

# Wisconsin Healthcare Engineering Association

## Newsletter

October 2018

Volume 28

3rd Quarter

### *Inside this issue:*

Thank You WHEA Sponsors!	2
Calendar of Events	3
In Memoriam	4
Chapter I	5
Education Committee	6
HCC Advanced Level 2	7
2019 Webinar Series	8
Chapter IV	9
Annual Conference	10
2019 WHEA Sponsorship	11
2019 Directory Advertising	11
Platinum Sponsor Article	12-17
Member Website Access	18
Code Critical	19
Employment Opportunities	20-21



*Darrell Courtney*  
WHEA President

### *President's Message*

What an amazing start to the 2018/2019 WHEA season. WHEA's 2018 Annual Conference was well represented from all of our Chapters in La Crosse.

It was a great honor to be your master of ceremonies for the conference and annual banquet. The excitement has already begun to swell for the 2019 Annual Conference in Appleton.

We will continue to work on our goals throughout the next year. Plan to hear from your Chapter President or Vice President on the following:

- Energy to Care Program (watch for a Lunch and Learn in February).
- Continued efforts to have a Chapter Meeting Call in Program available.
- WHEA's Foundation (very exciting)
- Working towards ASHE's Platinum Elite Award

We have an exceptional organization. It is my honor, and you have my deepest gratitude, to lead our efforts. WHEA will continue to grow and be a leader in the nation's healthcare organizations. Our current board is a direct reflection of lead that WHEA has taken and will continue to strive to be. It is all from your efforts.

Thank you for your continued support of WHEA,

Darrell Courtney.

***Endeavor to Persevere***

# Thank you to our 2018 Sponsors for their support!

## PLATINUM SPONSORS

The Boldt Company	Butters-Fetting Co., Inc.	C.D. Smith Construction, Inc.	Focus on Energy
Johnson Controls	JP Cullen	Miron Construction Co., Inc.	Pieper Electric, Inc. and Systems Technologies

## GOLD SPONSORS

AMS Steam Products	ASI Signage Innovations	August Winter & Sons, Inc.
Balestrieri Environmental	B-E Controls	Bradley Corporation
CEC (Communications Engineering Company)	CG Schmidt	Compliance One Group
Eppstein Uhen Architects	Fremont Water Solutions	HGA Architects and Engineers
Hilti, Inc.	Hoffman Planning, Design & Construction, Inc.	J. F. Ahern Co.
JH Findorff & Son	Kahler Slater	Knutson Construction
Kraemer Brothers, LLC	Mavo Systems	McCotter Energy Systems
Mechanical, Inc.	Mortenson Construction	PBBS Equipment Corporation
Riley Construction	Rinderle Door Company	Ring & DuChateau Consulting Engineers
RTM Engineering Consultants	Somerville Architects and Engineers	Total Water Treatment Systems
Tremco, Inc.	Tweet/Garot Mechanical, Inc.	Zimmerman Architectural Studios, Inc.

## SILVER SPONSORS

Badger Balancing, LLC	Beeler Construction	BELFOR Property Restoration
Berghammer Construction	BWBR Architects, Inc.	Chem-Aqua
Complete Control, Inc.	EAPC Architects Engineers	Environments
Faith Technologies	Flad Architects	Fowler & Hammer, Inc.
Furlong Industrial Systems	General Heating and Air Conditioning	GRAEF
Greenfire Management Services	Groth Design Group	Grumman/Butkus Associates
Hooper Corporation	IMEG	JSD Professional Services, Inc.
Kraus-Anderson Construction	KRS, Inc.	Macco's Commercial Interiors
Market & Johnson	McMahon Associates, Inc.	NEI Electric
Pearson Engineering, LLC	Phigenics	Plunkett Raysich Architects, LLP
Purely Med Gas, Inc.	raSmith	The Samuels Group, Inc.
Siemens Industry, Inc.	Staff Electric Co., Inc.	Techline America
Trane	V&F Roof Consulting & Service	Wendel
	Wold Architects and Engineers	

# WHEA CALENDAR

## Wednesday, November 7

Healthcare Construction Certificate Program – Advanced Level 2

## Thursday, November 8

~11:30 am Chapter II Meeting  
~Chapter I Meeting  
~Lunch & Learn Webinar 11:30 am

## Tuesday, November 13

~12:30 pm Code Committee Meeting

## Friday, November 16

~Foundation Meeting

## Friday, December 7

~9:00 am Board Meeting  
~1:00 pm Member Services Meeting

## Wednesday, December 12

~12:30 pm Chapter IV Meeting

## Thursday, December 13

~Chapter I Meeting  
~11:30 am Chapter II Meeting  
~Lunch & Learn Webinar 11:30 am

## Thursday, January 10, 2019

~Chapter I Annual Holiday Party  
~Lunch & Learn Webinar 11:30 am

## Friday, January 11, 2019

~Education and Professional Development Meeting, Kalahari Resort, Wisconsin Dells

## Wednesday, January 16, 2019

~Healthcare Construction Certificate (HCC) - Appleton

## Thursday, January 17, 2019

~Chapter III Meeting

## Friday, January 25, 2019

~9:00 am Conference Committee Meeting

## Thursday, February 14, 2019

~Chapter I Meeting  
~Chapter V Meeting  
~Chapter II Meeting 11:30 am  
~11:30 am Lunch & Learn Series Webinar  
~Foundation Meeting

## Friday, March 1, 2019

~9:00 am Board Meeting

## Thursday, March 7, 2019

~11:30 am Chapter II Meeting

## Thursday, March 14, 2019

~Chapter I Meeting  
~Lunch & Learn Webinar 11:30 am

## Wednesday, March 20, 2019

~Healthcare Construction Certificate (HCC) - Brookfield

## Thursday, March 21, 2019

Chapter III Meeting

High performing, safe and efficient  
healthcare facility design



Architecture • Process Improvement • Interior Design  
Lighting • Civil • Structural • Mechanical • Electrical  
Plumbing • Technology • Commissioning



Suzanne Ferris | 414.278.3454 | [www.hga.com](http://www.hga.com)



Preserve your building's health with  
Trane's HVAC systems and services

Trane's HVAC systems and services can help hospitals provide the ultimate healing environment through exceptional air quality, reliability and energy efficiency. We are your unique solutions provider — from designing, building, installing, and maintaining integrated HVAC systems to supplying your hospital with the highest quality IAQ.

Take control of the health of your building.  
Visit [Trane.com/Healthcare](http://Trane.com/Healthcare) to learn how.

© 2015 Trane. All rights reserved.  
Trane is a brand of Ingersoll Rand. Ingersoll Rand (NYSE:IR) enhances the quality of life by creating comfortable, sustainable and efficient environments.



# In Memoriam

## Edward M. Dowling



Born to eternal life October 14, 2018 at age 75. Loving husband of Penny Dowling. Beloved father of Kelly (Kurt) Kramer, Michael (Wendy) Ruger, and Susan (John) Mayer. Proud grandpa of Caleb, Katelyn, Emily, and Nathan. Further survived by other relatives and friends. Ed was a proud veteran of the U.S. Navy. He was a building engineer for Trinity Hospital and Milwaukee Repertory Theater. In his retirement, Ed was an avid volunteer of the Wisconsin Maritime Museum in Manitowoc and enjoyed spending time with his family. Visitation will be held Friday at St. Stephen the Martyr Lutheran Church 1:00 PM until 2:45 PM, memorial service 3:00 PM. In lieu of flowers, memorials to St. Stephen the Martyr Lutheran Church or the Wisconsin Maritime Museum are appreciated.

## Chapter I News



*Jason Sipiorski  
Chapter President*

I'm honored to have been installed as Chapter I President this year. I'm also excited about our meeting schedule and the educational topics that we have organized for the chapter.

Since the last quarterly report we had our summer banquet, had our annual golf outing, and have kicked off our monthly meeting schedule with our September and October meetings. Some of the highlights of those events are below.

### RECENT HAPPENINGS

#### Summer Banquet:

Held on June 28<sup>th</sup> at Weissgerber's Golden Mast on Okauchee Lake. 144 members got together for some mingling, our business meeting, door prizes, a casual dinner, and some fun yard games, pontoon rides, and a few cocktails.



#### Golf Outing:

The annual Chapter I golf outing was held September 7<sup>th</sup> at Western Lakes Golf Club in Pewaukee, WI. The golf outing is a big draw. We had 144 total golfers which maxes out the golf course. Therefore, we've decided to move to a bigger golf course for next year. Next years' outing will be held at Silver Spring Golf Course on September 13<sup>th</sup>, 2019.



#### September Business Meeting:

Our September 13th meeting was held at VJS Construction Services and our educational topic was "Water Safety Tool Kit". We had 48 members attend the meeting.

#### October Business Meeting:

Our October 11<sup>th</sup> meeting was held at Kahler Slater Architects and our education topic was "Rated Doors and Walls" presented by Lauzon Life Safety Consulting. We had 44 members attend.

#### Upcoming Calendar

November Meeting: 11/8 at Milwaukee Regional Medical Center Thermal. Boldt providing a tour of the upgraded Central Plant that serves the MRMC campus.



#### Other Happenings

Chapter 1 is excited about an Intern Initiative that our members at Advocate Aurora Health have drafted. Chapter 1 will present this initiative to the State Board at the December meeting.

## Education and Professional Development Committee (EPDC)



Darrell Courtney  
Committee Chair

Did you sign up for the November 7<sup>th</sup> Advanced HCC in Wisconsin Dells? The Advanced program, created and implemented by our Code Committee, has seen high interest by both trades and our health care personnel. The one day program is set up with a morning program attended by all and then three separate breakout programs for attendees to choose to from. We look forward to your evaluations to the newest program

for our members and sponsors in WHEA.

The 2019 Lunch and Learn programs are set. The EPDC is proud to once again offer programs that our members have requested with your returned program evaluations. As a reminder; we know that everyone's time is precious and limited. One of our updates will be to tighten up our presentations to a one hour program. As you may have seen, we have been running trials of the one hour program with positive reviews to the shorter time line. Continue to supply input for future programs after each of the monthly programs. See Page 8 for the complete flyer including tentative monthly topics. Thank you for your continued support to the education of our members in 2018.

Sign up for the 2019 Lunch and Learn webinar programs and receive the remaining 2 as a bonus. As a subscriber, you will receive the recorded links to all the webinars; past ones to review or watch for the first time. These may be watched at any time that you wish. Go to the Education tab at the [www.whea.com](http://www.whea.com) site, sign up, and start your learning today. You will receive the login information for the next scheduled webinar and the links to all previous recordings. You never have to miss a program again. The cost for the annual webinar series will again be \$300 for WHEA members and \$500 for non WHEA members. Join now and receive the remaining 2018 webinar programs for free. Register at [www.whea.com](http://www.whea.com).

**WE TAKE ALL THE HEAT**

PBBS is your single-source Cleaver-Brooks provider for any boiler room needs. We're ready to make your life easier—throughout the life of your boiler.

Ready to upgrade that ancient boiler? The experts at PBBS are on your side. We'll assist in engineering your boiler room to meet exact specifications, properly size Cleaver-Brooks equipment, and help you choose a qualified contractor for installation. After PBBS commissions the boiler to maximize efficiency, we'll provide parts, service, and repairs for the life of your equipment.

**PBBS**  
PBB SERVICES

**CleaverBrooks**

Your source for everything Cleaver-Brooks.  
Contact PBBS today at 800.236.9620.

**pbbs.com**

Milwaukee | Madison | Green Bay | Twin Cities | Stevens Point | Fargo

**TURN-KEY ENVIRONMENTAL SERVICES FOR HEALTHCARE FACILITIES**

**BALESTRIERI**  
AN INDUSTRIAL SERVICE COMPANY

- Adaptive Reuse
- Asbestos Abatement
- Demolition & Excavation
- Interior Demolition
- Aerial Imagery (sUAV)

**800.453.2965 • BalestrieriGroup.com**

**Grumman/Butkus Associates**  
Energy Efficiency Consultants and Sustainable Design Engineers

G/BA is a nationally recognized full service MEP firm specializing in energy & resource consulting for large, energy-intensive facilities as well as mechanical, electrical, and plumbing design services. Our correlative services, including commissioning and retro-commissioning, energy and resource benchmarking, energy conservation studies, MEP infrastructure planning and upgrades, LEED consulting, and computerized building modeling, are aimed at improving and maintaining the performance & efficiency of systems throughout the lifetime of a building or facility.

Wauwatosa, WI 414.476.8980  
Madison, WI 608.278.1890  
[www.grummanbutkus.com](http://www.grummanbutkus.com)



**HEALTHCARE  
CONSTRUCTION  
CERTIFICATE  
PROGRAM**

**ADVANCED  
LEVEL 2**

**Wednesday, November 7, 2018**

**Glacier Canyon Conference Center  
Wisconsin Dells**

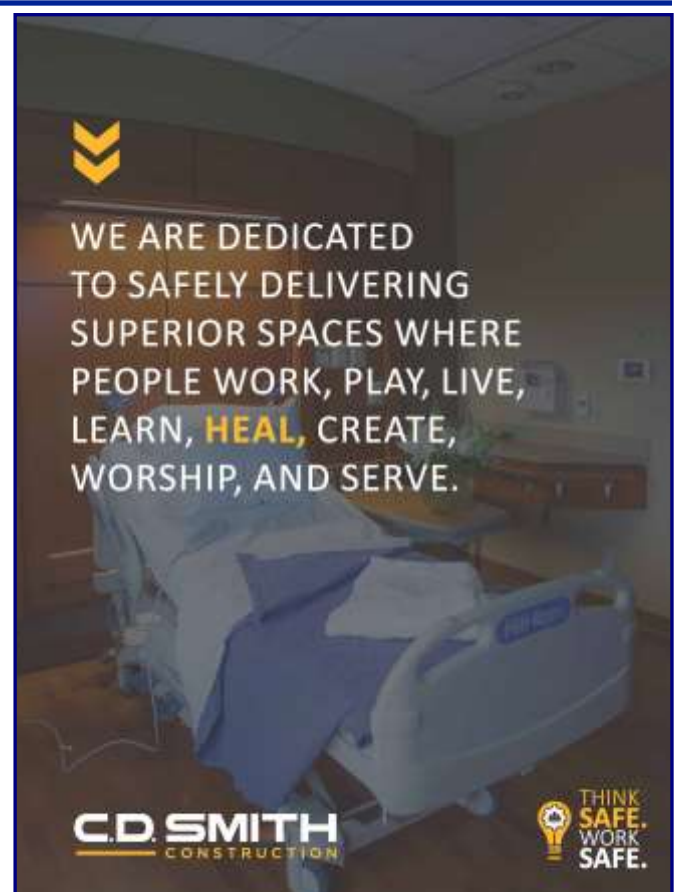
**Presented by  
Wisconsin Healthcare  
Engineering Association**

This program will provide a  
certificate good for 3 years



Expires: **11/30/2021**

There is still time to register at  
[www.whea.com](http://www.whea.com) under the  
 Education tab / Site Programs.



**WE ARE DEDICATED  
TO SAFELY DELIVERING  
SUPERIOR SPACES WHERE  
PEOPLE WORK, PLAY, LIVE,  
LEARN, **HEAL**, CREATE,  
WORSHIP, AND SERVE.**

**C.D. SMITH  
CONSTRUCTION**

**THINK  
SAFE.  
WORK  
SAFE.**



**Your  
Healthcare  
Construction  
EXPERT**

**Let us make  
your job easier™**

**Froedtert South - St. Catherine's Medical Center Campus  
Advanced Outpatient Surgical Wing**

Rendering courtesy of Eppstein Uhen Architects

**RILEY  
CONSTRUCTION**

**MILWAUKEE • KENOSHA • CHICAGO**

since 1965

[rileycon.com](http://rileycon.com)



# WHEA's 2019 Monthly

## "Lunch & Learn" Webinars Every 2nd Thursday of the month 11:30 am to 1:00 pm

Webinars are scheduled to run anywhere from 60 to 90 minutes

"Thank you for providing these trainings, I always walk away learning something."

"Thank you, very helpful information. Need to have more techs enrolled in these webinars"

"Very informative - great information"

"These webinars have been meeting our needs."

"The Lunch & Learn is a great program to educate staff."

WHEA's Educational and Professional Development Committee is offering 12 webinars for the 2019 calendar year for a one time, low price per computer connection.\*

Available by yearly subscription only.

**\$500 Regular Registration** (\$42 per webinar)

**\$300 WHEA Member Discount** (\$25 per webinar)

**NO LODGING • NO OVERTIME • ONE TIME PAYMENT**

**PLUS if you sign up today, you'll receive the login information for the remaining webinars in the 2018 webinar series.**

This is a cost effective, professional development series for facility staff, administrators and contractors. This is a fantastic opportunity to stay up to date on current issues without leaving your facility. You will receive complete session information approximately 2 weeks before each webinar. Each webinar offers 1.5 Contact Hours/.15 CEUs approved by ASHE.

**Registration is now open at [www.whea.com](http://www.whea.com) for this 2019 webinar series.**

Follow the drop downs under the Education tab to "Webinar Series Registration".

**To receive the members only discounted rate, you must log into the WHEA members only site and use the Members Only registration form.** If you don't have a members only login, email [info@whea.com](mailto:info@whea.com) to set up your members only access.

You may sign up anytime during the year but the cost will stay the same - there is no individual webinar pricing. All webinars will be recorded and you will receive a link to that recording after the webinar has been presented. Even if you are not able to attend, you can still have these important updates to watch at your convenience.

The webinars will cover a variety of topics that focus on "hot-topic", code alerts and management level subjects throughout the year. A tentative list of topics is below. This topics list is subject to change.

*\*Per Connection equals one computer login in one room. You may have as many people sitting in that room watching the webinar as you wish, but you may not share your login information with any other person inside or outside your facility.*

## 2019 TENTATIVE TOPICS

<b>JANUARY 10</b>	Med Gas Cylinder Storage & Handling	<b>JULY 11</b>	Generator Maintenance - Best Practices
<b>FEBRUARY 14</b>	E2C (Energy Efficiency Commitment)	<b>AUGUST 8</b>	Boiler Operations
<b>MARCH 14</b>	HVAC Troubleshooting	<b>SEPTEMBER 12</b>	Electrical Safety (Arc Flash - Lockout/Tagout)
<b>APRIL 11</b>	Med Gas Pipe & Alarm Systems	<b>OCTOBER 10</b>	Interim Life Safety Measures
<b>MAY 9</b>	Pressure Relationships (Room Specific)	<b>NOVEMBER 14</b>	Responding to Water Emergencies
<b>JUNE 13</b>	Ladder Safety & Fall Protection	<b>DECEMBER 12</b>	Electrical Generator Part 1 (Design)

## Chapter IV Fall 2018



Troy Torgerson  
Chapter President

Greetings fellow WHEA members!

The new year for Chapter IV is off and running with the newly elected officers having already met twice as a group to focus on our goals for the upcoming year. Education and value in our chapter meeting is our focus this year and we are going to do that with meetings specifically focused on education and others on networking and having fun. We want to keep in mind that time is our most precious commodity and that we want to make each meeting have value to the members that are able to attend. With this focus in mind, it is the goal of Chapter IV to retain all of our existing members as well as grow membership this year with the education oriented meetings. Additional Education meetings will be included in the months that aren't traditional quarterly meetings – education focused.

Our next Chapter Meeting will be December 12<sup>th</sup>, 2018 at The Great Dane, 2305 Sherman Street, Wausau starting at 12:30 pm. This is the traditional Christmas meal for the chapter with an exciting education session planned for the meeting. The education presentation will include a Medical Gas Specialty Presentation including;

- Medical Gas Specialty Presentation by Elite Medical Gas LLC
  - Medical Gas Systems Overview
  - Amico Products Overview
  - Retro Fitting in Healthcare Facilities
  - Cross Connections, Shutdowns and Back Feeding
- Presented by:
  - Robin Krause
    - Local 400 Plumbers Union
    - ASSE 6010-6050 Certified Medical Gas Professional
  - Brian Seymour
    - Amico Product Representative
    - Medical Gas Systems Specialist
    - Sales & Project Manager for EMGS LLC

We would welcome any ideas for chapter meetings and information on additional opportunities that any other chapter would have, please contact me at [troy.torgerson@co.marathon.wi.us](mailto:troy.torgerson@co.marathon.wi.us) or any one of our new Board members – VP Ed Radtke at [Edward.radtke@aspirus.org](mailto:Edward.radtke@aspirus.org), Travis Gunderson, Member at Large, [travis.a.gunderson@jci.com](mailto:travis.a.gunderson@jci.com) or Secretary/Treasurer, Chris Ecke at [cecke@inprocorp.com](mailto:cecke@inprocorp.com)

Good luck hunting and Happy Thanksgiving to all of the members of WHEA and their families!

**The safety of your patients, staff and visitors is top priority.**

**Meet with the CEC team to discuss:**

- Security Planning
- Creating Safe Environments
- 2012 Life Safety Code
- 24/7 Life Safety Monitoring and more...

1-800-377-0271  
[www.cecinfo.com](http://www.cecinfo.com)

The Experience Matters  
**cec**  
Creating Safe Environments

**GREENFIRE**  
CONSTRUCTION MANAGEMENT SERVICES

HEALTHCARE • MULTI-FAMILY • EDUCATION • RETAIL • OFFICE BUILD-OUTS • HISTORIC RENOVATIONS

414.290.9400 | [greenfire.com](http://greenfire.com)

Suite A Internal Medicine

**McMAHON**  
ENGINEERS ARCHITECTS

[mcmgrp.com](http://mcmgrp.com) • 920.751.4200 • [mgast@mcmgrp.com](mailto:mgast@mcmgrp.com)

VALUES • CULTURE • RELATIONSHIPS  
• FOR OVER 100 YEARS •

## 2018 Annual Conference Recap



Mike Blackwood  
Committee Chair

The WHEA Annual Conference was held in La Crosse at the La Crosse Center on September 18 through September 21. Registrations increased over last year and comments received were very positive. Tuesday afternoon the conference began with The John Foley Groups' powerful presentation followed by Marge McFarlane of Superior Performance, LLC's "The Impact of the Recent Flu Epidemic". Tuesday ended with the Open House, which once again was a great night of networking to reconnect with old friends and create new ones.

Wednesday morning continued with Marge McFarlane and her presentation "Continuity of Operations: Planning for Safe Patient Care and Services in a Crisis". The Technical Exhibit was once again a sold out event with 192 exhibits. The last programs of the day were presented by our very own Codes & Standards Committee members, Jeff Eckstein, David Soens, Wade Rudolph (with special guest Doug Erickson) sharing all the updates on codes

for the year.

Thursday, Bill Lauzon and Heather Lauzon Werner presented both an Introductory and Intermediate set of courses for the entire day. Heather with "Key Concepts" and Bill with "Compartmentalization & Smoke Barriers", Rated Walls and Doors" and "Hazardous Rooms".

Thursday evening's Annual Banquet and Awards Presentation was held offsite at Shenanigans Entertainment Center and Sports Bar. Member service awards were presented and Duke Cook gave out three awards, first presenting Dan Loest with the Founders Award for outstanding service and dedication for his many accomplishments and tireless contributions to WHEA, then to Dennis Havlik who was presented the Robert H. Botts Healthcare Engineering Pioneer Award providing leadership and continuing growth working with the conference technical exhibits, leading the way and constantly raising the bar for growth and finally a special award to Roger Elliott for his many years of presenting the member service awards and his extraordinary gift for storytelling. After dinner and the awards portion, it was on to the games. There was a fierce competition for prizes playing every kind of arcade game you could imagine.

Friday's half day program was the "Joint Commission Update" with Herman McKenzie from The Joint Commission. An excellent closeout to the 2018 WHEA Annual Conference.

The evaluations that were turned in gave out excellent marks for all portions of the conference.

Plans for the 2019 WHEA Annual Conference in Appleton have already begun and is sure to be yet another great conference. Be sure to mark your calendar for September 17 - 20, 2019 and watch for additional information in upcoming newsletters.

**YOUR HEALTHCARE DESIGN TEAM**

Bellin Health Titletown Sports Medicine & Orthopedics Clinic

**somerville**  
architects+engineers

VISIT US AT [somervilleinc.com](http://somervilleinc.com)

2100 Riverside Drive, Suite 300 | Green Bay, WI 54301 | 920.437.8136

**techline.**  
Functional. By design.

**Features & Benefits**

- Wide selection of colors, wood textures and countertop options
- Limited lifetime warranty
- Modular construction
- Shipped fully assembled (unless otherwise noted)
- Matching interior and exterior colors

**Call Toll Free: 1-800-356-8400**

## 2019 Sponsorship Opportunities Are Now Available



Dennis Havlik  
Committee Chair

The Wisconsin Healthcare Engineering Association (WHEA) is in the process of acquiring requests for sponsorship for 2019. Your organization may choose between three different levels of sponsorship, Silver, Gold or Platinum. Depending on which level of sponsorship you choose, there may be opportunities for free advertisements in the directory and newsletters, technical booth registrations and other ways to promote your company within the WHEA membership. You'll find the specifics for each sponsorship level on [www.whea.com](http://www.whea.com) under the Sponsorship tab. Once you apply for sponsorship using the online registration form, your sponsorship request will be processed. You will be informed by January 1<sup>st</sup> if your sponsorship request has been accepted and will be contacted regarding your sponsorship level opportunities. Please go to [www.whea.com](http://www.whea.com) and click on the Sponsorship tab for complete information on each level of sponsorship and the link to the sponsorship application. Applications are due by the end of November 2018.

## 2019 Directory Advertising Orders Being Taken

Ad space must be reserved by January 31st using our online order form found on [www.whea.com](http://www.whea.com). Complete advertising information and the order form may be found on [www.whea.com](http://www.whea.com) under the "Publications" tab.

**QUARTER PAGE**

COLOR RATES & SIZES		
1/8 Page	(3½" x 2½")	\$275
1/4 Page	(3½" x 5")	\$385
1/2 Page	(7½ x 5")	\$605
Full Page	(7½ x 10")	\$825
(Ad sizes are approximate)		

BLACK AND WHITE RATES & SIZES		
1/8 Page	(3½" x 2½")	\$195
1/4 Page	(3½" x 5")	\$275
1/2 Page	(7½ x 5")	\$395
Full Page	(7½ x 10")	\$555
(Ad sizes are approximate)		

**EIGHTH PAGE**

**HALF PAGE**

**Ads must be emailed to**  
[info@whea.com](mailto:info@whea.com)  
**by February 28th.**

### Advertising Copy Requirements

For reproduction of your ad copy in any of our publications, we prefer that your ad be developed in QuarkXPress or Adobe Illustrator. We can also accept high quality jpeg files, pdf files, and tiff files. We can develop entirely new ad copy for you or rework your existing ad, if needed. Please contact Jane Bruvold, at [info@whea.com](mailto:info@whea.com) with any questions or for additional information.

### For Advertising Copy Development or Coordination

Contact Laura Bennett at Econoprint 1.888.677.0118 or by email: [laurab@econoprint.com](mailto:laurab@econoprint.com).

SUBMISSION FROM A WHEA PLATINUM SPONSOR

# Create better business outcomes with an open BAS



## How to minimize risk and maximize ROI with an open BAS architecture

There's a lot of talk in the industry these days about the concept of openness and how organizations and their facilities teams can benefit from having an open building automation system. But what exactly does that mean and how can openness add value?

In the world of building systems and technology, openness refers to the use of standard data formats and communications protocols in the design, delivery and use of building automation systems.

Standardization makes it easier to ensure compatibility across different systems and networks, maintain systems efficiently, and expand capabilities as technologies advance.

Within a building automation system (BAS), openness is typically associated with one or more of these characteristics:

1. Open Protocols
2. Open Procurement
3. Open APIs
4. Open Software Tools & Support

When applied to a BAS, these four aspects of openness can help facility teams create better business outcomes such as reduced energy spend or consumption; increased operational efficiencies; reduced IT security risk; and the ability to better maintain safe, comfortable and productive environments.

But opening the door to an open architecture does not come without its challenges.

This white paper explores the advantages and disadvantages of each of the four attributes of openness, and is designed to give BAS owners and users the information they need to consider what they're really looking for when they specify an open system.

### 1. Open protocols to support BAS integrations

Protocols are sets of rules that govern the exchange of data over a computer network. In the HVAC industry, the development of 'open' or standard protocols is led by a number of professional societies and member organizations. Common examples include BACnet/IP, TLS and OPC. The key is that they are not owned or maintained by a commercial entity – they are in the public domain.

Open protocols help BAS owners get more from their investments by creating a common language between systems and data, making it easier and more cost effective to integrate and expand, and broadening the pool of people with the knowledge and experience to maintain the systems efficiently.

The downside is this: Standard protocols are updated frequently. Keeping them in sync and managing different versions can be challenging—especially when multiple vendors are involved.

As you consider open protocols for a BAS selection or upgrade, it's helpful to focus on the goal. Do you have a master plan for your BAS? Do you know what you need it to accomplish both today and in the future? Do you have a sense of what upgrades or system integrations may be needed down the line? Document planned or potential use changes along with goals such as improving maintenance practices or monitoring electrical, water or energy usage.

#### ADVANTAGES OF OPEN PROTOCOLS

- Simpler integrations between competitive BAS
- Simpler integrations with meters, lighting, security, fire and other systems
- Common understanding of the network

#### DISADVANTAGES OF OPEN PROTOCOLS

- Version complexities
- Challenges to determine priority or lead among multiple systems in terms of supplying and servicing

When you begin with the end in mind, you can better ensure that the building automation system you choose will support open protocols and give you the flexibility to connect to controllers, devices and systems you'll need in the future.

If you have an existing BAS, it may be worthwhile to assess the protocols of your current system. Are they standard, open protocols that can easily support upgrades or expansion? Are the protocols up to date? By taking a closer look at the currently existing protocols, you'll be better prepared to make an informed decision (and specify open compliance, if needed) when the time comes to make a change.

## 2. Open procurement to build a BAS from multiple suppliers

Open procurement refers to the ability to purchase a product or products from multiple suppliers, a strategy often used by those who are concerned about being locked into a single vendor. There are definite advantages to making use of open procurement. It can create competitive pressures among suppliers and help keep costs down. It can help with sourcing when controllers or replacement controls are available from multiple sources. And open procurement can expand the talent pool, making a broader range of people available to develop, deliver, manage and maintain building automation systems.

Open procurement does have disadvantages, however. When working with multiple vendors, it can be difficult to hold individual suppliers accountable for issues, or maintain consistency during upgrades and expansion. Open procurement can also lead to multiple systems from multiple providers in a single buildings, each with their own tools for management and maintenance. And with the layered complexity of a BAS including sensors, equipment and servers, operators may have vastly different experiences with different components, making training and troubleshooting more difficult.

As you consider leveraging open procurement, start by doing your homework on potential vendors. Is their product

### ADVANTAGES OF OPEN PROCUREMENT

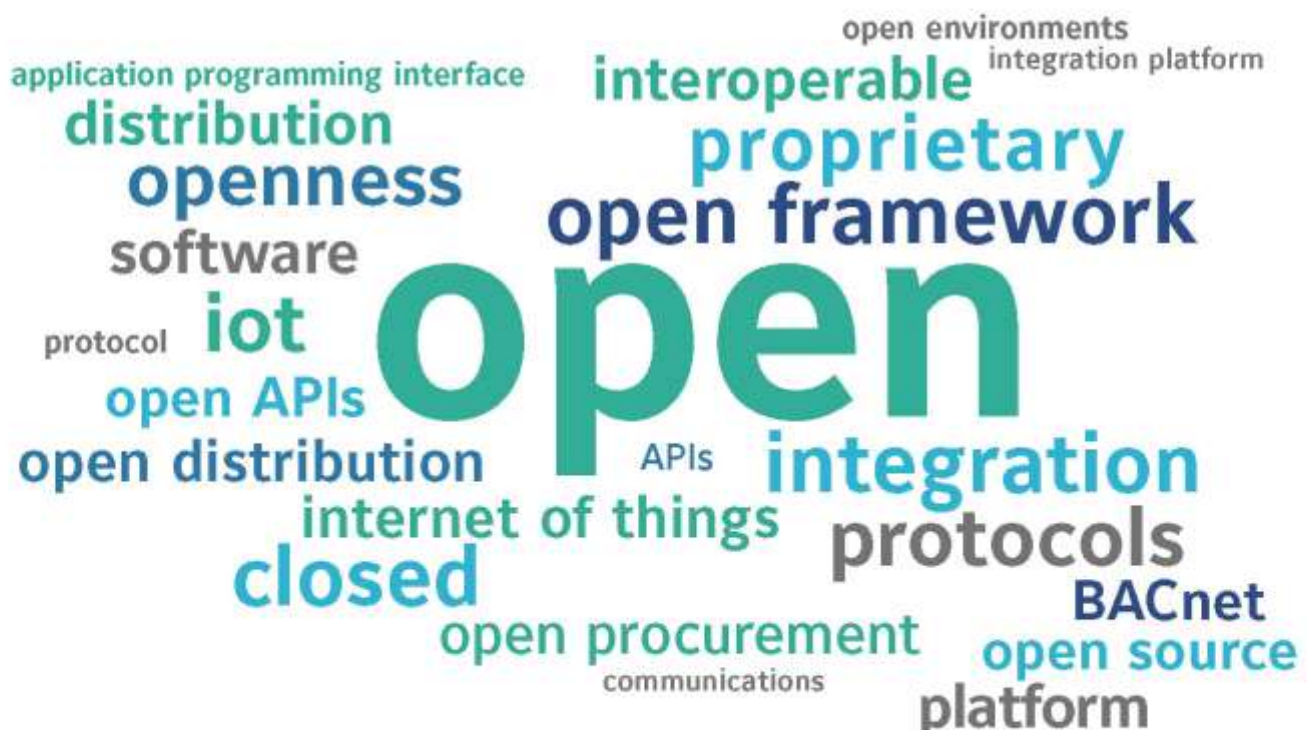
- Simpler integrations between competitive BAS
- Simpler integrations with meters, lighting, security, fire and other systems
- Common understanding of the network

### DISADVANTAGES OF OPEN PROCUREMENT

- Version complexities
- Challenges to determine priority or lead among multiple systems in terms of supplying and servicing

proven in environments and applications similar to yours? Do the company's service providers have the training, knowledge and experience to consistently deliver throughout the warranty period and without hidden costs?

And if you choose to specify open procurement, one way to minimize risk is to make sure documentation is thorough and current. In specification documents, make reference to today's technologies and protocols. Insist, in writing, that vendors across the system follow guidelines you set for system backups, updates, and common practices. Lastly, clearly documented roles and responsibilities can ensure that there are no overlaps or gaps.



## 3. Open APIs for BAS customization

When a building automation system supports an open API (Application Programming Interface) that means it gives third-party developers the ability to create custom tools and applications based on data generated by the BAS. The use of APIs can be an effective way to integrate building system data with other software applications or tools, such as computerized maintenance management system (CMMS), and can shorten the time needed to develop customized applications to meet a user's unique needs.

But APIs can be risky. By inviting third parties to access BAS data, the system will be inherently less secure and more vulnerable to threats and hackers.

In addition, withdrawing an API can be painful for users of systems that need to be consolidated or retired, as they'll lose their data. And software that uses APIs heavily can be impacted by changes on either the BAS or application side, which can disrupt operations.

### ADVANTAGES OF OPEN APIs

- Third parties can provide additional offerings
- Wider talent pool for customization work

### DISADVANTAGES OF OPEN APIs

- Security risk
- User dependency

As you consider using open APIs for your building automation system, start by assessing whether your current BAS is capable of meeting the need so you won't have to assume the risk associated with opening your network to third-party developers.



If you do choose to leverage open APIs, you can minimize the risk by taking these steps. First, involve your company's IT team; they'll help to ensure that measures are put in place to protect against vulnerabilities. They can also help validate that applications developed by third parties are capable of recognizing threats. Second, ensure that there's a plan for supporting and training people who will use the third-party applications.



## 4. Open software tools and support for BAS updates

'Open software tools and support' refers to the practice of extending access to the building automation system beyond the original vendor, so that others (either the BAS user or other vendors) can reconfigure the BAS or connect it to other new or upgraded systems. Having open access to software and tools gives BAS users more service options, including self-service.

The disadvantage is this: When a number of different individuals are allowed to make changes to a BAS, inconsistencies can be introduced.

### ADVANTAGES OF OPEN TOOLS AND SUPPORT

- Wider talent pool for BAS work or service (including "do it yourself" options)
- Access to factory training and factory support

### DISADVANTAGES OF OPEN TOOLS AND SUPPORT

- Inconsistency
- Ability to circumvent training or certification

As you consider granting open access to software tools and support, start by making sure the original BAS contractor provides, installs and sets up all the software tools necessary for a trained person to configure and program the building automation system.

Next, assess whether your organization has experienced, trained technicians who can add to or make changes to the BAS. If not, it may be more cost effective to consider external vendors. Either way, establish guidelines for who will be allowed to make changes to the system. Document the level of experience you'll require and develop standards within which the vendors (or your own employees) must work.

And keep in mind, as new projects are taken on, it will be important to determine and document who provides the tools and who owns the software licenses.

## Open, intelligent infrastructure

Over the past 10 years there has been a move to integrate systems and technologies and converge them onto a single network to take advantage of what we are now calling Internet of Things or (IoT). It all starts with an open BAS, and in most use cases the BAS is directing and scheduling the other system interactions to deliver desired outcomes. Until now, these single network integrations have been risky and costly largely due to the fact that systems didn't 'talk' to each other and complex building solutions were very customized. Now we are seeing the ability to integrate traditional building systems with business and vertical market specialty systems, taking advantage of the open BAS and its ability to direct workflow and operations to make the building do more.

Owners are looking for their buildings to do more. They're looking for their hospitals to become an instrument of care, or for their building to become a better learning environment in schools. IoT and open BAS are right in the center of delivering these outcomes. Owners and occupants alike have come to expect these IoT outcomes—like safety, comfort, productivity and efficiency.



### Open BAS: Helping facilities professionals achieve their goals

Building owners and facility managers are constantly looking for ways to obtain greater control and create greater efficiency in their buildings. An open BAS is one way to achieve those goals.

Tapping into the power of openness—through standard and open protocols, procurement, APIs and software tools—makes it easier to ensure compatibility across different systems and networks, maintain systems efficiently, and expand capabilities as technologies evolve.

By its very nature, however, an open architecture presents a number of challenges. It can be difficult to maintain consistency, eliminate version complexities and ensure

system security within an open system. The key to minimizing these risks is to know your BAS goals, and to clearly document roles, responsibilities and processes across vendors, systems and users.

That's why it's so important to approach open BAS with your eyes wide open. By taking steps to minimize risk, you can use open BAS to create better business outcomes such as reduced energy spend or consumption; increased operational efficiencies; reduced IT security risk; and the ability to better maintain safe, comfortable and productive environments.



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

### ABOUT JOHNSON CONTROLS

Johnson Controls is a global diversified technology and multi industrial leader serving a wide range of customers in more than 150 countries. Our 117,000 employees create intelligent buildings, efficient energy solutions, integrated infrastructure and next generation transportation systems that work seamlessly together to deliver on the promise of smart cities and communities. Our commitment to sustainability dates back to our roots in 1885, with the invention of the first electric room thermostat. We are committed to helping our customers win and creating greater value for all of our stakeholders through strategic focus on our buildings and energy growth platforms. For additional information, please visit [www.johnsoncontrols.com](http://www.johnsoncontrols.com) or follow us @johnsoncontrols on Twitter.

### ABOUT BUILDING TECHNOLOGIES AND SOLUTIONS


Johnson Controls' Building Efficiency has an unmatched portfolio of HVACR products and solutions to create more comfortable, safe and efficient buildings. Operating in more than 150 countries through a strong network of distribution channels, Building Efficiency's breadth of offerings help building owners, operators, engineers and consultants impact the full lifecycle of a building. Its market leadership is established through trusted brands such as YORK®, Sabroe® and Metasys® as well as its smart building integration capabilities and energy financing solutions. For more information, please visit [www.johnsoncontrols.com](http://www.johnsoncontrols.com) or follow us @JCI\_BENews on Twitter.

## Are You A New WHEA Member ? Or Current Member Without Members Only Website Access?

Email Jane at [info@whea.com](mailto:info@whea.com) with what you would like for a password and she will set you up with members only access.

It's fast and easy.

If you do have access, take a minute to go into the database and doublecheck your listing.  
Send Jane any edits.



**FINDORFF SUPPORTS  
A HEALTHY COMMUNITY.**

Findorff's experience and long-term relationships with many medical and health-related facilities translates into numerous benefits for our clients during all stages of projects. Our experienced construction professionals, individually AS-E and WHEA-certified, provide the day-to-day quality management and construction services that produce a beautiful, comfortable, and safe environment for patients.

**Jeff Eckstein, P.E.**  
614-587-4063 | jeckstein@findorff.com

**Findorff**  
BUILDERS SINCE 1890

### Bringing You the Best of Johnson Controls and Tyco

TAKE ADVANTAGE OF A BROADER RANGE OF CAPABILITIES.  
Johnson Controls now provides a wider spectrum of innovative products, expert installation and services, and systems integration to help improve operational and energy outcomes for customers worldwide.



- BUILDING AUTOMATION SYSTEMS
- CONTROL
- HVAC EQUIPMENT
- AIR SYSTEMS
- SECURITY
- WIRELESS SAFETY & SECURITY PROTECTION
- WIRELESS SERVICES & PARTS
- OPERATIONAL RESILIENT SYSTEMS
- LIQUID COOLED & MONITOR
- OPERATIONAL INTELLIGENCE & ALERT ANALYTICS
- ENERGY STORAGE
- ENERGY MANAGEMENT SYSTEMS

As one new company, Johnson Controls and Tyco have linked their branch networks and independent channels to better serve our healthcare customers.

We offer best-in-class products, cutting edge technologies, and streamlined service and capabilities across building management, fire and life safety, security, automation/control, HVAC, energy storage solutions, and our flagship Building Automation System, Metasys®.

Questions? Contact your local Johnson Controls representative.

**tyco METASYS YORK Simplex**

**Johnson Controls**

For more information, please contact your nearest Johnson Controls branch:  
Appleton: 866.393.4733 | Madison: 866.862.0458 | Milwaukee: 866.823.8866

© 2017 Johnson Controls. All Rights Reserved. All other trademarks are the property of their respective owners. Johnson Controls and Tyco are registered trademarks of Johnson Controls. Johnson Controls and Tyco are registered trademarks of Johnson Controls.



**KRAUS-ANDERSON**

608-838-5444 | [www.krausanderson.com](http://www.krausanderson.com)

## Code Critical

### Codes & Standards Committee



Jeff Eckstein  
Co-Chair



David Soens  
Co-Chair

### Updated Compounding Pharmaceutical Rule

Following the New England Compounding Center outbreak in 2012 which affected 753 patients (64 patient deaths), the Wisconsin Pharmacy Examining Board recognized that Pharmacy 15 rule has not been updated since 2000 and did not adequately address current safety standards. The Centers for Medicare and Medicaid Services updated their federal certification pharmacy requirements in 2015. Wisconsin rule Phar 15 repeals and recreates the Pharmacy Examining Rules related to compounding non-sterile and sterile pharmaceuticals through updates reflecting portions of U.S. Pharmacopeia chapters 795 and 797. The Pharmacy Examining Board held a public hearing on January 17, 2017, and after incorporating public comments, the legislature enacted an effective date of November 1, 2018.

**SCANNING ISN'T THE ONLY THING WE HAVE IN COMMON.**

**JPCULLEN**  
THE TOUGH JOB EXPERTS

WHILE OUR SCANS SHOW DIFFERENT RESULTS, WE BOTH USE THE LATEST TECHNOLOGY IN THE BEST INTEREST OF THE PATIENT.

The type of scanning we use in construction, laser scanning, converts real-world spaces into 3D images with hyper-accurate data. Scanning gives us exact locations and measurements of existing conditions, up front, with proven results in schedule savings, accuracy and eliminated costs.

**BUILDING WISCONSIN SINCE 1892**

f t i n b  
WWW.JPCULLEN.COM

**All your facility needs in one envelope!**

**ONE CALL  
ONE CONTRACT  
ONE SOURCE**

**NEEMS Roof Warranty Program**

**Interior & Exterior Building Services**

**Building Maintenance**

**B-E CONTROLS.COM**

**B-E CONTROLS**  
FACILITY MANAGEMENT SERVICES

**PROVIDING SOLUTIONS TO YOUR UNIQUE NEEDS**

**1-855-377-5755**  
admin@b-econtrols.com

**Ask us about our NEEMS Roof Warranty Program**

350 South Tower Street, Suite 3  
Saukville, WI 53080

**EMERGENCY SERVICE 24/7**

**KRS<sup>inc</sup>**

Healthcare Flooring Solutions

**HIGH PERFORMANCE  
RESILIENT HEALTHCARE  
FLOORING**

Solutions to all of your flooring needs!

Phone: 262.798.8900 | Email: info@krsinc.com | Website: www.krsinc.com

# Employment Opportunities

Are you looking for a change -- an opportunity to advance your career?

Check out the following pages for employment opportunities available for healthcare facilities professionals.

## Director of Building Operations

Ashland Memorial Medical Center

Immediate full time opening for Building Operations Director. Responsible for planning, coordinating and directing all functions and activities of the department for Regional Enterprises Inc. (REI). REI is comprised of two critical access hospitals. Hayward Area Memorial Hospital and Water's Edge, located in Hayward, WI, includes a nursing home and assisted living facility. Memorial Medical Center, located in Ashland, WI, includes the Northwest Wisconsin Cancer Center. The candidate will be expected to spend equal amounts of time at each location. Must be a Certified Healthcare Engineer (CHE) or Certified Healthcare Facilities Manager (CHFM) or eligible to become certified within one year of hire. Bachelor's Degree in engineering, healthcare or related field required with progressive responsibility in facilities management and engineering. Minimum of 3 years of supervisory experience and 3 years of project management experience.

Must demonstrate knowledge of facility systems and pertinent safety and regulatory codes, such as Joint Commission, NFPA, IBC, CMS, State of WI, DNR, DHS, DSPS; as well as biomedical equipment maintenance and operation. Outstanding customer service and communication skills required. Must be proficient with Microsoft Office applications, CAD software and other software pertinent to the Building Operations Department such as work order and preventive maintenance programs.

Competitive salary and excellent benefits including health, dental, life, LTD and matching 403b contributions. Join our growing company and enjoy the best of northern Wisconsin's natural beauty and recreational opportunities.

Interested applicants should access MMC's employment application online and submit with a cover letter and resume.

Contact: Human Resources, Memorial Medical Center, 1615 Maple Lane, Ashland WI 54806. EOE.


Phone: 715-685-5520; Fax: 715-682-2368

Website: [ashlandmmc.com/employment](http://ashlandmmc.com/employment)


Email: [employment@ashlandmmc.com](mailto:employment@ashlandmmc.com)

Posted 10/26/2018

WE LOVE THE DETAILS TOO.



Together we can make detail-driven decisions early in the design phase allowing your facility to run smoothly and efficiently long after completion.



Visit [mortenson.com](http://mortenson.com) or contact **Mike Gleeson** at 262.879.2500 to learn how Mortenson can partner with you on your next project.

PROPERTY DAMAGE?

Fire • Water • Wind • Mold

DISASTER RECOVERY & PROPERTY RESTORATION SPECIALISTS

24-HOUR EMERGENCY HOTLINE

866.763.7410

- SMOKE & SOOT REMOVAL
- WATER EXTRACTION
- DRYING & DEHUMIDIFICATION
- STRUCTURAL CLEANING
- RECONSTRUCTION
- MOLD REMEDIATION
- AIR DUCT CLEANING
- CONTENTS RESTORATION
- DOCUMENT & MEDIA RECOVERY
- ELECTRONICS RESTORATION
- MACHINERY REBUILD & REPAIR
- ENVIRONMENTAL SERVICES
- ASBESTOS & LEAD ABATEMENT
- CONSULTING SERVICES

MILWAUKEE

2929 N. 114th Street  
Wauwatosa, WI 53222  
414.476.3720

APPLETON

1760 Prospect Court  
Appleton, WI 54914  
920.358.3843



PROPERTY RESTORATION

RESTORING MORE THAN PROPERTY

www.belforusa.com | Wisconsin Certification 969937

## Employment Opportunities

### Director of Environmental Services

**Columbia Health Care Center** is located in Wyocena, WI and is recognized for its commitment to excellence. We are currently recruiting for a Director of Environmental Services. This person plans and supervises facility and grounds maintenance, housekeeping and laundry functions to ensure a safe/sanitary environment for residents, staff and visitors.

Requirements: Two or more years of management/supervisory experience preferred, and three years' experience or post high school education in mechanical, electrical, plumbing and/or HVAC. Journeyman/ tradesman license preferred.

This is a full-time position with a starting salary of \$49,000 - \$54,000. We offer a generous benefits package including Health, Dental, Vision, Life Insurance and State Retirement.

Contact Information: Personnel Analyst at [Lori.Aldridge@co.columbia.wi.us](mailto:Lori.Aldridge@co.columbia.wi.us) or 608-429-4241.

Full job description and applications are available at [www.co.columbia.wi.us](http://www.co.columbia.wi.us) or on-site at 323 W. Monroe Street, Wyocena, WI. EQUAL OPPORTUNITY EMPLOYER

Posted 10/4/2018



**Provide them the best**

You want to give your patients the best. The best treatment. The best healing spaces. The best healthcare experience. Hoffman can help you create the best care environment for your patients.

Your patients deserves first-rate facilities.  
You deserve a partner ready to make that happen.

**Hoffman.**  
Planning, Design & Construction, Inc.

*Proud to be a WHEA gold sponsor.*

## HELPING WISCONSIN HEALTHCARE PROVIDERS REDUCE ENERGY COSTS

**Focus on Energy** provides energy saving solutions to help your facility control energy costs.

- Financial incentives
- Subject matter expertise
- Facility wide energy audits

For information and resources, call **800.762.7077** or visit:

**[focusonenergy.com/business](http://focusonenergy.com/business)**

**\$1 BILLION** for Wisconsin economy since 2001

**focus on energy™**  
Partnering with Wisconsin utilities

\*focusonenergy.com/request