

**VFDs CAN SIGNIFICANTLY LOWER ENERGY COSTS**

THE ILLINOIS  
**Manufacturer**

[www.ima-net.org](http://www.ima-net.org)

Fall 2016

**Managing your energy strategy  
all year round**

**mHUB is Chicago's first  
manufacturing innovation  
center — opening in January**

**What every manufacturer  
should know about TSCA reform**





## Managing your energy strategy all year round **16**

Understanding the range of factors that influence energy prices can be a time-consuming and confusing process. Constellation, the IMA's endorsed energy provider, has various market intelligence publications available to keep you informed.

<b>Water Resource Recovery: The unique partnership of two industry leaders</b> — by Bruce Hawk and Debra Shore, <i>Illinois American Water</i> .....	<b>7</b>
<b>Variable Frequency Drives can significantly lower energy costs</b> — by Richard Reese, <i>CEM, CEA, Ameren Illinois Energy Efficiency Program</i> .....	<b>11</b>
<b>mHUB is Chicago's first manufacturing innovation center — opening in January</b> — by Dan Naumovich .....	<b>22</b>

### Columns

<b>President's Report:</b> Restructuring and competition have had a suppressing effect on Illinois energy prices, though our robust generation mix has also played a vital role .....	<b>Page 4</b>
<b>Legislative Report:</b> Why join the IMA? It's very simple — there is no other association in Illinois fighting for manufacturers' interests every single day .....	<b>Page 6</b>
<b>Management Strategies:</b> Budget for success: With Q4 2016 underway, it's time to think about 2017 — by Adam Hackman, <i>MIS of Illinois</i> .....	<b>Page 9</b>
<b>Energy &amp; Environment:</b> Four reasons investment and natural gas strategies work the same way — by Constellation .....	<b>Page 13</b>
<b>Legal Issues:</b> What every manufacturer should know about TSCA reform — by William J. Walsh, <i>Clark Hill PLC</i> .....	<b>Page 15</b>
<b>Government Initiatives:</b> Intersect Illinois seeks to position the state at the forefront of 21st-Century manufacturing — by Jim Schultz, Chairman and CEO of Intersect Illinois .....	<b>Page 19</b>
<b>Tax &amp; Accounting Issues:</b> Five features of tax deductions for energy efficient manufacturing buildings by Daniel Hurtado, <i>RSM</i> .....	<b>Page 21</b>
<b>IMA Member News</b> .....	<b>Page 28</b>
<b>New IMA Members:</b> Welcome! .....	<b>Page 30</b>
<b>IMA Calendar of Events</b> .....	<b>Page 30</b>

*The Illinois Manufacturer* is underwritten by Constellation — an Exelon Company

### Mission Statement

The object for which the Illinois Manufacturers' Association was formed is to strengthen the economic, social, environmental and governmental conditions for manufacturing and allied enterprises in the state of Illinois, resulting in an enlarged business base and increased employment.

#### Chairman

William M. Hickey, Jr.

#### President

Gregory W. Baise

#### Editor

Stefany J. Henson

*The Illinois Manufacturer* is published quarterly by the Illinois Manufacturers' Association. All rights reserved. The title, *The Illinois Manufacturer*, is a trademark of the Illinois Manufacturers' Association.

Copyright 2016© Illinois Manufacturers' Association. Reproduction of all or any part is prohibited except by written permission of the publisher. Published articles do not necessarily reflect the views of the magazine or its publisher. Information in this publication should not be substituted for advice of competent legal counsel.

For address changes and adjustments, write to *The Illinois Manufacturer*. Presort standard postage paid at Bloomington, IL. Postmaster: Send address changes to *The Illinois Manufacturer*, 220 East Adams Street, Springfield, IL 62701. Telephone: 217-522-1240.

If you have any questions, please contact Stefany Henson, Editor and Director of Publications at 217-718-4207, or email [shenson@ima-net.org](mailto:shenson@ima-net.org).

#### Share your company news with IMA . . .

News information, press releases and articles may be sent to Stefany Henson, Editor and Director of Publications, Illinois Manufacturers' Association (IMA), 220 East Adams Street, Springfield, IL 62701, or email: [shenson@ima-net.org](mailto:shenson@ima-net.org).



## WATER RESOURCE RECOVERY

# The unique partnership of two industry leaders

by **Bruce Hauk, President, Illinois American Water and Debra Shore, Commissioner, Metropolitan Water Reclamation District of Greater Chicago**

**A**merican manufacturing is at a crossroads. Foreign competition, rising operational costs, and the search for a qualified workforce are enough to keep any manufacturer awake at night. However, partnerships between private and public organizations with visionary and proactive strategies can offer U.S. manufacturers a competitive advantage.

Manufacturing is vital to the country's economy, but it can leave behind a big environmental footprint. The opportunity for companies to save money through environmental stewardship has often been considered an elusive, if not entirely unattainable, "win-win" scenario.

But when it comes to water, all that is changing.

Most manufacturers in the United States are paying full-price to use high-quality drinking water for processes that do not necessarily require potable water. It's an expensive and ultimately wasteful practice. Fortunately, an affordable, safe, and practical alternative to potable water can be found in municipal effluent — that is, treated wastewater from homes, businesses, and industries.

As leaders in the water industry, Illinois American Water (IAW) has partnered with the Metropolitan Water Reclamation District of Greater Chicago (MWRD) on an innovative effluent reuse project. This public-private partnership will offset manufacturers' operational expenses by supplying companies with low-cost treated effluent, also known as recycled water. Properly recycled water meets health and safety standards required for the vast majority of industrial uses, such as fabricating, processing, washing, diluting, cooling, and transporting.

This partnership will explore opportunities for industrial reuse of effluent water from MWRD's Calumet Plant, which treats approximately 237 million gallons of wastewater per day while eliminating 90 percent of contaminants. IAW will build and maintain the necessary infrastructure to

deliver the recycled water to industrial users while MWRD continues to process and treat wastewater. Once-used recycled water will be conveyed back to MWRD for another round of treatment and subsequent reuse.

As both a member of the Illinois Manufacturers' Association (IMA) and a steward of our natural environment, IAW shares a common interest in helping preserve, protect and enhance manufacturing operations while also advancing sustainable water solutions throughout the Chicago area. A growing percentage of the U.S. population recognizes the importance of water stewardship and expects companies to adopt greener practices, yet day-to-day industrial operations are often inherently water intensive. Recycled water provides an opportunity for manufacturers with even the largest water footprint to become environmental champions.

The idea that saving money and saving water are on opposite ends of the spectrum is an outdated way of thinking, long past its sell-by date. Instead MWRD and IAW are seeking to capture the economic value in what was once considered waste. Recycled water is an affordable and realistic alternative for manufacturers

currently paying full-price for potable water. It's good for the planet and good for the bottom line.



### Illinois American Water

IAW serves approximately 1.2 million people in 127 communities across the state of Illinois, providing high-quality water and wastewater service. IAW is a regulated utility governed by the Illinois Commerce Commission. The company operations follow strict regulations created by the United States Environmental Protection Agency (USEPA) that help to provide high quality drinking water.

IAW's parent-company, American Water, was founded in 1886 and today is the largest and most geographically diverse publicly traded U.S. water and wastewater utility company. With headquarters in Voorhees, New Jersey, the company employs 6,700 dedicated professionals who provide regulated and mar-

see **WATER** page 14

**Metropolitan Water Reclamation District of Greater Chicago's Calumet Plant**



## WATER

Cont. from page 7

ket-based drinking water, wastewater and other related services to an estimated 15 million people in 47 states and Ontario, Canada.



**Metropolitan Water Reclamation District of Greater Chicago**

### Metropolitan Water Reclamation District of Greater Chicago

The MWRD's mission is to protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan), improve the quality of water in watercourses in its service

area, protect businesses and homes from flood damages, and manage water as a vital resource for its service area. MWRD's strategic plan

includes a goal to pursue resource recovery, including reuse applications for treated wastewater. ■

### Metropolitan Water Reclamation District of Greater Chicago's Calumet Plant



## ENERGY COSTS

Cont. from page 12

dampener to control the flow of liquids or gases. The VFD allows the motor to speed up or slow down to provide the necessary pressure — eliminating the need for dampers and valves.

The sheer size of some of those motors made the Aventine project unique.

"It's not common to install VFDs on 400 horsepower motors," says Schultz. "Those are some very, very big dogs — but the bigger the motor, the bigger the savings."

In fact, by modifying just 12 motors, Aventine has reduced its annual electrical use by more than 4.2 million kilowatt-hours a year. Those energy savings boost the bottom line by nearly \$300,000 every year — and help the environment, too.

To help fund the improvements, Ameren Illinois provided more than \$170,000. The incentive money cut Aventine's project costs by more than half. And because Aventine has limited funds for capital projects, receiving incentives through Ameren Illinois helped push the project to the forefront.

The project proved to be a wake-up call to the power of energy effi-

ciency. With an eye for energy efficiency, the team at Aventine hopes to transform their workplace — originally built in 1899 as a sugar processing facility — one project at a time.

### Resources available for VFD projects

The Ameren Illinois Energy Efficiency Business Program has a number of valuable resources designed to help with your VFD energy efficiency project. The pro-

For a limited time, Ameren Illinois can provide businesses with a cash incentive of \$115 per horsepower controlled for motors of 500 horsepower or less . . .

gram offers free energy consultations, which can help identify the best applications for a VFD and detail how to secure cash incentives to offset project costs. For a limited time, Ameren Illinois can provide businesses with a cash incentive of \$115 per horsepower controlled for motors of 500 horsepower or less, which could cover

up to 75 percent of the project cost. The program also offers \$0.06 per kWh saved for VFD installations on motors larger than 500 horsepower. Your facility may also be eligible for an additional incentive bonus when you complete your project before March 31, 2017.

To schedule an energy consultation or inquire more about VFDs, please call us at 866-800-0747. You can also get more information at [ActOnEnergy.com/VFD](http://ActOnEnergy.com/VFD).

### About the Ameren Illinois Energy Efficiency Program

Since 2008, the award-winning Ameren Illinois Energy Efficiency Program has helped Illinois businesses save over \$360 million in energy costs. Utilizing more than \$85 million in cash incentives, business customers have been able to cut project costs, decrease payback periods, and move energy efficiency projects forward. ■

### References

1. U.S. Department of Energy (DOE). *Variable Speed Pumping: A Guide to Successful Applications*. May 2004.

Visit [ActOnEnergy.com/VFD](http://ActOnEnergy.com/VFD) or call 866-800-0747 for more information.