



## Integrated Approach Applied Successfully at Audiosears

### Inside:

#### Page 2

- Integrated Approach continued
- Lean-er Thinking for Harder Times

#### Page 3

- Lean Training Opportunity

#### Page 4

- Negative Foreign Competition Presents Opportunity
- Trade Promotion Assistance Available

#### Page 5

- Associates' Corner

#### Page 6

- SBIR/STTR Information
- Around the Southern Tier
- Materials for a Sustainable Future

#### Page 7

- Technology Transfer
- Research News

Happy St. Patrick's Day



Audiosears, Inc., located in Stamford, New York, employs about 90 people and manufactures high quality telecommunications equipment for the telecommunications industry. For over 50 years, Audiosears has gained increasing recognition and acceptance as a leading domestic manufacturer of custom and standard handsets, headsets, and component parts for most telecommunications applications. Audiosears maintains labs for electrical and mechanical design, maintenance, quality control, and environmental testing in Stamford. The business is family owned and operated.

Audiosears experienced increased competition as the telecommunications industry expanded globally. A lack of focused action to address this trend resulted in the loss of several key customers. In addition, manufacturing performance was lagging and business practices were outdated and insufficient to address issues with lead-time, delivery, and quality. Production processes were not standardized nor documented and reliant on the knowledge and skills of long-time employees. AM&T assisted Audiosears in developing a Strategic Plan, and then Audiosears requested that AM&T provide assistance to reverse this trend and improve business effectiveness and performance.

Audiosears and AM&T analyzed the key business processes and identified several areas for improvement – marketing & sales, quality system, and production. Together we developed a strategic plan to enhance their marketing & sales skills, apply lean methods to manufacturing, and implement an ISO 9001:2000 compliant quality management system. AM&T was then contracted to implement an integrated approach to making the improvements.

AM&T and Audiosears identified three primary areas of focus: 1) marketing & sales processes and tools; 2) machining and assembly methods; and 3) adopting ISO 9001:2000 quality system requirements.

The sales process at Audiosears consisted

primarily of taking orders from existing customers. Marketing to new customers was infrequent and marketing processes were not well defined. AM&T assisted Audiosears marketing and sales personnel in developing a business development plan, defining marketing and sales processes, training sales personnel, creating marketing materials, and exploring various marketing approaches (e.g. using distributors and sales representatives).

Manufacturing at Audiosears was primarily organized for batch production and had difficulty handling mixed model demand. AM&T assisted Audiosears assembly and machine shop personnel in applying lean methods to improve workplace organization, reducing machine set-up times, eliminating assembly bottlenecks, and shortening the material flow from receiving to shipping, thereby streamlining production operations.

The quality system at Audiosears was highly dependent on multiple inspections during manufacturing to ensure product quality. In addition, existing quality documentation was outdated and did not always reflect current quality practices. AM&T assisted Audiosears quality personnel in adopting ISO 9001:2000 quality system requirements throughout their organization as well as creating and implementing the ISO documentation required for certification.

Audiosears has applied the knowledge acquired through AM&T's integrated approach to its operations. As of November 2008, Audiosears has observed the following results:

- 1) Increased the customer base by 83 new customers in 2008
- 2) Reduced lead-time by 40% since 2007.
- 3) Improved on-time delivery (OTD) by 80% in 4Q 2008
- 4) Increased First Pass yield from 97% to 99% in 2008
- 5) Implemented an ISO 9001:2000 based quality management system, certification expected in 1Q 2009.

See *Integrated Approach*, page 2



**Integrated Approach cont.**

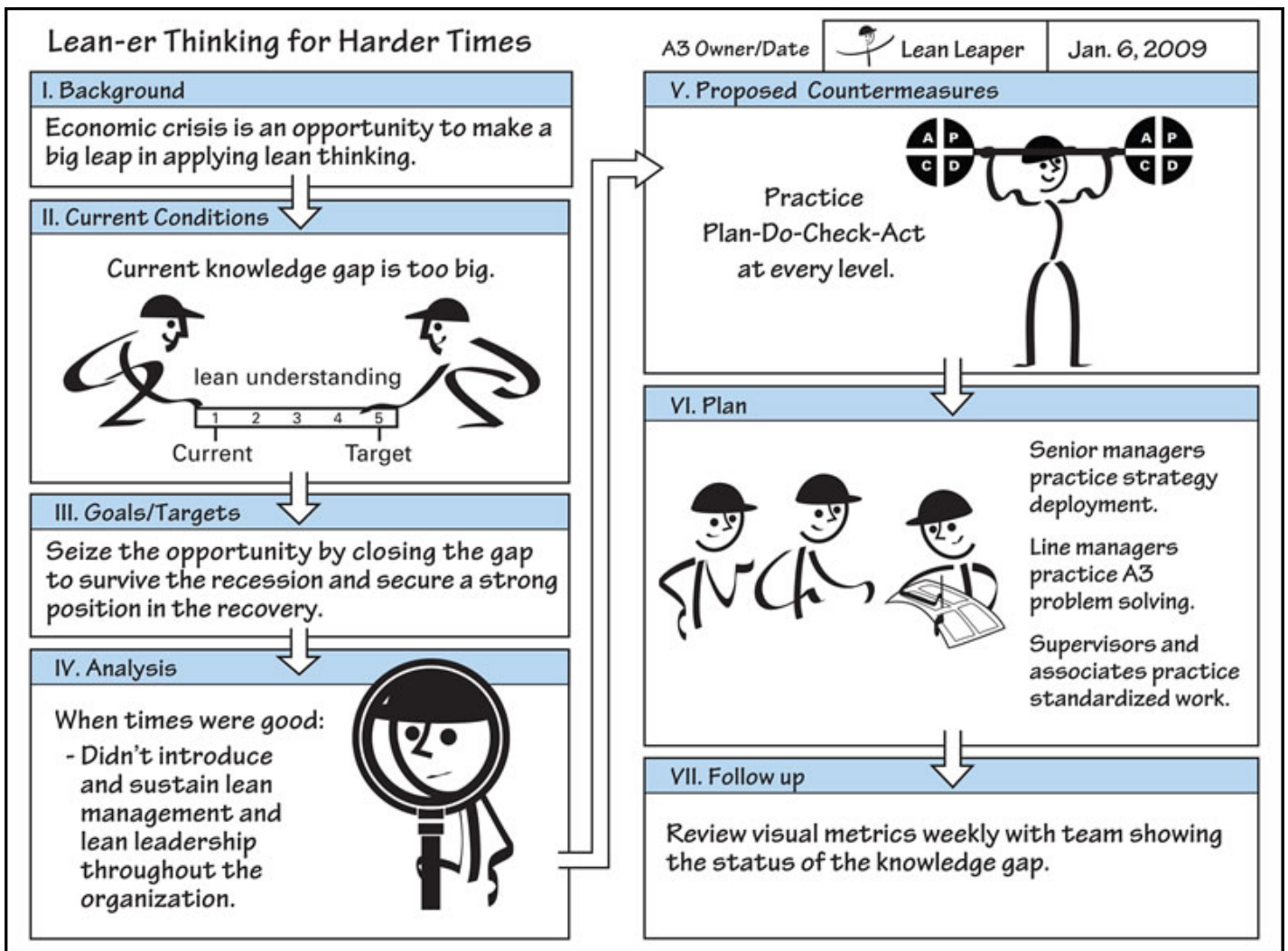
Audiosears has benefitted financially through increased orders, resulting in better cash flow and more funding available for capital investment in equipment and productivity tools (e.g. ERP system).

Employees have benefited through increased knowledge and skills that result in more job flexibility and security at Audiosears. The knowledge and skills acquired by Audiosears personnel are fully transferable.

The State of New York will benefit from Audiosears' ability to add and retain employees as their order demand grows. The skills and learning acquired by Audiosears personnel increases the strength of the NYS workforce and contributes to the retention of manufacturing based jobs in NYS.

"AM&T began working with Audiosears nearly three years ago. Their consultants worked with us to develop a strategic plan which led to a training initiative that incorporated Lean Manufacturing, ISO, and a Sales and Marketing program. The program revitalized our company and positioned us as a true global competitor. We now have an organized, efficient, confident workforce that will strive to grow this company and ensure employment in our small village of Stamford. I would strongly recommend AM&T's services to any company looking for improvement. Their style and work ethics are superb and our company will continue its success as a result of their training efforts."

Shawn Hartwell, VP and COO





# Workplace Organization - 5S Systems

Wednesday, March 4, 2009

8:00 am - 4:30 pm

If your workplace looks like this



and

you want it to look like this



you should  
attend this  
workshop

The workshop presentation is combined with a hands-on simulation of a production facility to familiarize participants with Workplace Organization using basic 5S systems:

1. *Sort*
2. *Set-in-Order*
3. *Shine*
4. *Standardize*
5. *Sustain*

Participants will apply the 5S process in a “train & do” workshop, and see the before and after impact on workplace appearance and functionality.

Participants will learn:

- How to conduct an in-depth audit of workplace organization and standardization
- How to organize a workplace by applying the concepts of sort, set-in-order and shine
- How to standardize procedures to maintain and control an organized workplace using visual controls
- How to describe 5S and how it improves workplace environmental health and safety

Location: Owego Treadway Inn

Sign-in: 7:30am - 8:00am with continental breakfast

Class: 8:00am - 4:30pm Lunch will be provided

Fees: \$50/attendee for AM&T Associates

\$100/attendee for others (Credit Card Payments accepted)

Limit of three participants per company unless preapproved by AM&T.

**Registration deadline: February 25, 2009**

Register with Norma Cushner at

607-774-0022 x302 or online at:

<http://www.amt-mep.org/events/index.htm>



**Negative Foreign Competition Presents Opportunity**

Has your business been negatively impacted by foreign competition? If so, you may qualify for a **Trade Adjustment Assistance Grant**.

If your company has experienced increased foreign competition, a decline in sales or production, and a decline or impending decline in employment, the NYS Trade Adjustment Assistance Center (TAAC) may be able to help improve your competitive position in today's global economy.

Since 1978, the NYS Trade Adjustment Assistance Center (TAAC) has helped over 1200 New York firms to recover from the effects of foreign competition and has provided more than \$53 million in assistance.

Assistance can be provided in strategic areas of importance including Management, Marketing, Finance, Information Technology, Manufacturing/Engineering and ISO/QS/TS/UL/CE Certification.

The cost for TAA program assistance is shared with the U.S. Department of Commerce, which can underwrite up to 75% of the cost.

There is no cost to determine qualification for the program and all inquiries are confidential.

Applications for assistance under the TAA program can be made at any time of the year. If your company is not immediately eligible for the program, you can apply at a later time if conditions change.

For more information please contact:

Jim Cunningham  
 607-774-0022 Ext. 311  
 607-725-1225 or by email:  
 jcunningham@amt-mep.org



**Trade Promotion Assistance Available**

The U.S. Commercial Service, the trade promotion unit of the International Trade Administration of the Department of Commerce, has trade specialists in 107 U.S. cities and in more than 80 countries. These specialists can work with your company to help you get started in exporting or increase your sales to new global markets.

U.S. Commercial services include:

1. World class market research
2. International Company Profiles that provide credit checks and due diligence reports on buyers and distributors
3. Trade events that promote your product or service to qualified buyers
4. Introductions to qualified buyers and distributors through our International Partner Search and Gold Key programs
5. Counseling and advocacy through every step of the export process

Companies located in Broome, Cayuga, Chenango, Cortland, Jefferson, Lewis, Madison, Oneida, Onondaga, Oswego, Tioga, and Tompkins Counties are now served by the Syracuse Associate Office located at 445 Electronics Pkwy, Suite 207, Liverpool, NY 13088.

Contact: John Tracy - International Trade Specialist  
 315-453-4070 or email: john.tracy@mail.doc.gov

For companies located in Steuben, Schuyler, Chemung, Delaware and Otsego counties contact:

Michael Grossman  
 Tel: 914-682-6712  
 E-mail: michael.grossman@mail.doc.gov

to learn how the U.S. Commercial Service can help your company export.



*AM&T Associate Since 1/2009*

Hardinge, founded in 1890, is a leading global designer and manufacturer of precision and Super-Precision® machine tools, and is one of the world's largest manufacturers of precision collets, chucks and workholding systems with corporate headquarters in Elmira, New York. Their products are distributed in most of the world's industrial markets, including North America, China, the United Kingdom, Germany, Switzerland, Russia, France and Italy. Hardinge has an established global operations infrastructure with manufacturing, sales, and support facilities in North America, Europe and Asia. In 2007, approximately 34% of company sales originated in North America, 46% in Europe and 20% in Asia and other markets.

Hardinge customers are highly diversified by end-user markets and operate in a variety of industries, including aerospace, automotive, transportation, construction equipment, defense, energy, farm equipment, fiber optics, medical equipment, recreational equipment, and telecommunications.

Hardinge utilizes the Lean Principles in Manufacturing, Six Sigma and Total Quality Management for continuous improvement activities throughout its operations. They are ISO 9001 certified, a former Baldrige finalist and one of the Top 50 Companies in America.

For more information, visit: [www.hardinge.com](http://www.hardinge.com)



*AM&T Associate Since 2/2009*

Lok-N-Logs is a leading manufacturer of pre-cut log home packages located in Sherburne, New York. For over thirty years, Lok-N-Logs has been refining their log home manufacturing, construction and treatment processes to keep pace with state of the art systems. They have also invented and perfected their own new log home manufacturing technologies.

stantial collection of outstanding log homes, garages, recreational buildings, and business buildings.

Over the years Lok-N-Logs network of dealers has grown from coast to coast. They recently penetrated the international market as well with distributorships in Europe and Asia. Working together, the Lok-N-Logs family of dealers, staff and customers have designed and created a sub-

Lok-N-Logs is committed not only to quality but to finding uses for the "complete log" and the continued care and maintenance of their products. The establishment of "I Wood Care", a maintenance assistance and information resource, demonstrates their commitment to their customers long-term satisfaction with their Lok-N-Logs building.

For more information, visit: [www.loknlogs.com](http://www.loknlogs.com)



*AM&T Associate Since 1/2000*

EMA offers significant energy savings by being one of the leading suppliers of AC Drives. Founded in 1990 by Eddie Mayfield in the Atlanta area EMA has three locations to service its regional, national, and international customers.

all brands of drives and controllers. EMA's technicians attempt to spot potential problems and recommend corrective action before a failure causes unscheduled and costly downtime.

Today EMA's Cortland, NY office is well known throughout the Northeast for its outstanding customer service and assisting its customers to "Go Green" by adding AC Drives. EMA is able to show estimated cost savings for adding AC Drives to fans and pumps, as well as building complex coordinated drive systems.

EMA has developed a national reputation as being a leading repair center for both AC and DC Drives, industrial monitors, power supplies, printed circuit boards, and most other industrial electronic controls.

EMA supports their customers after the sale with trained technicians to provide preventive maintenance on nearly

If you are interested in training on AC Drives, signing up for EMA's Drive Lines e-newsletter, or would like more information on how EMA can help reduce your energy costs with AC Drives, please contact Dean Williams at 607-756-0424 or by email at [dwilliams@emainc.net](mailto:dwilliams@emainc.net)



# Alliance for Manufacturing & Technology

...helping organizations achieve & sustain growth,  
profitability and world-class performance

A NYSTAR Designated Regional Technology Development Center and a NIST MEP Center

March 2009 Newsletter

## SBIR/STTR INFORMATION

Program	Release	Accepts	Closing
DoD STTR 2009.A - <a href="http://www.acq.osd.mil/osbp/sbir/solicitations/">http://www.acq.osd.mil/osbp/sbir/solicitations/</a>	27 Jan 2009	24 Feb '09	25 Mar 2009
DoD SBIR 2009.2 - <a href="http://www.acq.osd.mil/osbp/sbir/solicitations/">http://www.acq.osd.mil/osbp/sbir/solicitations/</a>	20 Apr 2009	18 May '09	17 Jun 2009
DoD SBIR 2009.3 & DoD STTR.B - <a href="http://www.acq.osd.mil/osbp/sbir/solicitations/">http://www.acq.osd.mil/osbp/sbir/solicitations/</a>	27 Jul 2009	24 Aug '09	23 Sep 2009
NSF STTR Program Phase I Solicitation FY-2009 - <a href="http://www.nsf.gov/pubs/2008/nsf08608/nsf08608.htm">http://www.nsf.gov/pubs/2008/nsf08608/nsf08608.htm</a>		14 Jan '09	25 Feb 2009
DOT SBIR Program Solicitation - <a href="http://www.volpe.dot.gov/sbir/sol09/topics.html">http://www.volpe.dot.gov/sbir/sol09/topics.html</a>	2 Feb 2009	13 Feb 2009	14 Apr 2009

*Around the Southern Tier* - call number or visit [www.amt-mep.org/events.htm](http://www.amt-mep.org/events.htm) for details

- Feb 23** Business Disaster Preparation Workshop — Corning Gaffer District & Chamber— 607-937-6292 x101
- Feb 24** Networking Luncheon — Otsego County Chamber — 607-432-4500
- Feb 24** Human Resource Roundtable 607-687-2020
- Feb 25** Women Business Owners Roundtable — Binghamton SBDC — 607-777-4024
- Mar 4** Workplace Organization - 5S Systems — AM&T — [www.amt-mep.org/events/](http://www.amt-mep.org/events/)
- Mar 5** Business after Business Reception — Chemung County Chamber — 607-734-5137
- Mar 7** Annual Dinner and Awards — Corning Area Chamber — 866-463-6264
- Mar 18** Women Business Owners Roundtable — Corning SBDC — 607-937-6861
- Mar 19** Regional Job Fair — Chemung County Chamber — 607-734-5137
- Mar 23** Advances in Bioprocessing: Cultivating Economic Growth  
[www.esf.edu/outreach/pd/2008/bioprocessing/agenda.htm](http://www.esf.edu/outreach/pd/2008/bioprocessing/agenda.htm)
- Mar 25** Women Business Owners Roundtable — Binghamton SBDC — 607-777-4024
- Mar 25** Upstate NY Biocareer Connection — <http://www.tompkinsworkforceny.org/>
- Apr 3** Annual Banquet & Celebration of Business — Otsego County Chamber — 607-432-4500
- Apr 8** Facilities 101 — CCMR — [www.ccmr.cornell.edu/industry/facilities101](http://www.ccmr.cornell.edu/industry/facilities101)
- Apr 17** TWI Job Relations Workshop — Tompkins County Chamber and AM&T — 607-774-0022 x302

## "Materials for a Sustainable Future" 2009 CCMR - KAUST-CU Symposium:

The Cornell Center for Material Research and KAUST-Cornell University Center invites you to participate on May 18, 2009, in their first joined Symposium.

The CCMR focuses on advanced materials and the KAUST-CU Center focuses on a new tunable materials platform based on nanoscale inorganic-organic hybrid materials recently discovered at Cornell. The materials and processes developed at both centers have applications in multiple fields related to sustainability. This year's program will reflect the current interest on materials synthesized using sustainable processes or enabling them. It will focus

amongst others on the synthesis of green materials and carbon dioxide capture, sequestration and use.

The symposium will include presentations showcasing advances in these fields of research at Cornell and will also have the ever-popular poster session highlighting their entire research portfolio and graduate students and post docs.

- Date:** May 18, 2009
- Location:** Statler Hall, Cornell University, Ithaca NY
- Registration:** [www.ccmr.cornell.edu/symposium/](http://www.ccmr.cornell.edu/symposium/)

## Technology Transfer

Technologies of the Week describe inventions offered for license and anonymous requests for technology, distributed through the yet2.com marketplace, that you and your organization may be able to fulfill. Responding to a Tech Need is the first step to gaining an introduction with a prospective seller or "buyer" for a technology solution.

A molding technique achieves the perfect fit for the efficient manufacture of high-precision parts. Results are especially good for thin molded parts, including optical disks. It achieves superior results not only for etching methods, but for injection methods as well. For optical disks, the technique can reduce the manufacturing cycle time by about half while achieving high quality disk production at low cost.

<http://link.abpi.net/l.php?20081216A3>

A method creates display screens and operator interface controls for a wide range of stand-alone process control and measurement instruments that are incapable of supporting a display editor. A software package graphically defines and generates a display library on a PC that is subsequently applied via a communication link, to the stand-alone instrument. An interpretation engine interprets the display library to render the appearance of the instrument display and to control the instrument's taught behavior during normal operations.

<http://link.abpi.net/l.php?20081216A4>

A company seeks innovative binder solutions for the manufacture of molds and cores used in the production of metal castings. The molding and core making processes demand robust, environmentally-acceptable binder systems with easy breakdown and removal after casting. The solution could be either a controllable self-setting system, or a system that could achieve almost instantaneous cure through the application of a low hazard gaseous hardener/catalyst. The solution must have high strength development at low (<5%) addition levels.

<http://link.abpi.net/l.php?20090115A3>

Technology is sought to reduce VOCs in binders/resins while

maintaining or enhancing existing product properties. The solution could be a new low VOC resin/binder system or an alternative technology or process that can be added to enhance existing binders/resins. Potential solutions could include the addition of a compound or additive that reduces VOC demand, a new cross-linking system for polymers to enhance molecular network formation, or another technical solution that eliminates existing issues such as poor appearance and high viscosity during drying.

<http://link.abpi.net/l.php?20090115A4>

A cable technology produces measurably cleaner, clearer signals over cables used in audio applications, such as electric instruments and audiophile equipment. The same technology easily doubles the effective length of digital cables such as Ethernet, USB, HDMI, and a host of similar applications. In tests using electric guitars, the technology delivered a flat response between 20Hz to 20KHz at .5dB of variation over 20 feet of cable. In network applications, a connected cable can run longer distances and can enhance security, compared to Wi-Fi over the same distance.

<http://link.abpi.net/l.php?20090127A4>

A process to fabricate a printed circuit board assembly carrying a chip-on-board type microcircuit package bonds aluminum wires to the aluminum pads on the microcircuit, and to copper connector pads on the printed circuit board to form the electrical connection between them. The microcircuit, aluminum wires, and copper connection pads are then encapsulated with a material, such as low-stress liquid encapsulate having a thermal expansion coefficient equal to that of the printed circuit board substrate material.

<http://link.abpi.net/l.php?20090127A5>

For licensing opportunities through Binghamton University research: <http://research.binghamton.edu/TT/LicensingOpps.htm>  
For licensing opportunities through Cornell University research: <http://www.ctec.cornell.edu/technology/>

## Research News

### Removing Pollutants From Incinerator Exhaust

A system for removing pollutants — primarily sulfur dioxide and mixed oxides of nitrogen (NO<sub>x</sub>) — from incinerator exhaust has been demonstrated. The system is also designed secondarily to remove particles, hydrocarbons, and CO. The system is intended for use in an enclosed environment, for which a prior NO<sub>x</sub>-and-SO<sub>2</sub>-removal system designed for industrial settings would not be suitable. The incinerator exhaust first encounters a cyclone separator, a primary heat exchanger, and a fabric filter that, together, remove particles and reduce the temperature to 500°C. The exhaust then passes through a porous bed, maintained at ≈ 450°C, that contains Na<sub>2</sub>CO<sub>3</sub>, which absorbs SO<sub>2</sub>.

Next, a commercial catalyst maintained at 400°C accelerates the oxidation of the carbon in hydrocarbons to CO and CO<sub>2</sub>. A heat exchanger then cools the exhaust to ≈ 300°C before passage over a catalyst that causes 95 percent of the NO to be oxidized to NO<sub>2</sub>. The first of two water scrubbers removes most of the NO<sub>2</sub>, which is converted to KNO<sub>3</sub> and KNO<sub>2</sub>. The second water scrubber contains sodium bisulfite, which, with an aminophenol catalyst, converts most of the remaining NO<sub>2</sub> to N<sub>2</sub>.

*For further information, contact the JSC Innovative Partnerships at (281) 483-3809*

### Valuable Waste

Researchers from Fraunhofer Institute for Ceramic Technologies and Systems in Dresden have developed the first-ever biogas plant to run purely on waste instead of edible raw materials - transforming waste into valuable material. The plant generates 30 percent more biogas than its predecessors. A fuel cell efficiently converts the gas into electricity. Until now, biogas plants have only been able to process a certain proportion of waste material, as this tends to be more difficult to convert into biogas than pure cereal crops or corn, for example.

The researchers optimized the conversion of biogas into electricity by diverting the gas into a high-temperature fuel cell, with an electrical efficiency of 40 to 55 percent. By comparison, the gas engine normally used for this purpose only achieves an average efficiency of 38 percent. The fuel cell operates at 850 degrees Celsius. The heat can be used directly for heating, or be fed into the district heating network. The time for which the decomposing waste material, or silage, is stored in the plant is reduced by 50 to 70 percent.

Read the full story:  
<http://link.abpi.net/l.php?20090205A2>



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- ✓ **High-tech Start-up Assistance**
- ✓ **Grant Assistance**

Contact: Jim Cunningham at AM&T  
607-774-0022 Ext. 311

mobile: 607-725-1225

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To subscribe to the AM&T newsletter or to update your mailing address visit:  
<http://amt-mep.org/newsletter.htm>

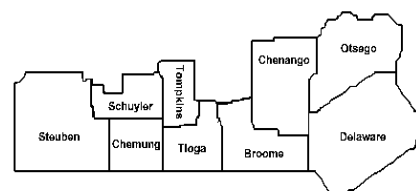


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Southern Tier Region of NY