFO: Are there many competing technologies?

Mr. Cossey: "In one sense, yes there are. On the physical chemical process side there is steam stripping, air stripping,

membrane technology, and membrane filtration, all of which were tested by New York City over a ten-year period, which included our ARP process. Also, there are biological ways of treating ammonia which is referred to as Biological Nitrogen Reduction, or BNR, of which there are several different varieties from which to choose. Again, it comes down to which process best meets the regulations at the lowest cost. ARP was the first contract signed by New York City designed to deal specifically with centrate ammonia removal. So, technically there are competitors, but in reality there are not."

CEOCFO: How do you reach your potential customer?

Mr. Cossey: "Even though there are approximately sixteen thousand publicly owned wastewater treatment plants in the US, which doesn't include the industrial side, it is still a small, close knit, community. There are eight or nine big markets such as Chicago, New York, Atlanta, Dallas, LA that drive the industry. Most of the smaller plant operators follow their lead. New York City is the leading weather vane for the industry because they have a sizeable R&D program. New York City sends teams of engineers all over the world looking for new technologies that they can adopt to achieve an economic or environmental goals. By contrast, most municipal governments have trouble meeting their daily critical services - much less being able to devote millions of dollars to wastewater treatment research and development. The best way for us to reach the municipal is through word of mouth as well as the dozens of trade journals that write about successful projects - like the one we're doing for New York City. In addition we also have an in-house sales and marketing group that calls on industrial and municipal clients. Although our current sales and marketing staff is small, we are planning to double its size during 2008. Currently we have sales offices in Jacksonville Florida and Baton Rouge Louisiana. We plan to open another in Los Angeles during the second quarter and one in Chicago during the fourth quarter during 2008."

CEOCFO: Will you tell us about your energy technology?

Mr. Cossey: "We have an interesting energy component that we have been developing over the last seven years. This effort was significantly expedited by three US government grants, totaling approximately \$2.5 million, in 2005; two with the Department of Energy and one with US EPA. Two of those grants have been successfully completed and we are working to finalize the third grant; a \$1.5 million effort sponsored by the Alaska Energy Authority in conjunction with the US EPA. These grants were designed to fast-track the development of our new zero air emission power plant design called the ThermoEnergy Integrated Power System or 'TIPS'. TIPS is based on atmospheric oxy-fuel chemistry which has been around for decades. We added the novel aspect of pressurizing the entire power plant cycle - which is the basis of our two TIPS US patents. Once pressurized, a new thermodynamic pathway for combusting coal, natural gas, heavy oil, and most biomass into energy has been created, allowing zero air emissions of NOx, SOx, particulates and mercury. In addition, we also capture CO₂, a potent greenhouse gas, in pressurized liquid form for either sequestration or beneficial reuse. We have worked closely with the Canadian Energy Laboratory (CANMET). CANMET produced an extensive 250-page scientific study that says we can build a commercial TIPS plant for about the same cost of building a conventional pulverized coal-fired power plants that doesn't offer carbon capture. Certainly we can build it much cheaper than alternative technologies such as Internal Gasification Combined Cycle (IGCC), a technology, which has been heavily promoted for over a decade by many in the power industry as the next Clean Coal technology. The CANMET study concludes that TIPS looks to be much more promising from both an economic and environmental standpoint. TIPS represents a tremendous business opportunity for the company going forward. In fact we are in the process of negotiating a joint venture with a large, well-known company in the energy industry that supplies key power plant components for coal-fired and power plants to jointly pursue the commercialization of TIPS. So we are understandably excited about the opportunities here. Although we are a few months away

from designing and building a large-scale multi-megawatt prototype plant, we are still years ahead of other so-called carbon capture technologies, many of which still remain in the planning phase.”

CEOCFO: What is the financial picture like for the company?

Mr. Cossey: “A year and a half ago we were seriously looking for additional capital. Fortunately, since that time we have completed two rounds of private equity funding totaling \$17.5 million. The last round was a \$12 million commitment from a private Family Trust brokered by the investment banking firm of Merriman Curhan & Ford, based in San Francisco. This investment carries the possibility of bringing in another \$30 million behind that if the Company achieves certain milestones. This investment allowed us to complete the CASTion acquisition, as well as allow management to position the company to take the fullest advantage of the technologies we have spent the last fifteen years developing. All of our water technologies are commercially viable. We are investing considerable money in building up our CASTion division and increasing its pro-

duction capability and thus its market share. I don’t want to sound over confident, but our technologies are addressing a number of critical needs in the water industry and as such we expect sales to ramp up quickly. As one trader on AMEX told me recently “water is the new oil.” The challenge is not so much selling the technologies as it is being able to deliver what we sell. For the first time, ThermoEnergy can actually design, manufacture, fabricate, deliver, install, and operate all of its patented and proprietary process equipment. Only a year ago we would have had to outsource each of these services.”

CEOCFO: In closing, why should potential investors pick ThermoEnergy out of the crowd?

Mr. Cossey: “I think the core issue lies in what separates us from the rest of the companies in our space. If you look at the water industry from a global standpoint, there are eight to ten companies that dominate the market. There are two French water companies, two or three British waste-water companies along with Siemens and GE, and to a lesser extent, US Filter. Below that level the market

becomes somewhat fractured. A large part of this market is populated by mostly small companies which tend to offer only one or two technologies. In addition, they tend to be very parochial, marketing to a small geographic area and limited client base. Because of the breadth and depth of our technology portfolio, we are attracting a great deal of interest from larger, well known companies whose core business is in wastewater treatment. We are attractive to them because we have proprietary technologies that meet current regulatory needs at a lower cost. The other reason is because we feel we are way undervalued at the moment. Even though we are a publicly traded company we have never done an IPO, therefore, have no retail support or analyst coverage. The only people that currently follow the company are people that have already invested. We think that when our story gets picked up by the mainstream media, and people start to see what we have to offer, we feel we represent a bargain with lots of upside potential. Obviously a year or two down the road that bargain is not going to be quite as good as it is today.”

Additional information on the Company and its technologies can be found on its website at www.thermoenergy.com, or www.castion.com for wastewater treatment specific information.



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