Zacks Small-Cap Research

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Midwest Energy Emissions (MEEC-OTCQB)

MEEC: EPA's Response to Supreme Court's ruling does not change MATS

OUTLOOK

Midwest Energy Emissions is well-positioned to benefit from the reduction of mercury emissions program of the EPA. The company has exclusive rights to SEA™ Technology for the reduction of mercury emissions by coal-fired electric generating units. The technology has been commercially deployed and provides many advantages, including low cost of operation, flexibility for optimization and preservation of fly ash marketability. The EPA's response (which conforms to the Supreme Court's ruling) contains no changes to MATS and appears not to be delaying the installations planned by Midwest Energy's customers.

Current Recommendation	**Buy**
Prior Recommendation	Hold
Date of Last Change	09/27/2015
Current Price (01/13/16)	$0.57
Six- Month Target Price	**$1.00**

SUMMARY DATA

52-Week High	**$0.83**
52-Week Low	**$0.25**
One-Year Return (%)	**-5.00**
Beta	**-2.71**
Average Daily Volume (shrs.)	**33,198**
Shares Outstanding (million)	**47.19**
Market Capitalization ($ mil.)	**$26.90**
Short Interest Ratio (days)	**N/A**
Institutional Ownership (%)	**38**
Insider Ownership (%)	**45**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/A**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**N/M**
P/E using 2016 Estimate	**N/M**
P/E using 2017 Estimate	**9.3**

Risk Level	**Above Average**
Type of Stock	**Small-Growth**
Industry	**Pollution Control**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2014	0.00 A	0.88 A	1.37 A	0.54 A	2.79 A
2015	0.24 A	2.70 A	3.63 A	1.60 E	8.16 E
2016					17.98 E
2017					38.36 E

Earnings per Share
(EPS is operating earnings before non recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2014	-$0.09 A	-$0.04 A	-$0.05 A	$0.06 A	-$0.13 A
2015	-$0.16 A	$0.01 A	-$0.02 A	-$0.04 E	-$0.20 E
2016					-$0.06 E
2017					$0.06 E

Zacks Projected EPS Growth Rate - Next 5 Years % **N/A**

Quarterly EPS may not equal annual EPS total due to rounding.

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KEY POINTS

- The U.S. Environmental Protection Agency's Mercury and Air Toxic Standards (MATS) have created a multi-billion dollar market for mercury remediation solutions.
- Midwest Energy Emissions is **well-positioned** to benefit from the full implementation of MATS in its final form.
- The company holds exclusive rights to 30 patents and patents-pending related to mercury removal processes developed by the Energy & Environmental Research Center, including SEA™ Technology.
- SEA Technology provides an operationally-effective and cost-effective mercury emissions solution that is flexible to accommodate a broad range of configurations of coal-fired power plants fueled by varying coal types.
- SEA Technology has been successfully demonstrated over 40 times at large operating power plants across the United States and Canada.
- Midwest Energy Emissions achieved its first **commercial installation** of SEA Technology in late 2011. The client, a major West Coast utility, renewed its three-year contract in May 2014.
- Thus far, the company has won five contracts with spanning 15 Electric Generating Units (EGUs) across eight power plants.
    - a **West Coast utility** with two EGUs
    - a **major U.S. power producer** for 9 generating units
    - two separate utility **cooperatives in the Southwest**, each with one EGU
    - a large **northern Midwest utility** with two EGUs
- **Management is maintaining its current timetable for the installation of mercury emissions control systems**. Currently, six EGUs are operational, and the remaining nine units under contract are scheduled to be commissioned in 2016.
- Under the current contracts, by the end of 2016, when management expects all 15 systems to be under compliance and operational, each EGU on average should be generating approximately $2.5 million of revenue annually. **Management continues to estimate that product sales, equipment installations and consulting services will generate over $110 million over the terms of existing contracts**.
- Deferred revenue (for expected installations) was over $5.3 million as of September 30, 2015.
- As the company's mercury emission control systems come online during 2015 and 2016, Midwest Energy Emissions should gain further traction within the marketplace as managements of coal-fired utilities seek more cost-effective mercury emissions solutions.
- Midwest Energy Emissions has international blue sky market opportunities. The company holds the exclusive rights to SEA Technology patents in Europe, Canada and China, and the Minamata Convention on Mercury should bolster international demand for the company's mercury remediation solutions.
- Having invested over $10 million through multiple purchases of convertible debentures, Alterna Capital Partners is financially committed to Midwest Energy Emissions. Alterna also contemplates additional investments of up to $1.2 million on or before June 30, 2016.
- **The EPA has responded to the Supreme Court ruling** in the Michigan et al v. EPA case. The **proposed supplemental finding** considers costs of the emissions limits and determines that the agency's requirements for compliance with MATS and the implementation timetable are achievable with power generators being able to absorb the anticipated compliance costs while remaining operational.
- We maintain our Buy rating and price target of $1.00.

RECENT NEWS

EPA Addresses Cost Considerations for MATS

On November 20, 2015, the EPA proposed a notice supplementing the Mercury and Air Toxics Standards (MATS) which addresses the U.S. Supreme Court's decision in Michigan et al v. EPA that was ruled upon on June 29th. In the proposed supplemental finding, the EPA concludes that the inclusion of a consideration of cost does not alter its previous determination that it is appropriate to regulate air toxics (including mercury) from coal- and oil-fired electric utility steam generating units. The EPA is accepting comments for 45 days (or until January 15, 2016) on the supporting document (aka Legal Memorandum), which was published in the Federal Register on December 1, 2015.

Briefly, the EPA concludes that the agency is required to focus on potential hazards to public health and the environment, where cost is one of the several factors that must be considered, but not the predominant or overriding factor. In addition, while determining the appropriateness of regulating emissions from EGUs, "it is reasonable to focus on whether the power sector can reasonably absorb the cost of compliance with MATS," and it is "important to account for the full range of benefits associated with the action."

The EPA conveyed that, after the regulations were issued to reduce non-mercury metal, acid rain and organic hazardous air pollutants (HAP), significant research resulted in the development of more cost-effective pollutant controls, which is also likely in the effort to reduce the costs of compliance with MATS. The EPA specifically citied that the "new, more effective mercury sorbents and other control strategies have been developed prior to and during the MATS rulemaking process" further supporting the EPA's expectation for a decrease in the cost of mercury controls in the future. **The technology of Midwest Energy Emissions clearly fulfills the EPA's conclusion.**

After considering the power industry's ability to comply with MATS and maintain its ability to generate, transmit and distribute electricity at reasonable costs to consumers, the EPA determined that the costs and impacts of MATS are reasonable and that the power sector can reduce mercury while continuing to provide affordable, reliable electricity. The EPA concludes that "this analysis indicates that the vast majority of the generation capacity in the power sector directly affected by the requirements of MATS would be able to absorb the anticipated compliance costs and remain operational."

Janet McCabe, Acting Assistant Administrator for the Office of Air and Radiation of the EPA, noted in November 2015 that "the vast majority of power plants began making the pollution reductions needed to meet their MATS requirements in April of this year and the rest will begin doing so in April of 2016" and that "the steps that many plants across the country have already taken to reduce toxic air emissions and comply with the final standards show that the standards really are achievable."

In December 2015, the U.S. Court of Appeals for the District of Columbia Circuit allowed **MATS regulations to remain in place** while the EPA responds to the Supreme Court's ruling.

Financial Results for Third Quarter

On November 17, 2015, Midwest Energy Emissions announced results for the third quarter ending September 30, 2015; the stock rallied 5.7% on the news. The company reported a **164% increase in total revenues** (equipment sales and delivered product sales) from $1,373,293 to $3,625,858. Equipment sales for two new installations generated revenues of $1,238,897 versus no revenues from new installations in the comparable quarter last year while delivered product sales increased 86.5% to $2,386,961 versus $1,280,043 in the third quarter last year. Delivered product revenue included both product deliveries for equipment commissioning activities at six customer sites (the two new installations completed during the quarter plus the four new installations completed earlier in 2015) and product deliveries associated with operations at EGUs.

Management estimates that the design and installation of front-end injection equipment (and in some cases with the installation of back-end systems, along with product sales, will generate over $8 million in equipment sales during 2015. Thus far, during the nine months ended September 30, 2015, the six installation projects generated $3,205,936 in equipment sales. Management expects that the remaining balance of deferred revenues will be recognized as revenue during the fourth 2015 when equipment is commissioned for use by the customers. At the end of the third quarter, deferred revenues on the balance sheet were $5,342,400. **Management continues to estimate that product sales, equipment installations and consulting services will generate over $110 million over the terms of existing contracts**.

Total operating expenses increased 45.8% to approximately $3.85 million, driven by a 172% (or $1,423,021) increase in cost of goods sold, which was primarily associated with the cost of equipment sold to customers and recognized as revenue during the third quarter of 2015, and partially offset by a 80.1% decrease (or $375,269) in stock-based compensation. Operating expenses increased $157,830 (or 33.6%) from $469,370 to $627,200 primarily attributable to increased labor and technical consulting costs were incurred as the company assisted its customers with testing in preparation for compliance with MATS, as well as higher salary and overhead costs associated with the company's operations staff. Depreciation & amortization decreased 45.8% (or $87,316) to $103,462, which is attributable to the use of accelerated depreciation on equipment held at a customer site. Interest expense increased 26.7% to $905,713 versus $714,852 during the third quarter of 2014.

The company reported a net loss of $1,154,845 (or $0.02 per diluted share) versus a loss of $1,981,719 (or $0.05 per diluted share) in the third quarter of 2014. The **41.7% decrease in the net loss** was primarily driven by the revenue 164% increase as operational expenses disproportionately increased only 45.8%. Average shares outstanding increased 16.6% as shares outstanding increased 17.9% YOY to 47,194,118. **Management plans to hold quarterly conference calls** to review financial and operational results **sometime in 2016**.

Financings

On November 16, 2015, Alterna Core Capital Assets Fund II LP (a private an equity fund managed by Alterna Capital Partners) increased its investment in Midwest Energy Emissions having been issued **$600,000** in 12% Senior Secured Convertible Notes along with 3.6 million warrants exercisable at $0.35 per common share. Alterna Capital Partners is committed to Midwest Energy Emissions. Having made an initial investment of $10 million in convertible debt during August 2014 ($3 million of which was repaid in March 2015), Alterna can make additional investments of up to $1.4 million on or before June 30, 2016 under the terms of the Financing Agreement.

On November 30, 2015, Alterna Core Capital Assets Fund II LP was issued **$71,774** in 12% Senior Secured Convertible Notes and on December 31st, an additional **$77,368** in 12% Senior Secured Convertible Notes were issued, elevating the aggregate amount beneficially owned by Alterna Capital Partners to 34,527,362 shares, representing 49.6% of MEEC.

These financings are allowing Midwest Energy Emissions to execute on continued preparations and installations of SEA™ Technology at power plants currently under contract.

Business Development and Investor Relations

Representatives of Midwest Energy Emissions plans to attend the **Energy Generation Conference** to be held January 26- 28, 2016 at the Bismarck Event Center in Bismarck, ND.

In addition, a **new Corporate Presentation** was uploaded to the company's website in early January 2016.

OVERVIEW

Headquartered Lewis Center, Ohio, Midwest Energy Emissions Corp. (MEEC) provides patented mercury capture solutions for coal-power plants whose mercury emissions exceed the U.S. Environmental Protection Agency's Mercury and Air Toxic Standards (MATS). **The company has successfully commercialized its Sorbent Enhancement Additive (SEA™) Technology**, which can achieve mercury removal levels that are compliant with MATS at a significantly lower cost than other methods while preserving the quality (and hence the marketability) of fly-ash, a by-product from the coal burning process. The company holds exclusive rights to 30 patents and patents-pending related to a mercury removal processes developed by the Energy & Environmental Research Center (EERC) and has a close and mutually beneficial relationship with the EERC Foundation, which aids in the commercialization EERC's research efforts. The company's holistic **cost-competitive solution** for mercury emission control is a proven, effective technology that reduces mercury emissions to MATS-compliant levels over a wide range of plant configurations and coal types.

The EPA's **MATS have created a multi-billion dollar market for mercury remediation solutions**. MATS require that all coal-fired Electric Generating Units (EGUs) larger than 25 megawatts (MW) remove approximately 90% of mercury from their emissions beginning April 16, 2015. On a plant-by plant basis, power plant operators must find an economical feasible method to upgrade existing plants in order to comply with MATS; otherwise, non-compliant plants could be forced to be decommissioned, which will affect the capacity, reliability and supply attributes of the associated electric networks.

The process of commercializing any pollution control technology or method within the utility industry is a lengthy and expensive process, which involves the migration of a technology from the laboratory to commercial-scale demonstrations and then to contract signings, installations, testing and finally commercial operations. SEA Technology has been successfully demonstrated over 40 times at large operating power plants across the United States and in Canada.

Midwest Energy Emissions is deploying what appears to be the industry's most cost-effective solution for coal power plants to comply with MATS. Management and the EERC believe that the SEA Technology process with an optimized blend of sorbents is the most efficient, cost-effective manner to capture mercury. **SEA Technology provides an approach that optimizes the mercury capture process while minimizing the cost of injected materials**. As a result, SEA Technology lessens the total amount of sorbent injected, thereby reducing the cost of MATS compliance. **The technology is also flexible**, allowing Midwest Energy's consumable products to be formulated specifically for a coal-fired unit and its coal-fuel-type. Importantly, the process has less operational impact with minimal corrosion to the plant's equipment and preserving the marketability of fly ash, an important ancillary revenue stream for power plants.

The company's primary consumable products are **SF-10** (a front-end sorbent enhancement additive) and **SB-24** (a back-end carbon sorbent). SF-10 conditions the flue gas enhancing the ability of mercury to be removed with the company's proprietary back-end sorbent products. The company also can provide a non-carbon approach with a back-end carbon-free sorbent, **SB-26**, if a customer desires.

Management is executing its plan to sign multi-year contracts, deliver and test mercury emissions removal equipment and supply sorbent for three-year contract periods. The company has been **awarded five contracts encompassing 15 EGUs**. Management's strong marketing efforts resulted in many successful demonstrations in 2013 and 2014, which altogether exceed 40 in number since SEA Technology was invented. However, the company has many more opportunities in its sales pipeline, especially utilities that have not yet committed to a mercury remediation solution and also companies currently under contract with competitors but dissatisfied with the high cost of their current solution.

Also, Midwest Energy Emissions has **international market opportunities**. The company holds the exclusive rights to SEA Technology patents in Europe, Canada and China. SEA Technology has been

successfully demonstrated for a few large utilities in Canada, where raising mercury capture regulations is being contemplated. Since 2012, a nationwide mercury reduction agreement has required a 60% reduction, which will likely be raised to an 80% reduction beginning in 2018. Individual provinces may require more strict emissions control sooner. China has promulgated emission regulations, but has yet to implement mercury reductions. In October 10, 2013, 140 nations (including the US, Canada, China, Germany, Netherland and the U.K.) signed the Minamata Convention on mercury, an international treaty that recognized mercury is a chemical of global concern and addresses the reduction of emissions of mercury and mercury compounds. Long-term, there is **blue sky potential** for international demand for the company's mercury remediation solutions.

Financings

Since inception, Midwest Energy Emissions has raised over $17 million in capital financing, most significantly a private placement of a $10 million 4-year 12% senior secured convertible note and warrants with an affiliate of Alterna Capital Partners, LLC in August 2014. Interest on the convertible note is payable in kind (PIK) in the first year, 2% cash and 10% PIK in the second year (through August 13, 2016) and entirely in cash thereafter. Through participation in various tranches of financings, Alterna Capital Partners is deemed to be the beneficial owners of 34,527,362 shares of MEEC (as of December 31, 2015).

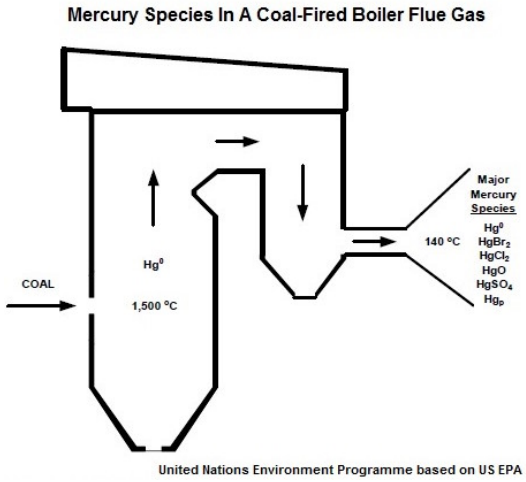
SEA™ TECHNOLOGY

Utilizing a patented Sorbent Enhancement Additive (SEA™) Technology, Midwest Energy Emissions is able to offer at lower-cost option to utilities so that their coal-fired units can achieve compliance with MATS while maintaining the marketability of the fly ash by-product. Developed by researchers at the EERC, the company's SEA Technology utilizes the application of sorbent enhancement additives to promote the oxidation of elemental mercury in preparation for adsorption by uniquely formulated blends of sorbent products.

Mercury is emitted from coal-fired boilers in three basic forms: elemental mercury (Hg^0), oxidized mercury (Hg^{2+}) and particulate-bound mercury (Hg_p). **Compliance with MATS requires that the <u>total</u> of all three forms of mercury be measured and reduced.** The ratio of elemental to the oxidized forms of mercury emitted from combustion is highly dependent on the type of coal that is combusted. By and large, bituminous coal-fired boilers emit primarily oxidized mercury while the majority of mercury produced by low rank coal-fired (subbituminous and lignite) boilers is elemental mercury.[i] The strongest factor for this generalization is that the relatively high concentrations of halogens, such as chlorine and bromine, in bituminous coals results in the oxidization of elemental mercury to form oxidized mercury, primarily the mercuric halides ($HgCl_2$ and HBr_2). In contrast, both subbituminous and lignite coals not only have lower quantities of halogens, but also higher amounts of alkaline material (such as calcium and sodium) than bituminous coals. The halogens from the combustion of subbituminous coal and lignite have a tendency to react with the alkaline materials with the result that little halogen oxidizes the elemental mercury.[ii] Though in aggregate, roughly 60% of the mercury emitted by coal combustion is elemental mercury and 40% is oxidized mercury.[iii]

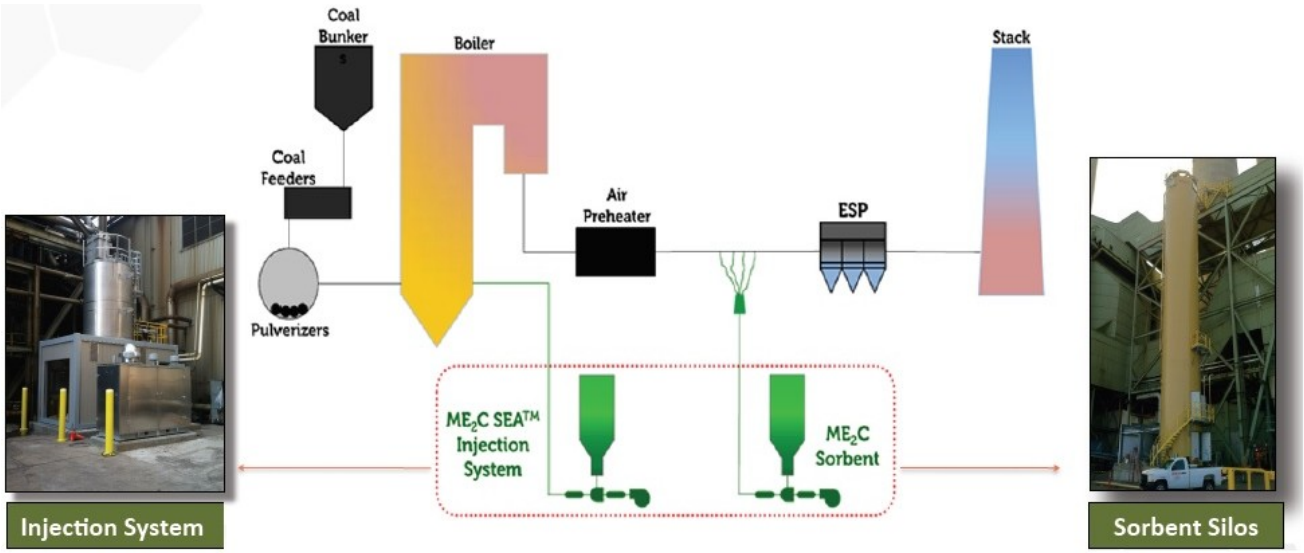
Elemental mercury is very difficult to capture and remove because, by definition, it is in its elemental form (a single atom with a neutral charge). Elemental mercury is the most difficult to remove from flue gas since it is practically insoluble in water, and hence, not typically removed by wet processes like flue gas desulfurization (FGD) systems aka scrubbers. However, **oxidized mercury** is reactive in that it more easily deposited and captured by sorbents. Through the chemical reaction by which oxidized mercury is formed, it becomes charged allowing its efficient capture by pollution control devices. It is highly soluble in water, and therefore, readily captured in wet scrubbers. **Particle-bound mercury** is condensed on the fine fly ash particles emitted by coal-fired boilers. With charged components, Hg_p sticks to surfaces and is

readily removed by pollution control devices designed to remove particulates (bag houses/fabric filters, electrostatic precipitators and scrubbers) and also by activated carbon.



The use of a Brominated Activated Carbon (BAC) injection system is the most common method used today to oxidize elemental mercury, primarily since BAC is more effective than Standard Powdered Activated Carbon (PAC) for removing mercury from flue gas of boilers burning low chlorine content coal. However, the cost of operation can become uneconomical, since the injection of activated carbon sorbent is only cost-effective at capturing about 60% of the mercury emissions, at which point diminishing effectiveness is achieved by the injection of additional sorbent. For some 1,000 MW coal-fired units, the cost to achieve a 90% reduction in mercury emissions can exceed over $10 million per year.

Midwest Energy Emissions can provide a MATS-compliant process, along with custom-blended halogenated front-end sorbent enhancement additives and back-end sorbents, for an effective and cost-competitive solution for controlling emissions mercury in coal-fired units. The use of SEA Technology, namely the proprietary additives and sorbents, costs around $2.5 million annually, depending on size of the EGU, the coal being combusted and the amount of time the plant is being operated. In addition, the fly ash by-product remains marketable, which may not be the case in a BAC system. Fly ash is fine, powdery matter collected by the fabric filters and electrostatic precipitators, which is mostly utilized by the cement/concrete industry, but also for structural fills (such as embankments), the stabilization of waste materials and road bases. The sale of fly ash represents an opportunity for utilities to both increase revenues and reduce costs.



Midwest Energy Emissions provides a process that can be fine-tuned to achieve optimum efficiency, by tweaking not only the **location and method of injection** of products, but especially the **blend and reactivity** of sorbents. The company's solution for 90%+ mercury emissions reduction is a **two-step process** that can be fine-tuned to the unique configuration of the customer's EGU and the coal type being combusted. The **first step** involves the introduction of **flue gas conditioning products** that promote the conversion of elemental mercury to oxidized mercury and particulate-bound mercury, which are more easily captured in downstream devices.

SF-10, Midwest Energy's proprietary and patented sorbent enhancement additive flue gas conditioner, is **injected into the coal-fired boiler** by MEEC's injection system. The SF-10 immediately gasifies and migrates throughout furnace system promoting mercury oxidation. With a keen understanding of the complex interactions among elemental mercury, sorbent enhancement additives and flue gases, along with the role and impact that these various components of flue gas have on chemisorption, EERC designed SEA Technology to maximize the conversion of elemental mercury to oxidized mercury while minimizing the amount of injected sorbent enhancement additives. The location of front-end injection **optimizes the residence time** for these reactive conditioning products to oxidize the elemental mercury. Promoting mercury oxidation through catalytic processes and materials is a key feature of SEA Technology and only requires the use of a relatively small amount of sorbent enhancement additive. In addition, the amount of SF-10 being injected is adjusted to the unique requirements of each client's system to ensure benefit-to-cost performance.

The cost of installing the **front-end injection system** is roughly $500,000; however, Midwest Energy Emissions sells its front-end and back-end products for the duration of the contract, which normally costs the utility approximately $2.5 million annually per EGU. Typically, the lower operating costs can provide a 4-to-5 month payback on the front-end capital equipment when compared to current costs of operating a Brominated Activated Carbon system.

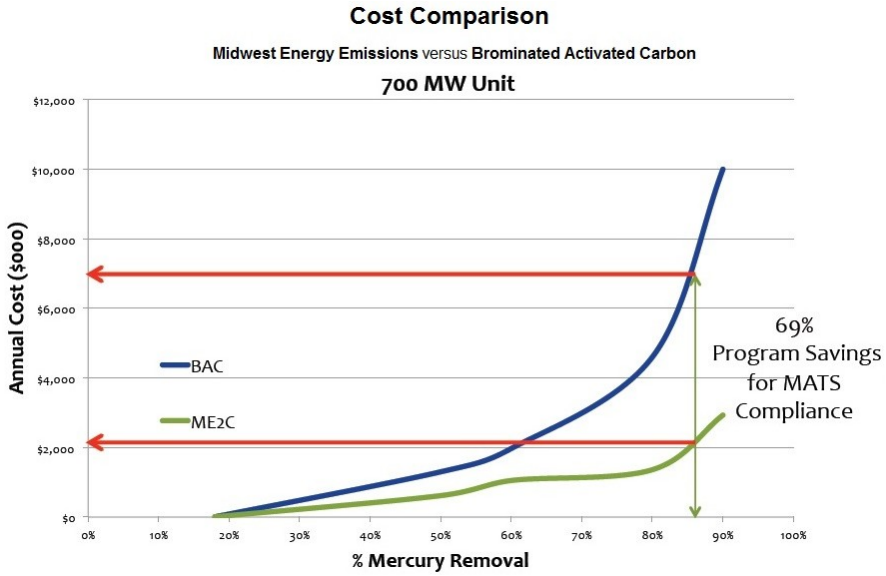
SEA Technology's **back-end injection system** is located up-stream (prior) to the particulate matter (PM) equipment, principally bag-house and electrostatic precipitator. Midwest Energy offers a variety of products for introduction into the mercury-contaminated flue gas stream, with the most-used product being SB-24. The fine sorbent particles of the sorbent are injected through a flue gas duct, where the now more reactive, oxidized mercury contacts the sorbent and attaches to its surface so it can be collected. The pregnant sorbent is removed from the flue gas stream, along with the fly ash, in the bag-house or electrostatic precipitator. The cost of the back-end system is in the $1.0-$1.5 million range, but an injection silo must be installed in all cases when MATS-compliance cannot be achieved. This back-end injection system is common to almost any mercury collection technology in the industry, and not unique to SEA.

SB-24 is the mainstream sorbent product of Midwest Energy Emissions and designed to provide active capture sites for mercury absorption. The proprietary blend performs well across all known boiler configurations and most coal types without impacting fly ash quality. SB-24 is the company's most effective and least cost-per-pound sorbent.

The SEA Technology process has been proven to be effective over a broad range of coal types and configurations of coal-fired power plants. Midwest Energy provides an approach that optimizes the mercury capture process while minimizing the cost of injected sorbents. The optimal combination is determined through extended parametric testing of various combinations of front- and back-end products to determine the arrangement that exhibits optimum mercury removal rate at the minimal consumption of sorbent material. Depending on the existing air pollution control equipment and the type of coal being burned, the SEA Technology system can also be tailored on-the-fly through adjustable sorbent enhancement additive and sorbent feed rates. As a result, SEA Technology lessens the total amount of sorbent injected thereby reducing the cost of MATS compliance.

A **case study** was performed in which mercury removal and costs were monitored through parametric testing of the use of both SEA Technology proprietary sorbents and Brominated Activated Carbon at the

same 700 MW EGU powered by subbituminous coal. The results (depicted in the graph below) clearly indicate that Midwest energy's SEA Technology is vastly superior to BAC in terms of cost and effectiveness.



Attaining 80%+ mercury reduction levels at low rank coal- EGUs by injecting Powdered Activated Carbon or Brominated Activated Carbon has proven to be challenging and, in most cases, uneconomical. The higher volumes of injectant not only can increase annual injectant costs to the $5 million to $20 million range, but also potentially can creates severe operational issues, including corrosion of the plant's equipment and the degradation of the fly ash by-product, which renders it unsuitable for sale.

COMMERCIALIZATION OF SEA TECHNOLOGY

Lead times for the selection of mercury emissions control solutions are long, with power producers requiring demonstrations in order to evaluate and assess the effectiveness and costs of competing pollution control systems. Since SEA Technology is both operationally effective and cost-effective, management anticipates that demonstrations will often yield commercial contracts.

Midwest Energy's initial client was a **West Coast utility** with the contract being signed in late 2010. The utility had parametrically tested various mercury emission control systems at **one** of its two 730-MW Electric Generating Units (EGUs) located at a power plant in the Pacific Northwest. Midwest Energy's method of employing SEA Technology achieved a mercury capture rate that exceeded the required MATS compliance limit at the lowest cost. State mercury emissions regulations and grass roots pressure required the early implementation of the reduction of mercury emissions. The company's system was commissioned into operation in September 2011, and compliance operation began in December 2011. The company attained a significant milestone with this **first commercial installation** of SEA Technology. A **second system** was also installed at the utility's other 730-MW EGU. The systems are used when the EGUs are in operation, usually during peak demand periods of the year.

In August 2012, a major **Southwestern U.S. power producer** contracted Midwest Energy Emissions to perform a demonstration of the company's mercury removal technology at one of the power producer's generating units. After the initial demonstration in the fall, the power producer contracted for additional demonstrations on three of the larger generating units at different plant sites for the spring of 2013.

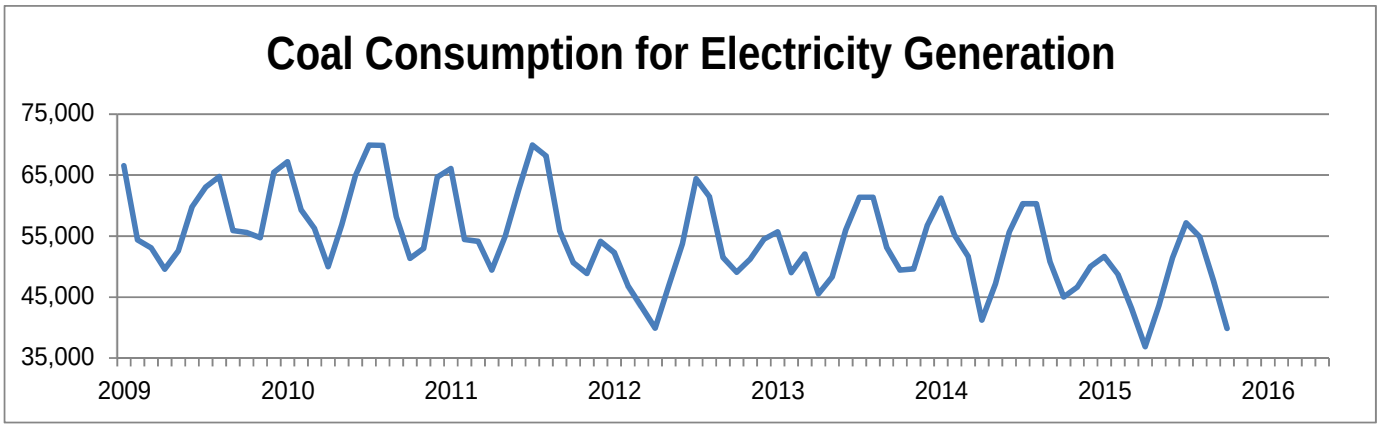
By the spring of 2013, Midwest Energy Emissions had performed 23 demonstrations of the SEA Technology in North America. In April 2013, a major **U.S. electric utility in the Midwest** contracted for a

demonstration in early-summer. The Southwestern and Midwestern utilities then requested additional demonstrations, which were completed in late-summer.

By the end of 2013, Midwest Energy Emissions had conducted **31 demonstrations** of its patented SEA Technology on the power generating units of potential customers. The demonstrations were carried out across many coal types and the majority of utility system designs. In addition, management attended trade shows including participation at the EERC Air Quality Conference during October 2013 in Arlington, Virginia. Midwest Energy's CEO Alan Kelley served as Session Chair for "Hg Control – Sorbent Injection" and Marc Sylvester, VP of Sales, made a presentation entitled "MATS Compliance Programs for Mercury with Various PM Equipped Units." The company's participation cultivated interest with potential clients who were planning for compliance with mercury emissions regulations.

As a result of the management's marketing efforts since 2012 and subsequent demonstrations during 2013, 11 coal-fired electricity generation units came under contract during the first quarter of 2014, bringing the total to 13 at that time. The first commitment was from a **major U.S. power producer** for **9 generating units**, which are expected to come online in early 2016. Management estimates that by 2016 the relationship will be generating approximately $30 million annually, with initial revenues beginning in 2014. The second contract announced was for a **single EGU** with a large coal-power **cooperative in the Southwest US** The installation of the SEA system, which included a newly-designed mercury-control feeder system, occurred in 2014. The company estimated that the sorbent supply contract should generate $2 million of revenues annually beginning in early 2015. The third commitment was a contract with a large utility **cooperative in the Southwest US** for a single EGU. The system installation is expected to have generated revenues of $ 2.4 million in 2015, and the three-year supply contract should generate revenues of $4 million per year annually beginning in 2016.

Seasonal Consumption of Coal for Domestic Electricity Generation



In May 2014, the company's initial customer, located on the West Coast, **extended the contract for its two coal-fired electric generating units** for additional three years. The contract extension serves as an indicator of the customer's level of satisfaction with Midwest Energy's Sorbent Enhancement Additive solution. Obviously, the operational performance of SEA Technology has more than met the utility's expectations. The supply contract is expected to generate approximately $3 million in revenues per year starting when MATS takes effect in the second quarter of 2015. To date, revenues derived by supplying sorbent to the customer has been less than the $3 million potential due to lower reduction rates required by state regulations and the seasonal operation of the two EGUs, which are used to satisfy peak demand periods in the summer and winter.

In June 10, 2014, Midwest Energy Emissions **opened a mixing and distribution facility** in Freestone County, Texas. The 7,000 sq. ft. facility will support its customers' mercury-capture projects in the Southwest region of the U.S. Also, in the first half of 2014, Midwest Energy Emissions designed a **new mercury-control feeder system** that can operate in both enclosed and outdoor environments. Also, the space required for system operations was reduced. In July, the company delivered the first of its newly-

designed mercury control feeder systems to a major utility customer. Four demonstrations were performed at the sites of potential customers during 2014. In November 2014, a large coal-power producing **electric utility in the upper Midwest** contracted for the company's mercury emissions control systems on a **dual-unit power plant**, bringing the total to 15 EGUs.

During 2014, Midwest Energy Emissions generated $2.79 million in revenues, of which $2.45 million was derived from product sales used in operating and testing SEA Technology systems. As of December 31, 2014, the company recorded $5.81 million as deferred revenues representing advance payments received for system installations, which will be recognized as revenues once the equipment is delivered and commissioned.

As the company's mercury emission control systems come online at the additional 13 EGUs during 2015 and 2016, management expects to gain further traction within the marketplace beyond its current 1.7% market share.

On April 2, 2015, Midwest Energy Emissions announced the launch of its proprietary **Mobile Emissions-Analysis Lab**. Having completed field-testing, the mobile lab can gather on-site mercury measurements to better understand each power plant's specific operations, which are unique to each EGU's configuration and type of coal being combusted. The lab is also able to measure and monitor other gas components (such as CO2, CO, SO2, O2 and NOx) and Midwest Energy's injected products.

Management has provided some guidance as to the expectation of anticipated revenues to be generated from the installation of mercury emission control systems and from the sale of sorbent thereafter. These estimations have been incorporated into our income statement model.

- Revenues from system installations are anticipated to be $8 million in 2015.
- Management anticipates that Midwest Energy Emissions will become free cash flow positive in 2016, when it is expected that all 15 EGU's will have begun full MATS compliance activities.
- By the end of 2016, all 15 systems are expected to have been installed and be operational. On average, each EGU should be generating approximately $2.5 million of revenue annually.

EPA's MERCURY AND AIR TOXIC STANDARDS (MATS)

The first Federal legislation pertaining to air pollution was the Air Pollution Control Act of 1955, which provided funds for air pollution research. Subsequently, the Clean Air Act of 1963 established a federal program to monitor and control air pollution. However, the Clean Air Act Amendments of 1970 required federal and state air pollution regulation and expanded enforcement authority. The Environmental Protection Agency (EPA) was established to research and monitor the environment, and also to set standards and enforce those standards in order to protect the environment. The Act was again amended in 1977.

The adoption of the **Clean Air Act Amendments of 1990** not only further expanded the scope of air pollution regulation and increased the EPA's authority, but also specifically targeted acid rain, ozone depletion and toxic air pollution. Prior to 1990, only seven air pollutants[iv] were monitored and controlled by the EPA. However, The 1990 Amendments under Section 112(b)(1) identified 189 hazardous air pollutants and set into motion the process of establishing emission standards and enforcing emission limitations by requiring the installation of controls or by changing production processes.

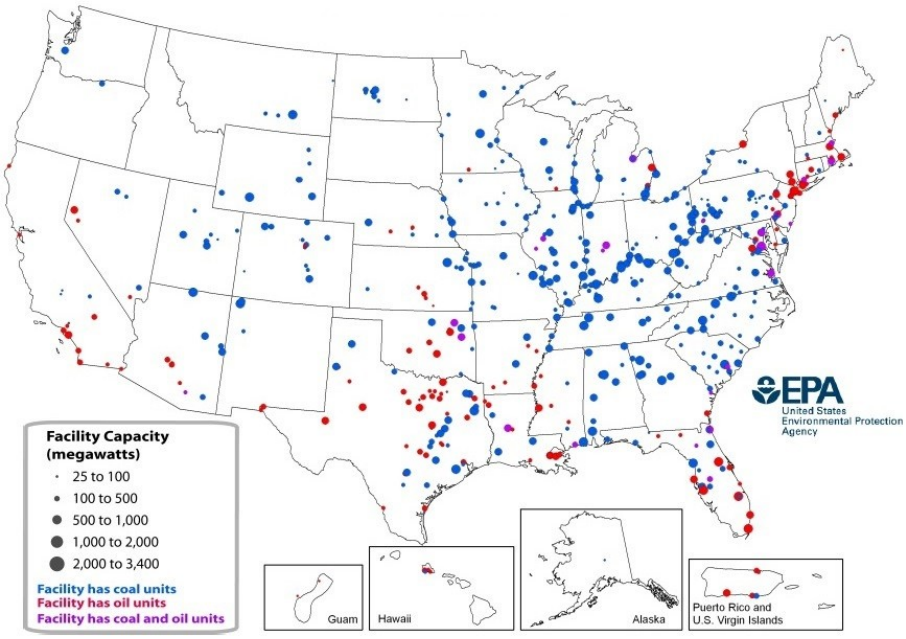
Charged by Congress with protecting the nation's land, air, and water resources, the EPA mandated national emission standards for hazardous air pollutants from coal- and oil-fired steam producing units used in the generation of electricity. Subsequent regulations have established annual allowable emission limitations for most of the major atmospheric pollutants. One of the more familiar provisions is the Acid

Rain Reduction Program through Title IV of the Clean Air Act Amendments of 1990, which focuses on sulfur dioxide (SO_2) and nitrogen oxides (NO_x).

The Clean Air Act of 1990 created the framework to form the initiatives that target Mercury emission reductions. The EPA regulates **Mercury (Hg)** under Section 112, which specifically lists Mercury compounds as hazardous air pollutants. Mercury is a Persistent Bio-accumulative Toxic (PBT) due to this metal's inability to degrade. Since Mercury is generated from the heating process of steam boilers in fossil fuel-fired electric generation units, the EPA was charged to investigate electric utility steam generating units in Section 112(n)(1)(A) and specifically to study mercury emissions from those units in Section 112(n)(1)(B).

On December 16, 2011, the EPA issued **Mercury and Air Toxics Standards (MATS)** for new and existing coal- and oil-fired power plants that generate electricity for sale and distribution to the public through the national electric grid. The standards are intended to reduce certain toxic air pollutants (and especially Mercury) emitted from all major fossil fuel-fired units located at U.S. power plants with a capacity of 25 megawatts (MW) or more, including those owned by electric utilities, industrial concerns, the Federal government, municipalities and cooperatives that provide electricity for commercial, industrial and residential uses. **The regulation targets a 90% reduction of specific air toxins, including Mercury**. MATS are estimated to prevent up to 11,000 premature deaths, 130,000 asthma attacks and 5,700 emergency room visits each year.[v]

Location of Coal and Oil Power Plants



MATS were published in the Federal Register on February 16, 2012 and became effective 60 days after publication (April 16, 2012).[vi] Existing sources of Toxic Air Pollutants are allowed 3 years from the effective date to come into compliance with the final applicable emission standards. However, if an existing source is unable to comply within 3 years (April 16, 2015), the governing permitting authority (usually the state or local air agency) can grant up to a 1 year extension (i.e. to April 16, 2016) on a case-by-case basis, if the additional time is necessary for the installation of pollution controls needed to comply with the emission limits. This option for a 1-year extension pursuant to Section 112(i)(3)(B) was expected to be broadly available. Management estimates that over half of the utility industry's EGUs were granted the one-year extension for compliance. In rare circumstances, the EPA will make available an additional 5th year to achieve compliance using an Administrative Order granted under section 113(a) of the Clean Air Act Amendment of 1990, provided a particular power plant's operation is critical for reliability.[vii] Initially, the EPA estimated that MATS apply to approximately 1,400 coal- and oil-fired electric generating

units (EGUs) at about 600 power plants. The U.S. Energy Information Administration (EIA) estimates that due to the high cost of MATS compliance and other factors, approximately 24% of U.S. coal-fired generation capacity is expected to shut down through retirements by 2016.[viii] Therefore, management is targeting a projected marketplace of between **800 and 850 coal-fired EGUs** as candidates for the use of its SEA Technology.
Mercury is an element and is the only metal that is a liquid at room temperature. In elemental form and oxidation states, Mercury is extremely toxic to the human central nervous system and affects the areas associated with the sensory, visual, auditory and coordinating functions. This neurotoxin is particularly damaging to developing fetuses and children, inhibiting the normal progress of the nervous system resulting in developing delayed or abnormal motor and verbal skills. In most cases, the effects of Mercury poisoning are irreversible.

Emissions of airborne inorganic Mercury are mostly the result of fossil-fuel combustion (biomass burning). The EPA's Mercury Study Report to Congress in 1997 determined that the burning of coal for electric utility boilers constituted the largest source category for atmospheric mercury.[ix] Eventually the airborne Mercury is deposited to the ground, from where it may be transported into oceans, lakes, rivers, streams and wetlands. Sulfate-reducing bacteria found in the anaerobic (oxygen-absent) conditions of muddy sediments ingest inorganic Mercury, and through metabolic processes, convert it to methylmercury (CH_3Hg), a particularly toxic form of Mercury. Through the process of bioaccumulation, whereby organisms ingest contaminants more rapidly than they can be eliminated, methylmercury stockpiles in in fish, marine mammals and aquatic invertebrates, contaminating the aquatic food chain. Consumption of fish, shellfish and crustaceans is the major source of human methylmercury exposure. For example, a recent study found that the concentration of mercury in yellow fin tuna caught near Hawaii increased at least 3.8% per year between 1998 and 2008.[x]

The electric power sector is especially concerned about the Mercury and Air Toxics Standards since not only are the pollution control **requirements stringent**, but also **compliance is power plant-specific**. Therefore, emissions-trading is not a compliance option. In addition, there is a **statutory-constrained compliance deadline**.

ENERGY & ENVIRONMENTAL RESEARCH CENTER (EERC)

The **Energy & Environmental Research Center** (EERC) is a nonprofit branch of the University of North Dakota. Founded in 1951 as the Robertson Lignite Research Laboratory, EERC **conducts energy and environmental research**, primarily in the fields of pollution prevention and environmental cleanup technologies within nine Centers of Excellence:

- Oil and gas
- Emission Control Technologies
- Water Management
- Coal Utilization Technologies
- Climate Change & Carbon Capture and Storage
- Renewable Energy and Biomass Utilization
- Alternative Fuels
- Environmental Chemistry and Reclamation
- Hydrogen Technology

Under these Centers, research has been conducted in clean coal technologies, carbon capture & sequestration, air toxics & fine particulate control, mercury measurement & control, zero-emissions coal conversion, biomass technologies, energy & water sustainability, renewable energy, water management strategies, flood prevention, waste utilization, energy-efficient technologies, hydrogen & fuel cells, global

climate change and contaminant cleanup. Since 1987, the EERC has had more than 1,285 clients in all 50 states and 52 countries. Currently, EERC has 216 active contracts.

To better commercialize the technologies developed by EERC, the Energy & Environmental Research Center Foundation (or **EERC Foundation**) was founded and incorporated in 1992 as an independent 501(c)3 nonprofit corporation. The EERC Foundation acts as EERC's designated technology commercialization organization, supporting the transition from the creation of technologies developed at EERC to their commercialization. Currently, the **EERC Foundation** oversees the commercialization activities of the technologies held under 40 issued patents and 60 pending patents. The Foundation has established variety of business arrangements with entrepreneurial start-ups to a large multinational corporation, usually through licensing and equity agreements. Featured partners include Fujian Longking Co., Ltd. (a Shanghai Stock Exchange listed manufacturer of air pollution control equipment, namely electrostatic precipitators and flue gas desulfurization units), InEnergy, Inc (a provider of energy technology evaluation services) and Midwest Energy Emissions Corp.

Since the early 1990s, the EERC has developed a number of mercury control technologies and has received patents at least 15. The EERC Foundation provides installation and technical support during the commissioning and start-up of commercial deployments, along with ongoing optimization assistance, when needed, to ensure optimum performance. After almost two decades of research and demonstrations, the EERC Foundation licensed the SEA Technology to Richard Mac Pherson, founder and CEO of Midwest Energy Emissions on January 15, 2009 for $100,000. Known as the "**Exclusive Patent and Know-How License Agreement Including Transfer of Ownership**," Midwest Energy Emissions was granted an exclusive license to develop, make, use, sell, lease and import the technology in coal-fired combustion systems worldwide.

On December 19, 2013, Midwest Energy Emissions and the EERC Foundation entered into **Amendment No. 4**, through which the EERC Foundation established an equity ownership in Midwest Energy Emissions and Midwest Energy Emissions received exclusive rights to an expanded portfolio of 12 patents and 15 patent applications that span numerous technologies of mercury emissions control, primarily in the United States, and also in Canada, Europe and China.

In addition, fee schedules for license maintenance and royalties were restructured. Beginning in January 1, 2014, license maintenance fees were raised from $50,000 quarterly to $25,000 monthly. Royalties became $100 per one megawatt (MW) of electronic nameplate capacity and $100 per three MW per hour at systems utilizing licensed products and/or processes. As a result of the amendment to the patent license, a one-time additional license maintenance fee of $875,000 ($825,000 in stock and $50,000 in cash) was incurred in the fourth quarter of 2013.

Midwest Energy Emissions is required to pay the EERC Foundation 35% of all sub-license income received by the company (excluding royalties on sales by sub-licensees) until the company pays for the assignment of the patents. Running royalties and sub-license income are payable annually in January. Thus far, neither running royalties nor sub-license income have become payable.

Amendment No. 5 (effective August 14, 2014 and coincident with the $10 million loan/note agreement) modestly increased the number of shares required in the terms by which Midwest Energy Emissions can receive for the assignment of the patent rights. Now, at the option of the company, Midwest Energy Emissions can be assigned the patent rights for a **payment of $2.5 million** and the **issuance 925,000 shares** (647,500 to the EERC Foundation and 277,500 to the inventors of the technology). Previously under Amendment No. 4, the number of shares was 875,000.

During 2015, the EERC Foundation (EERCF) was granted two new patents for emissions control: U.S. Patent 9,011,805 (issued on April 21st) and Europe Patent #1931449 (March 25th). **Now Midwest Energy Emissions has 21 patents under its exclusive patent-licensing agreement with the EERCF** and an additional 8 patents pending.

RISKS

- The industry addressing the reduction of mercury emissions is a market driven by governmental regulation. Any reduction in the EPA's regulations concerning mercury emissions or the timing of enforcement would significantly impact the demand for the company's products and services.
  - On June 29, 2015, the U. S. Supreme Court ruled that the EPA did not consider cost as a relevant factor when promulgating MATS. The case was remanded back to the Washington DC Circuit Court of Appeals for further proceedings that are consistent with the Supreme Court's opinion.
  - Though the decision significantly impacted the stock of Midwest Energy Emissions, in December 2015, the DC Court of Appeals for the District of Columbia Circuit allowed MATS regulations to remain in place while the EPA responds to the Supreme Court's ruling.
  - Also in December, the EPA has responded to the Supreme Court with a proposed supplemental finding that considers costs of the emissions limits and determines the agency's requirements for compliance with MATS and the implementation timetable are achievable.
  - However, if the Supreme Court decision results in revised version of MATS, which potentially could be slightly less stringent, the legal process could lead to utilities delaying both the installation of all required emission control systems and the optimal operation of all previously installed systems.
- Midwest Energy Emissions has approximately $1.7 million of convertible debt maturing in 2016. Therefore, the company's operations must start generating significant cash flow or management must find a funding source to meet the company's debt obligations or successfully negotiate an alternative resolution.
- Investors should be aware of the potential dilution from options, warrants and convertible debt as the company becomes profitable. The fully diluted share count is approximately 69,600,000 versus 47,194,118 shares outstanding as of September 30, 2015.

VALUATION

The valuation methodology for pollution control/environmental remediation companies usually is based on the use of EV-to-EBITDA (Enterprise Value/Earnings Before Interest, Taxes, Depreciation and Amortization) reflecting the industry's characteristics of profitability and cash flow generation. However, if a company is experiencing negative profitability, either due to adverse fundamental circumstances or being in the early phases of the company's life cycle, **the applicable valuation metric becomes Price-to-Sales (P/S)**.

Finding comparable companies to Midwest Energy Emissions is challenging. The company is unique in that it has a singular focus (the mercury emissions control market), holds exclusive rights to patented processes, has achieved market penetration through the commercialization of SEA Technology and is positioned to take advantage of further growth opportunities afforded by the implementation of MATS. Many companies involved in the air pollution control industry range from companies that provide commodity chemicals and/or equipment to divisions of large, diversified companies where emission controls is just a small part of total operations. These types of companies are generally valued in the lower-to-middle portions of the valuation continuum rather than in the higher-end of the spectrum where highly-focused companies with patented treatment processes tend to trade.

For example, competing mercury emission control technologies are largely being commercialized by subsidiaries of large, diversified firms where mercury emission remediation is a small part of the total company. For example, TOXECON™ is being brought to market by Hamon Research-Cottrell, a subsidiary of Hamon & Cie International SA (aka Hamon Group), a publicly-traded Belgium-based engineering, procurement and contracting company (HAMO.BR) while Mer-Cure™ is being offered by US Power Plant Laboratories and URS Group, both subsidiaries of Alstom SA (ALO.PA and ALSMY

OTC Pink), a publicly-traded France-based power generation, power transmission and rail infrastructure company. Also, the Air Pollution Control business unit of FMC Environmental Solutions, a division of FMC Corp. (FMC: NYSE), offers methods of mercury emission control as an adjunct to its use of hydrogen peroxide- and sodium bicarbonate-based methods to prevent or remediate contamination of air by power utility and manufacturing industries. FMC Corp. is a diversified chemical company. Mitsubishi Hitachi Power Systems, a merger of thermal power generation businesses of Mitsubishi Heavy Industries, Ltd. (7011) and Hitachi, Ltd. (HTHIF), is dedicated to the engineering, design and service of SCR systems for the control of NOx and SO2, and its SCR system solutions also have mercury oxidation capabilities.

Industry Comparables	**Pr Chg YTD**	**P/E CFY**	**EPS Gr 5Yr Est**	**Gross Margin**	**Price/ Book**	**Price/ Sales**	**Price/ CF**	**EV/ EBITDA**
MIDWEST ENERGY EMISSIONS	-9.5	N/M	N/M	5.7	N/M	3.7	N/M	N/M
Industry Mean	5.5	15.4	15.9	37.7	2.2	1.4	14.4	10.4
Industry Median	-5.4	14.5	15.0	31.8	2.8	1.4	12.1	9.6
S&P 500	-7.5	14.9	10.8	N/A	6.4	3.4	15.0	N/A
ALBEMARLE CORP.	-14.8	12.0	16.2	31.5	1.6	1.6	8.5	13.4
CALGON CARBON	-12.8	14.5	7.0	34.6	1.9	1.4	10.0	7.7
CECO ENVIRONMENTAL	-9.9	7.2	15.0	32.2	0.9	0.7	5.0	9.2
IDEX CORP.	-8.6	18.4	13.0	45.8	4.0	2.6	15.1	11.5
FUEL-TECH INC.	-7.4	N/M	25.0	44.5	0.6	0.6	14.9	N/M
Recent Industry Acquisition		**Acquiror**						
CYTEC INDUSTRIES INC.		Solvay SA	16.0	30.0	3.6	2.6	14.4	19.7

We believe that the **valuation comparables** of Midwest Energy Emissions should Albemarle (ALB), Calgon Carbon (CCC), CECO Environmental (CECE), Cytec Industries (CYT), IDEX (IEX) and Fuel-Tech (FTEK). For example, Calgon Carbon supplies value-added catalyst chemicals while CECO Environmental provides engineering, manufacturing and construction services and Fuel-Tech offers boiler optimization and air pollution control solutions. Also, comparable pollution control and value-added specialty chemical companies have comparable business models to Midwest Energy Emissions and achieve higher-than-average gross margins, generally in the 30% range, which is management's targeted margin when the company's current contracts are fully functional some time in 2016.

The appropriate valuation methodology for Midwest Energy Emissions is based on price-to-sales (P/S) due the character of the company's enterprise, namely a small-capitalization company, currently with negative profitability, but with an expected sales profile that should grow and expand as the company's SEA Technology processes are deployed within the coal-fired utility industry and the company's patent-protected sorbent is sold into the operating customer base. Ultimately, the growing revenue stream should manifest itself into positive EBITDA and later, positive earnings when the break-even point is surpassed.

Comparable companies trade in a P/S valuation range between 2.6 and 0.6. Also, as a reference, Cytec Industries was recently acquired by Solvay SA at 2.6 times TTM revenues. Utilizing the top decile P/S ratio of 2.5 on projected 2016 sales of $17.98 million, our **share price target is $1.00**.

We are optimistic the ultimate success of Midwest Energy Emissions. The company should experience a dramatic increase in revenues over the next few years as the coal-fired plants, which have contract for Midwest Energy's SEA Technology, ramp up their mercury emissions control efforts to become compliant with the EPA's mercury emissions reduction regulations.

BALANCE SHEET

Midwest Energy Emissions Corp.					
Year ending December 31st	12/31/2011	12/31/2012	12/31/2013	12/31/2014	9/30/2015
ASSETS					
Cash and cash equivalents	99,713	189,367	509,605	7,212,114	912,762
Accounts receivable	206,545	274,464	383,859	410,950	1,112,942
Inventory	30,622	37,993	-	5,784,905	5,593,80
Prepaid expenses and other assets	33,234	68,59	63,13	140,559	117,95
Total Current Assets	**370,114**	**570,422**	**956,59**	**13,548,528**	**7,737,465**
Property and Equipment, net	1,566,697	343,584	173,07	255,33	942,16
License, net	82,353	76,47	70,58	64,707	60,295
Prepaid expenses and other assets	43,019	36,28	23,53	13,799	6,494
Debt issuance costs, net	-	125,534	700,01	2,285,696	1,781,60
Customer acquisition costs	-	-	-	1,156,521	967,420
TOTAL ASSETS	**2,062,183**	**1,152,292**	**1,923,80**	**17,324,581**	**11,495,448**
Liabilities and Stockholders' Equity					
Accounts payable and accrued expenses	420,360	529,94	275,14	688,73	648,45
Accrued legal and consulting fees	656,507	220,15	365,34	86,304	-
Accrued salaries and benefits			377,213	399,48	455,65
Deferred revenue	-	-	-	5,808,301	5,342,40
Convertible notes payable	-	-	-	3,080,376	1,682,86
Customer credits	-	-	-	936,500	936,50
Other current liabilities			261,036	250,00	0
Accrued interest - related party			247,696	0	0
Advances payable - related party	951,034	951,03	4,167	0	0
Convertible note payable - discontinued ops.	50,000	50,00	50,00	0	0
Notes payable	150,000	150,00	300,00	0	0
Current liabilities of discontinued operations	379,521	262,03	-	0	0
Note payable - related party of disc. ops.	169,984	169,98	-	0	0
Total Current Liabilities	**2,777,406**	**2,333,156**	**1,880,60**	**11,249,698**	**9,065,864**
Convertible notes payable	-	2,570,199	4,675,67	4,724,59	4,629,14
Warrant liability	-	-	-	5,597,011	4,135,68
Accrued interest	-	134,975	273,87	337,99	87,532
Equipment note payable	-	-	-	-	57,007
TOTAL LIABILITIES	**2,777,406**	**5,038,330**	**6,830,15**	**21,909,306**	**17,975,235**
Common stock	32,679	33,24	35,29	40,228	47,194
Additional paid-in-capital	9,251,529	9,958,202	13,789,473	19,113,724	24,334,708
Accumulated deficit	(9,999,431)	(13,877,480)	(18,731,120)	(23,738,677)	(30,861,689)
Total Stockholders' Equity	**(715,223)**	**(3,886,038)**	**(4,906,348)**	**(4,584,725)**	**(6,479,787)**
TOTAL LIABILITIES & STOCKHOLDERS' EQUITY	**2,062,183**	**1,152,292**	**1,923,807**	**17,324,581**	**11,495,448**
Shares outstanding	32,678,650	33,239,878	35,299,429	40,228,123	47,194,118

PROJECTED INCOME STATEMENT

Midwest Energy Emissions Corp.

Income Statement

Period ending	2011 12/31/2011	2012 12/31/2012	2013 12/31/2013	2014 12/31/2014	2015 E 12/31/2015	2016 E 12/31/2016	2017 E 12/31/2017
Revenues	**458,080**	**788,072**	**1,668,472**	**2,794,206**	**8,163,731**	**17,976,500**	**38,364,000**
Costs and operating expenses:							
Cost of goods sold	443,925	233,120	370,635	1,483,379	5,162,264	8,380,117	11,509,200
Operating expenses	255,026	263,143	886,949	904,914	1,979,192	5,774,386	15,345,600
License maintenance fees	150,000	200,000	1,075,000	300,000	300,000	300,000	300,000
Marketing and development	764,046	413,816	338,379	0	0	0	0
Selling, general & administrative expenses	3,878,087	1,655,114	1,622,657	2,208,546	2,360,530	2,596,583	2,908,172
Depreciation and amortization	23,250	417,735	176,394	387,123	374,044	400,000	400,000
Professional fees	805,852	782,121	565,851	678,725	650,600	622,288	525,000
Stock-based compensation	N/A	N/A	855,256	3,318,759	331,189	380,867	476,084
Impairment of fixed assets	-	800,000	-	-	-	-	-
Impairment of goodwill	3,555,304	-	-	-	-	-	-
Total operating expenses	**9,875,490**	**4,765,049**	**5,891,121**	**9,281,446**	**11,157,819**	**18,454,241**	**31,464,057**
Operating gain (loss)	**(9,417,410)**	**(3,976,977)**	**(4,222,649)**	**(6,487,240)**	**(2,994,088)**	**(477,741)**	**6,899,943**
Other income (expense):							
Interest (expense)	(54,257)	(261,534)	(711,647)	(2,724,506)	(6,169,898)	(2,500,000)	(2,611,647)
Gain (loss) on disposal of fixed assets	-	(19,504)	-	-	-	-	-
Gain (loss) on forgiveness of liabilities	-	280,000	80,656	0	-	-	-
Change in value of warrant liability	-	-	-	4,204,189	1,461,324	0	0
Debt conversion costs	-	-	-	-	(1,123,380)	0	0
State income taxes	-	-	-	-	(43,635)	0	0
Other income (expense)	-	-	-	-	-	-	-
Total other income (expense)	**(54,257)**	**(1,038)**	**(630,991)**	**1,479,683**	**(5,875,589)**	**(2,500,000)**	**(2,611,647)**
Net Gain (Loss) from Continuing Ops.	**(9,471,667)**	**(3,978,015)**	**(4,853,640)**	**(5,007,557)**	**(8,869,677)**	**(2,977,741)**	**4,288,296**
Net gain (loss) from discontinued ops.	(25,449)	99,966	-	-			
Net Income (Loss)	**(9,497,116)**	**(3,878,049)**	**(4,853,640)**	**(5,007,557)**	**(8,869,677)**	**(2,977,741)**	**4,288,296**
Net loss per share:							
Basic and diluted loss per share	**(0.32)**	**(0.12)**	**(0.14)**	**(0.13)**	**(0.20)**	**(0.06)**	**0.06**
Wgted avg. shares - basic & diluted	29,331,788	33,136,492	34,283,631	39,140,243	43,977,143	47,495,314	69,600,000

Midwest Energy Emissions Corp.

Income Statement		1Q	2Q	3Q	4Q	
	2013	2014	2014	2014	2014	2014
Period ending	12/31/2013	3/31/2014	6/30/2014	9/30/2014	12/31/2014	12/31/2014
Revenues:						
Product sales	668,532	0	659,052	1,280,043	511,956	2,451,051
Demonstration and consulting services	999,940	0	219,905	93,250	30,000	343,155
Total revenues	**1,668,472**	**0**	**878,957**	**1,373,293**	**541,956**	**2,794,206**
Costs and operating expenses:						
Cost of goods sold	370,635	0	365,118	829,662	288,599	1,483,379
Operating expenses	886,949	20,287	252,379	469,370	162,878	904,914
License maintenance fees	1,075,000	75,000	75,000	75,000	75,000	300,000
Marketing and development	338,379	62,943	N/A	N/A	N/A	0
Selling, general & administrative expenses	1,622,657	480,793	504,761	487,015	673,034	2,208,546
Depreciation and amortization	176,394	43,507	91,676	190,778	61,162	387,123
Professional fees	565,851	232,852	109,725	120,066	216,082	678,725
Stock-based compensation	855,256	2,188,675	452,029	468,269	209,786	3,318,759
Impairment of fixed assets	-	-	-	-	-	-
Impairment of goodwill	-	-	-	-	-	-
Total operating expenses	**5,891,121**	**3,104,057**	**1,850,688**	**2,640,160**	**1,686,541**	**9,281,446**
Operating gain (loss)	**(4,222,649)**	**(3,104,057)**	**(971,731)**	**(1,266,867)**	**(1,144,585)**	**(6,487,240)**
Other income (expense):						
Interest (expense)	(711,647)	(298,209)	(408,647)	(714,852)	(725,000)	(2,724,506)
Gain (loss) on disposal of fixed assets	-	-	-	-	-	-
Gain (loss) on forgiveness of liabilities	80,656	0	0	0	0	0
Change in value of warrant liability	-	-	-	-	4,204,189	4,204,189
Other income (expense)	-	-	-	-	-	-
Total other income (expense)	**(630,991)**	**(298,209)**	**(408,647)**	**(714,852)**	**3,479,189**	**1,479,683**
Net Gain (Loss) from Continuing Ops.	**(4,853,640)**	**(3,402,266)**	**(1,380,378)**	**(1,981,719)**	**2,334,604**	**(5,007,557)**
Net gain (loss) from discontinued ops.	-					-
Net Income (Loss)	**(4,853,640)**	**(3,402,266)**	**(1,380,378)**	**(1,981,719)**	**2,334,604**	**(5,007,557)**
Net loss per share:						
Basic and diluted loss per share	**(0.14)**	**(0.09)**	**(0.04)**	**(0.05)**	**0.06**	**(0.13)**
Wgted avg. shares - basic & diluted	34,283,631	37,318,502	39,014,401	39,973,907	40,101,015	39,140,243

Income Statement		1Q	2Q	3Q	4Q E	Year Est.
	2014	2015	2015	2015	2015	2015
Period ending	12/31/2014	3/31/2015	6/30/2015	9/30/2015	12/31/2015	12/31/2015
Revenues:						
Product sales	2,451,051	243,344	609,328	2,386,961	476,119	3,715,752
Equipment sales	0	0	1,967,039	1,238,897	1,121,725	4,327,661
Demonstration and consulting services	343,155	N/A	120,318	0	0	120,318
Total revenues	**2,794,206**	**243,344**	**2,696,685**	**3,625,858**	**1,597,844**	**8,163,731**
Costs and operating expenses:						
Cost of goods sold	1,483,379	149,689	1,787,205	2,252,683	972,687	5,162,264
Operating expenses	904,914	347,170	551,802	627,200	453,020	1,979,192
License maintenance fees	300,000	75,000	75,000	75,000	75,000	300,000
Marketing and development	0	N/A	N/A	N/A	N/A	0
Selling, general & administrative expenses	2,208,546	556,255	549,535	599,887	654,853	2,360,530
Depreciation and amortization	387,123	65,588	99,463	103,462	105,531	374,044
Professional fees	678,725	170,245	118,244	192,111	170,000	650,600
Stock-based compensation	3,318,759	125,528	205,661	-	-	331,189
Impairment of fixed assets	-	-	-	-	-	-
Impairment of goodwill	-	-	-	-	-	-
Total operating expenses	**9,281,446**	**1,489,475**	**3,386,910**	**3,850,343**	**2,431,091**	**11,157,819**
Operating gain (loss)	**(6,487,240)**	**(1,246,131)**	**(690,225)**	**(224,485)**	**(833,247)**	**(2,994,088)**
Other income (expense):						
Interest (expense)	(2,724,506)	(3,422,356)	(936,116)	(905,713)	(905,713)	(6,169,898)
Gain (loss) on disposal of fixed assets	-	-	-	-	-	-
Gain (loss) on forgiveness of liabilities	0	0	0	0	0	0
Change in value of warrant liability	4,204,189	(1,878,550)	3,195,279	144,595	-	1,461,324
Debt conversion costs	-	-	(961,843)	(161,537)	0	(1,123,380)
State income taxes	0	(20,495)	(7,730)	(7,705)	(7,705)	(43,635)
Other income (expense)	-	-	-	-	-	-
Total other income (expense)	**1,479,683**	**(5,321,401)**	**1,289,590**	**(930,360)**	**(913,418)**	**(5,875,589)**
Net Gain (Loss) from Continuing Ops.	**(5,007,557)**	**(6,567,532)**	**599,365**	**(1,154,845)**	**(1,746,665)**	**(8,869,677)**
Net gain (loss) from discontinued ops.	-					-
Net Income (Loss)	**(5,007,557)**	**(6,567,532)**	**599,365**	**(1,154,845)**	**(1,746,665)**	**(8,869,677)**
Net loss per share:						
Basic and diluted loss per share	**(0.13)**	**(0.16)**	**0.01**	**(0.02)**	**(0.04)**	**(0.20)**
Wgted avg. shares - basic & diluted	39,140,243	40,414,884	41,322,566	46,619,367	47,551,754	43,977,143

HISTORICAL ZACKS RECOMMENDATIONS



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Sell/Underperform: The analyst expects the company will underperform the broader U.S. Equity market over the next one to two quarters.

The current distribution is as follows: Buy/Outperform- 25.6%, Hold/Neutral- 47.5%, Sell/Underperform – 22.5%. Data is as of midnight on the business day immediately prior to this publication.

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[i] Control of Mercury Emissions from Coal-fired Electric Utility Boilers, U.S. Environmental Protection Agency, March 2004.
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[v] EPA FACT SHEET: Mercury and Air Toxics Standards, Benefits and Costs of Cleaning Up Toxic Air Pollution from Power Plants, December 21, 2011.
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[viii] Closures threaten 24 percent of US coal-fired electric power plants, March 29, 2014.
[ix] U.S. Environmental Protection Agency, Mercury Study Report to Congress, EPA-452/R-97-004, 1997.
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