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FEBRUARY 2026



Everest Energy & Control Technologies: Empowering Customers With Strong Relationships

16



When You Need a Concrete Solution

26



Spotless Sewer Lines Play a Key Role in Lining Success

32

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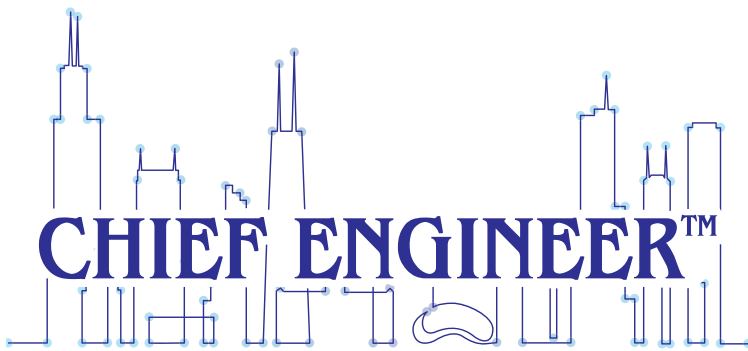
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VOLUME 91 • Number 2

Official Magazine of the



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The Chief Engineers Association of Chicagoland magazine is published
12 times per year by the Chief Engineers Association of Chicagoland.

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Subscription rate is \$36.00 per year in the United States and Canada; \$110.00 per year in all other foreign countries.
POSTMASTER: Send address changes to 22 W. Washington St., Suite 15112, Chicago, IL 60602

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**16 Everest Energy & Control Technologies:
Empowering Customers With Strong Relationships**

Everest Energy & Control Technologies fuels its success with solid relationships, education, and freeing customers from product source limitations.

26 When You Need a Concrete Solution

You might remember the tamales they brought to the CEAC Golf Outing last September. But what Corona Craft Restoration’s wants you to remember most is the quality of its work and the integrity of its service.

**32 Spotless Sewer Lines Play
a Key Role in Lining Success**

We look at the evolving role of Delta-T management and data-driven efficiency in modern facilities.

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2026 EVENT SCHEDULE



FEB 21

SATURDAY 1:30PM

SKATEFEST

Family friendly event, open to all members and their families and friends! Enjoy ice skating, gymnastics area, and light refreshments.



MAR 18

WEDNESDAY 4:00PM

ST. PATRICK'S DAY

Have a pint with your fellow CEAC members at the Irish American Heritage Center accompanied by authentic Irish music.

APR 22

WEDNESDAY 3:00PM

VENDOR FAIR

Back again by popular demand! Come see the industry's best at Morgan Arts Complex.

MAY 20

WEDNESDAY 3:00PM

BBQ

Spring is here and we're taking it outside for our annual BBQ event.



JUNE

DATE TBD

WHITE SOX GAME

Join members on the Fan Deck to cheer on the Chicago White Sox for an exciting CEAC outing.

SEPT 11

FRIDAY 9:00AM

86TH ANNUAL GOLF OUTING

Everyone's favorite event takes over Cog Hill once again for the biggest event of the year! This event is on PAR!

WWW.CHIEFENGINEER.ORG

PRESIDENT'S MESSAGE

 **The CHIEF ENGINEERS**
Association of Chicagoland

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Dear Members,

A big thank-you to everyone who attended the January Inauguration Gala, as well as to our Events Committee and everyone who had a hand in its planning and execution. We're most grateful to our Event Sponsor, Chicago Filter Supply, for its generous contribution. All of your continued support is invaluable to the vitality of our association, and we never take that support for granted.

This is the first time I'm addressing you in these pages as your new CEAC President, and I want to start by first thanking the Board and our membership for putting your faith in trust in me to oversee this historic association.

The CEAC has been around for well over 100 years, and has seen a lot of change in that time, but its mission of supporting those who devote their careers to managing the buildings throughout the Chicagoland area and the industries that are a part of that task remains the same. As your President, I aim to keep that mission on course and to help bring in new blood that will sustain the CEAC and our industry as a whole.

I would like to first thank Past President Doug Kruczek for everything he did over the last two years to keep us thriving. We continue adding new Active and Associate Members, building momentum toward our future, and we're grateful for the role that Doug and the rest of our Officers and Directors have played in making that happen. As we go forward, I hope we can all re-commit ourselves to making the CEAC the best it can be, for ourselves and for the up-and-coming generation.

In that spirit, I'm going to encourage those of us whose buildings may have trainees or engineers with the ambition and developing skill sets to become Chief Engineers, to please reach out to us — we want to hear their stories and to be able to share them with you in the pages of this publication. We would like to hear your stories, too, of mentorship, of jobs well done, and about the properties you manage. If you have had an interesting retrofit, a new install or any other work that has enhanced the properties you oversee, please get in touch with us at editor@chiefengineer.org and let us know about it — we want to keep these pages full of stories that are of interest to all of you, and the best way to do that is for all of us to take part.

This month, we're looking forward to our annual Skatfest event on Saturday, Feb. 21, at 1:30pm, at the Morgan Park Sports Center (11505 S. Western Ave., Chicago). This is a family event, as always, with food and beverages available for all. The rink will be available for open skating, and the gym facility will be open as well. Registration is open on the event page at chiefengineer.org. We hope to see everyone and their families take part in this great CEAC winter tradition.

I should also remind everybody that the Vendor Fair is now an annual event. If you're an Associate Member organization with us, this is a great time to show off your products and services and to interface with our Active Members. This has always been an enriching event that does what the CEAC does best, which is to create opportunities to come together to better what we do and to elevate the industry we're all a part of.

It's going to be a great year ahead — let's all be part of it!

Sincerely,



Larry McMahon





2026 Women in ASHRAE Leadership Symposium to Feature Dynamic Speakers and Sessions

ASHRAE announced a dynamic technical program for the 2026 Women in ASHRAE Leadership Symposium, taking place April 13-14, 2026, in Los Angeles, Calif. Following a sold-out inaugural event in 2025, the symposium returns with an expanded agenda designed to empower women and allies across the HVAC&R and built environment industries.

“This event offers professionals at every career stage, from students and early-career practitioners to seasoned executives, the opportunity to enhance leadership skills, grow their professional networks, and explore inclusive strategies for advancing women in the industry,” said Karine Leblanc, Symposium Chair.


Featured keynotes include:

- Gail Brager, Ph.D., Distinguished Professor of Architecture, University of California, Berkeley. Brager will share insights from her leadership in building science and sustainability research and mentorship of emerging leaders.
- Sara Safari, Ph.D., Empowerment Activist and Author.
- Safari will speak from her own personal experiences in overcoming challenges and how those principles can inspire peak performance in technical teams.

Key breakout sessions include:

- *Building Future Makers: How to Inspire the Next Generation into the Trades:* Explores strategies to empower young talent and expand pathways into HVAC&R and related technical careers.

- *Smarter Buildings Start with You: AI and IoT in HVAC:* Provides practical insights into how artificial intelligence and the Internet of Things technologies are being applied to improve building performance and commissioning.
- *Executive Presence Without Pretending:* Focuses on developing authentic confidence, clear communication and personal influence in both technical and leadership roles.
- *Inside the Walls of Net-Zero: Women Designing the Future:* Highlights real-world case studies showcasing women leading decarbonization, electrification and net-zero building projects.
- *Managing Technical Teams with Emotional Intelligence:* Offers tools and approaches for effective leadership across varying backgrounds, roles and experience levels.

In-person early bird registration to attend the 2026 Women in ASHRAE Leadership Symposium is \$495 for ASHRAE members (\$545 for non-members). 

For the full technical program, registration and additional information, visit ashrae.org/2026WIA.





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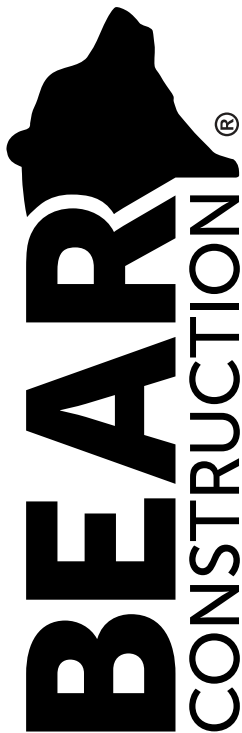
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CxEnergy 2026
April 21-24, 2026
Sheraton Grand
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The largest and oldest commissioning conference arrives at the Sheraton Grand in Chicago April 21-24, 2026. The premier event for building commissioning, energy management, and building analytics and diagnostics, CxEnergy 2026 draws hundreds of the nation's leading commissioning experts, energy management professionals, MEP engineers, HVAC testing professionals, facility managers and building owners to participate in the strongest technical sessions in the industry. Attendees learn real skills, make valuable connections, and stay ahead of what's coming next. It's the place where the industry meets, grows and moves forward.

Attendees can expect:

- Cutting-edge technical sessions
- Top-tier exhibitors
- Unmatched networking with industry leaders
- CEUs for professionals
- Real-world case studies and product demos
- A vibrant community shaping the future of the built environment

Don't miss your chance to connect with commissioning providers, energy managers and facility professionals at the most cost-effective event of its kind. Enjoy six hours of dedicated exhibit time, free access to 30+ expert-led sessions, and unparalleled networking opportunities. Presentation topics for CxEnergy 2026 will include:

- Blowing Stuff Up: A Practical Guide to Duct Air Leakage Testing
- Commissioning Hospital Pharmacies for Acceptance and Accreditation
- Empowering Change: Women Leading the Future of Commissioning
- Microgrid Applications for Mission Critical Facilities
- Testing, Adjusting & Balancing: Lessons Learned for Engineers, Cx & Energy Providers

CxEnergy Technical Presentation attendees earn AIA LU, USGBC LEED General Education, and CxA and EMP continuing education credits for presentations. The credits are

widely applicable for other certifications and professional licenses. (Attendees should check with their certification or licensing body.)

In addition, more than 300 free videos on industry best practices, including the ones from past CxEnergy presentations are available on the CxEnergy YouTube Channel. CxEnergy is presented by the Leaders in Building Performance: AABC Commissioning Group (ACG), Associated Air Balance Council (AABC), and Energy Management Association.

For more information or to register for CxEnergy 2026, visit www.cxenergy.com.



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Building Operator Certification® Opportunities Available

Building Operator Certification Level I: Building System Maintenance class will be available for 16 online sessions between February and May 2026. Building Operator Certification (BOC) helps building engineers, maintenance supervisors and others advance their skills in the energy-efficient operation of commercial buildings. With a combination of classroom and hands-on training, BOC delivers immediate benefits for owners, operators and occupants. BOC graduates use the tools learned in training to help their facilities save energy, reduce costs, and improve the efficiency of their building systems.

Building Operator Certification is a nationally recognized training and certification program that focuses on energy efficient building operations and preventative maintenance procedures. The Level I training provides building operators with knowledge and skills enhancement in the key activities associated with energy efficient building operations, including HVAC controls, common opportunities for operational improvements and building scoping for energy efficiency. The training includes lectures, discussion, small group exercises, tests and project assignments and will require about 74 hours of time. Visit www.boccentral.org to learn more and review eligibility requirements.

This series will be taught online through Zoom with live, instructor-led lectures on Wednesday and Thursday mornings between 9:00am and 12:00pm CT. See below for detailed class schedule.

Tuition for this series is available at a discounted rate of \$1,400 for individuals residing or working in Illinois. Additionally, some students may qualify for a tuition reimbursement upon successful completion of the training. Visit boccentral.org/training to see if a local partner is offering tuition reimbursement.

Tuition covers all class materials, books and credential recognition materials. Student handbooks will be shipped

directly to registered students. Please provide accurate shipping address at registration checkout. Register before Feb. 11, 2026 to ensure your books arrive before the first session.

SCHEDULE:

Feb. 25 & 26, 2026. BOC 1001A,
Energy Efficient Operations of Building HVAC Systems

March 4 & 5, 2026. BOC 1001B,
Energy Efficient Operations of Building HVAC Systems

March 18 & 19, 2026. BOC 1002,
Measuring and Benchmarking Energy Performance


April 1 & 2, 2026. BOC 1003,
Efficient Lighting Fundamentals

April 15 & 16, 2026. BOC 1004,
HVAC Control Fundamentals

April 29 & 30, 2026. BOC 1005,
Indoor Environmental Quality

May 13 & 14, 2026. BOC 1006,
Common Opportunities for Low-Cost Operational
Improvements

May 20 & 21, 2026. TBD,
participants will help select the topic

If a student is unable to attend a session, we will provide recordings of the class and the student will be responsible for watching it and completing any assignments or tests for that class on their own time. Students will be ineligible for tuition reimbursement and certification if they miss more than 12 hours of class time. 

For more information
and to register,
visit tinyurl.com/53jtrwdp.





J.C. Anderson's recently completed laboratory for Eurofins Environment Testing US brought the challenge of two often-competing demands: the uncompromising tolerances of lab infrastructure and the softer demands of user experience.


J.C. Anderson Completes State-of-the-Art Eurofins Environment Testing Laboratory in Tinley Park, Ill.

CEAC Associate Member organization J.C. Anderson recently announced its completion of the new Eurofins Environment Testing laboratory in Tinley Park. The new facility, part of Eurofins Environment Testing’s U.S. presence, is equipped with advanced analytical systems designed to process environmental samples with speed and accuracy. The project required the ability to uphold rigorous scientific performance requirements while simultaneously cultivating a workplace into which employees would want to step into every morning. The project ultimately became a testament to how a technically demanding laboratory environment can also support human comfort, collaboration and innovation.

Designed by Partners by Design, the lab space was thoughtfully organized to balance the needs of high-precision

instrumentation with everyday work life. Quiet private offices, breakout lounges, and amenity spaces were woven throughout to foster interaction, downtime and collaboration. The design called for careful mechanical, electrical, lighting and HVAC systems to support sensitive lab equipment while maintaining occupant comfort and safety.

Construction proceeded under tight scheduling constraints, because Eurofins Environment Testing was committed to meeting its service goals for clients across the Chicago region. J.C. Anderson phased portions of work to allow early access to critical lab systems, carefully sequenced finishes, and maintained close communication among all stakeholders to keep disruptions minimal. As structural, mechanical, and finish trades progressed, rigorous quality controls were maintained to ensure that each lab condition — temp control, humidity, clean zones, and air handling — met design intent.

The Tinley Park facility now stands as a living example of what’s possible when client, architect and contractor unite behind shared goals. The lab doesn’t just serve as a scientific workhorse — it offers an environment where scientists, support staff and leadership can move freely through spaces intended to inspire creativity, connection and purpose. 



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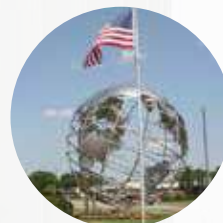
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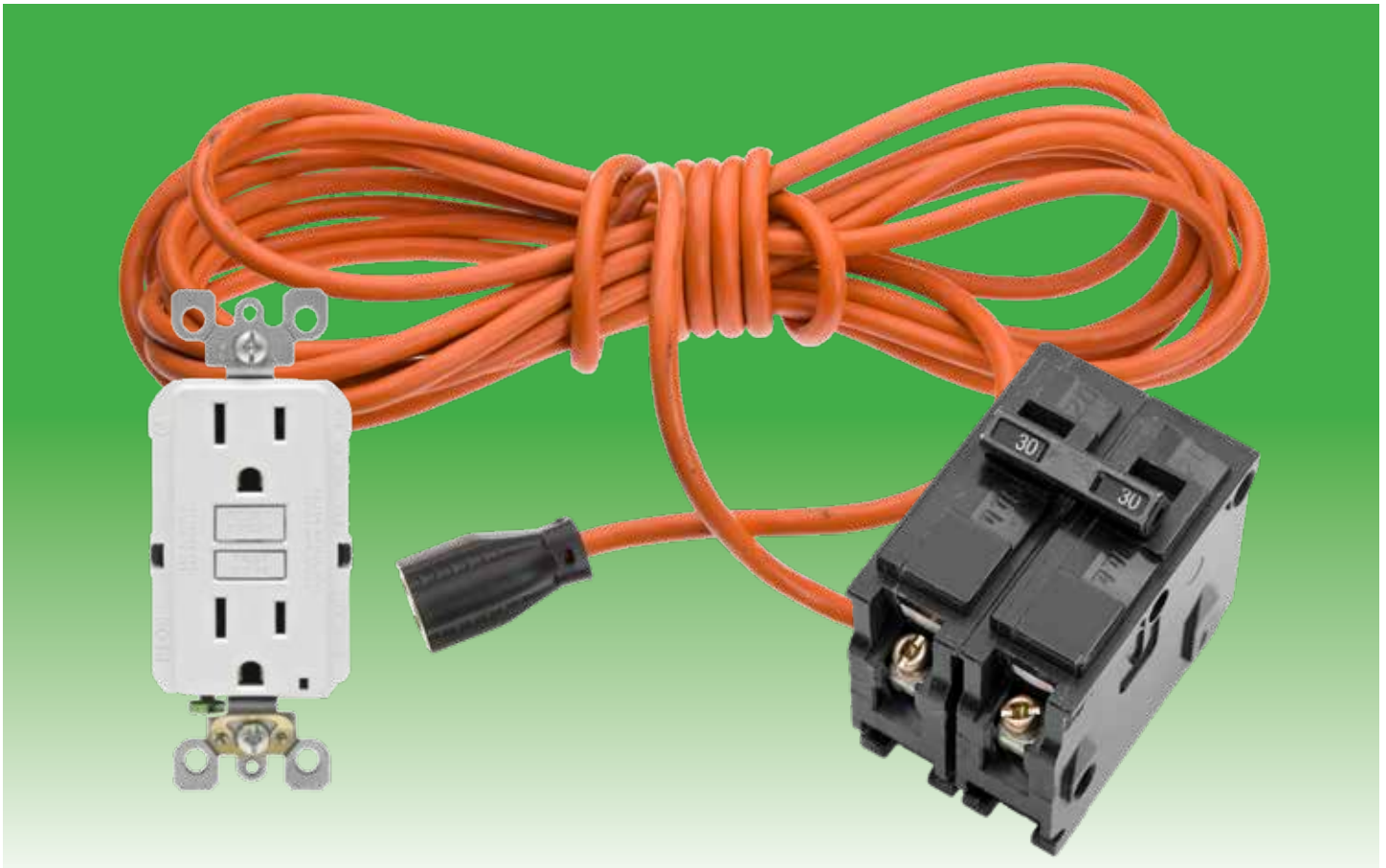


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Ensuring proper use of ground-fault protection is essential to working with electricity.

ELECTRICITY AWARENESS

It's obvious to anyone with even a basic understanding of electricity that working with it can be dangerous. Any of us in the industry who work with electricity directly or indirectly may find ourselves exposed to electrical hazards. Electricity has long been recognized as a serious workplace hazard. OSHA's electrical standards are designed to protect employees exposed to dangers such as electric shock, electrocution, fires and explosions.

Some workers may not always be aware of the potential electrical hazards present in their work environments, making them more vulnerable to the danger of electrocution. Let's look at the following hazards that are the most frequent causes of electrical injuries:

Lack of Ground-Fault Protection

What's the danger?

Due to the dynamic, rugged nature of construction work, normal use of electrical equipment at your site causes wear and tear that results in insulation breaks, short-circuits, and exposed wires. If there is no ground-fault protection, these can cause a ground-fault that sends current through the worker's body, resulting in electrical burns, explosions, fire or death.

How do I avoid hazards?

- Use ground-fault circuit interrupters (GFCI)s on all 120-volt, single-phase, 15- and 20-ampere receptacles, or have an assured equipment grounding conductor program (AEGCP).
- Follow manufacturers' recommended testing procedure to insure GFCI is working correctly.
- Use double-insulated tools and equipment, distinctively marked.
- Use tools and equipment according to the instructions included in their listing, labeling or certification.
- Visually inspect all electrical equipment before use. Remove from service any equipment with frayed cords, missing ground prongs, cracked tool casings, etc. Apply a warning tag to any defective tool and do not use it until the problem has been corrected.

Path to Ground Missing or Discontinuous

What's the danger?

If the power supply to the electrical equipment at your site is not grounded or the path has been broken, fault current

may travel through a worker's body, causing electrical burns or death. Even when the power system is properly grounded, electrical equipment can instantly change from safe to hazardous because of extreme conditions and rough treatment.

How do I avoid hazards?

- Ground all power supply systems, electrical circuits and electrical equipment.
- Frequently inspect electrical systems to ensure that the path to ground is continuous.
- Visually inspect all electrical equipment before use. Take any defective equipment out of service.
- Do not remove ground prongs from cord- and plug-connected equipment or extension cords.
- Use double-insulated tools and equipment, distinctively marked.
- Ground all exposed metal parts of equipment.
- Ground metal parts of the following non-electrical equipment, as specified by the OSHA standard [29 CFR 1926.404(f)(7)(v)]:
 - o Frames and tracks of electrically operated cranes.
 - o Frames of non-electrically driven elevator cars to which electric conductors are attached.
 - o Hand-operated metal shifting ropes or cables of electric elevators.
 - o Metal partitions, grill work, and similar metal enclosures around equipment of over 1kV between conductors.

Equipment Not Used in Manner Prescribed

What's the danger?

If electrical equipment is used in ways for which it is not designed, you can no longer depend on safety features built in by the manufacturer. This may damage your equipment and cause employee injuries.

Common Examples of Misused Equipment

- Using multi-receptacle boxes designed to be mounted by fitting them with a power cord and placing them on the floor.
- Fabricating extension cords with ROMEX® wire.
- Using equipment outdoors that is labeled for use only in dry, indoor locations.
- Attaching ungrounded, two-prong adapter plugs to three-prong cords and tools.
- Using circuit breakers or fuses with the wrong rating

for over-current protection, e.g. using a 30-amp breaker in a system with 15- or 20-amp receptacles. Protection is lost because it will not trip when the system's load has been exceeded.

- Using modified cords or tools, e.g., removing ground prongs, face plates, insulation, etc.
- Using cords or tools with worn insulation or exposed wires.

How do I avoid hazards?


- Use only equipment that is approved to meet OSHA standards. [29 CFR 1926.403(a)]
- Use all equipment according to the manufacturer's instructions. [29 CFR 1926.403(b)(2)]
- Do not modify cords or use them incorrectly.
- Be sure equipment that has been shop-fabricated or altered is in compliance.

Improper Use of Extension and Flexible Cords

What's the danger?

- The normal wear and tear on extension and flexible cords at your site can loosen or expose wires, creating hazardous conditions. Cords that are not 3-wire type, not designed for hard-usage, or that have been modified, increase your risk of contacting electrical current.

How do I avoid hazards?

- Use factory-assembled cord sets.
- Use only extension cords that are 3-wire type.
- Use only extension cords that are marked with a designation code for hard or extra-hard usage.
- Use only cords, connection devices, and fittings that are equipped with strain relief.
- Remove cords from receptacles by pulling on the plugs, not the cords.
- Continually audit cords on-site. Any cords found not to be marked for hard or extra-hard use, or which have been modified, must be taken out of service immediately. 

Source: OSHA.gov

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A photograph of two men in a modern office hallway. The man on the left is smiling and looking towards the man on the right. He is wearing a blue blazer over a light blue button-down shirt. The man on the right is seen in profile, wearing glasses and a dark jacket. The background shows a hallway with yellow doors and modern lighting.

Everest Energy & Control Technologies: Empowering Customers With Strong Relationships

By Kate Gawlik

Bob St. Mary, senior engineer at Elara Energy Services (right), and Everest Energy & Control Technologies' Dan Reynolds partnered on an HVAC and infrastructure overhaul for the Maine Township School District 207.



At Maine Township School District 207, the facilities team turned to Everest Energy & Control Technologies, with Siemens Smart Infrastructure and Elara Energy Services, to update HVAC and controls systems at three high school campuses.

Everest Energy & Control Technologies has crossed paths with several Local 399 members since the company was founded in 2012. With a focus of building lasting partnerships with its customers and educating chief engineers and others about adding building automation system (BAS) products to their buildings, Everest Energy & Control Technologies President Dan Reynolds discovered the benefits of being a member of the Chief Engineers Association of Chicagoland (CEAC). The company joined in 2014 as an Associate Member.

Everest Energy & Control Technologies is a temperature controls contracting and building automation services company in the Chicagoland and northern Illinois areas, providing turnkey design, engineering, installation and programming services for HVAC systems. What sets the company apart is Reynolds' insistence that the 14 team members at Everest Energy & Control Technologies build lasting relationships.

"Our team of in-house application engineers, programmers and field engineers are dedicated to creating a collaborative work environment and establishing long-term customer relationships," Reynolds says. "We strive to deliver consistent, proactive, trusted service that leads to better system performance and lower life-cycle costs. Our relationships are built on timely and reliable communication."

BACnet Adoption

Reynolds' introduction to the controls business started in 1988, when he was an application design engineer for Johnson Controls. At that time, the communication protocols on which products were built were proprietary to specific companies. A shift happened in the market in 1995 when the ASHRAE Building Automation and Control Networking (BACnet) protocol was released as ANSI/ASHRAE Standard 135.

According to Reynolds, BACnet has been designed specifically to meet the communication needs of building automation and control systems for applications such as heating, ventilating and air-conditioning control, fire and other life safety and security systems, energy management, lighting control, physical access control and elevator monitoring systems.

He says, "The BACnet protocol provides mechanisms by which computerized equipment of arbitrary function may exchange information, regardless of the particular building service it performs. As a result, the BACnet protocol may be used by mobile and cloud-hosted devices, head-end computers, general-purpose direct digital controllers, and application-specific or unitary controllers, with equal effect."



Room unit sensors.



New HVAC controls in place.

The adoption of BACnet changed system communications and created opportunities for additional providers to enter the market. Reynolds saw the chance and says, "It may sound intuitive, but we focused on doing the right things for our customers — great communication, high quality installations, second-to-none support, all at a fair, consistent price point."

The majority of Everest Energy & Control Technologies' work is retrofit, at about 70 percent. For the retrofits, Reynolds wanted to find a technology platform that allows building owners to preserve their existing energy, HVAC, fire prevention or other systems with upgrades that promote monitoring and device integrations that meet new standards-based technologies. His goal was to have all this happen while at the same time remaining vendor neutral. Therefore, the company uses Tridium as the platform for its systems, making Everest Energy & Control Technologies an independent Tridium System Integrator.

"Our solution differs greatly from those installed by the large control companies, which can leave a customer feeling handcuffed for the life of the system," Reynolds explains. "Tridium is a multi-sourced, open-protocol, open-licensed, Web-based product sold through thousands of independent and OEM distribution channels worldwide. We give the customer the choice of working with whomever contractor or service provider they choose. Tridium products can be serviced and supported by any Tridium certified individual or company."



(L to R): Mark Koscielniak, Vice President at Everest Energy & Control Technologies, and Dan Reynolds, Owner of Everest Energy & Control Technologies, examine TC controllers at a local school.



Significant benefits of IP-based controllers are their reduced upload time and ability to be programmed more efficiently.

At Maine Township School District 207, the facilities team turned to Everest Energy & Control Technologies, with Siemens Smart Infrastructure and Elara Energy Services, to update HVAC and controls systems at three high school campuses. Creating a connection between the schools was vital to monitoring the indoor air quality, maintaining uptime and establishing system-wide communication among multiple systems. The district also requested systems that would lower utility bills and require minimal maintenance. The project, phased over four years while school was in session, replaced a pneumatic system and air handler equipment that was about 60 years old, eliminated air handler units, and made other improvements. To increase energy efficiency, Siemens DXR2 controllers, which communicate via BACnet/IP, and pressure independent control valves (PICVs), which are self-balancing, were installed. QMX series room unit sensors provide additional data for staff to monitor trends and to be alerted about issues. In addition, the students and staff also now have an improved learning and work environment via a system that is completely outside air-based, with a complete air change in about 40 minutes.

Now Trending

Like many markets across the construction industry, cloud-based BAS systems are becoming more prevalent. This trend is being spurred in part by the convergence of building automation and IT networks that are exposing security and compliance risks. As networks become more sophisticated, the aging supervisory systems result in audit findings and cyberattack concerns. Some companies have chosen to integrate new hardware refresh cycles, but these can place additional strain on budgets and IT resources.

Reynolds believes that “fortunately, transitioning to a cloud-based system simplifies remote access to your building’s systems, making it as straightforward as visiting a website. This migration addresses these challenges by providing a secure, always-updated infrastructure, reducing IT workload, and enabling seamless global browser access.”

Also on trend for Everest Energy & Control Technologies is collaborating with and educating customers. The company’s team provides complete turnkey design, engineering, installation and programming of building automation and control systems for plan-and-specification, design/build and owner direct projects. Reynolds believes this approach is essential because he finds that building owners often feel trapped by previous decisions or forced into continuing to work with a contractor or service provider because of product sourcing limitations, software licensing restrictions, dedicated service/engineering tools, controller communication protocols and other restraints.

“Our goal is to exceed the expectations of our customers by delivering high-quality and innovative solutions with the philosophy of ensuring the client has an open system with multiple options for future expansion, renovations and service,” Reynolds says. “We work very closely with engineers, like those associated with Local 399, in helping them understand how to apply BAS products to their designs to ensure the best possible open, code compliant, energy efficient deliverable to their customer.”

Kate Gawlik is a Chicagoland writer who focuses on uncovering construction and business trends.



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INAUGURAL GALA

The biennial Inaugural Gala was held last month, at which we swore in our new slate of Officers and Directors — always an exciting event for the CEAC and its membership. Thanks go out to the Events committee for all of their hard work in planning and making everything happen, and of course, to our Event Sponsor, Chicago Filter Supply, for its generosity. Please continue to support our sponsoring organizations when you need outside services, and be there for them just as they're here for us.

This month we look forward to seeing all of you at our traditional Skatefest, being held Saturday, Feb. 21, at 1:30pm at the Morgan Park Sports Center, 11505 S. Western Ave., Chicago. As usual, open skate and open gym will be accompanied by free food and drinks, and all members' families are welcome. Registration for Skatefest is now open on the Events page at chiefengineer.org, with sponsorship opportunities available. For more information or to ask about sponsoring this event or others, please email events@chiefengineer.org. 



INAUGURAL GALA





When You Need a Concrete Solution

By Karl J. Paloucek

Though Corona Craft Restoration was only established in 2021, Juan Corona (right) and his team have been working together for more than 20 years, bringing abundant expertise and experience to every job they do.



Juan Corona grows his business with vision, integrity and initiative, celebrating its 5th anniversary this year.

If you attended last September's Annual CEAC Golf Outing, you'll remember them — they're the company that brought the tamales. Though established as a business in 2021, Corona Craft Restoration's (CCR) team has been working together for more than 20 years, applying its masonry expertise to the restoration, maintenance and preservation of buildings in the Chicagoland area. Founder and President Juan Corona sat down with us recently to tell the story of the business, and how he and his team turned initiative and opportunity into a growing business focused on the needs of its customers, with a vision for doing work the best that it can be done.

Chief Engineer: So how did Corona Craft Restoration come about? Where does this story begin?

Juan Corona: It started, unofficially, in 2015. I was working for another outfit, and I was in the beginning stages of developing my business. It wasn't until 2021 that I actually went into business full time. That was a big step. The company that I worked with prior was a small, family-owned business. And the way that I started, I actually started from the bottom. I was a laborer and then kind of moved up. My last position there was project management and new business development. [But] there was no succession plan in that company. ... That's really what pushed me into starting my own business, because I saw the writing on the wall.

CE: And how is it all going, looking back now at the 5-year mark?

JC: It's been a little bit of a roller coaster, because the way that CCR started, its first big opportunity started very unconventionally. What happened was, I provided free inspections, trying to just draw some work. Out of those inspections came something that was more like an emergency, which was the railings on the building. Those railings were a liability. So what I did was, first day there, I discovered four of them. I reported that to management and they brought in the consultants, and they said, "Well, he knows what he's looking at — let him look at all of them." Right off the bat, during that process, we had to lock out 67 units. So, I was at the right place at the right time. Because I had repaired one of them before, I had the specs on it, and gave them a price for it, and basically did the work and gained capital to continue on with my business.

CE: How did you establish the scope of services for CCR?

JC: In the façade restoration business, we deal with all types of façade work, so our abilities and capabilities extend to anything that has to do with façades. Not only was it bricklaying, tuckpointing, caulking, concrete repairs, coatings, flashing systems, lintels — all of those — this is all work that I've performed in the past. I had already had not only the exposure,



Safety is absolutely priority at Corona Craft Restoration.

but worked on many projects on the scaffold as an applicator and ran as a foreman, superintendent, and then project manager. So I've already had that experience coming in. It was already a part of my arsenal at that point. I was already well prepared for the execution of those services.

CE: Let's talk about those services — what are your areas of specialty?

JC: What we specialize in is keeping weather out of the buildings — that's what we specialize in. That is going to be most of the calls that we get. Either the building is going to be having some sort of leak issues, or having some deterioration. They're having safety concerns because the masonry is compromised and it could be potentially harmful to either residents or property, or pedestrians walking nearby.

When we talk about the services, we provide caulking services, tuckpointing, bricklaying, coating systems for façade and balcony coatings, installation of protective railings. We do parking garages. We do traffic coatings. Then we get into what I'm a little more passionate about, which is the historical side. This company is also certified in historical. For that, we also work with terracotta, limestone, different types of brick patterns and mortars. And we also do mainstream work on interiors of the buildings.

CE: What about some of the more significant historical projects you've worked on?

JC: Projects that would highlight that would be the University Club of Chicago, the Merchandise Mart, and we've also done some historical projects in the suburbs, like Winnetka — some of those landmark-protected buildings and structures. The Merchandise Mart — we do a lot of repurposing of the masonry in the interior of the building. So when you're talking about the corridors of hallways, or there's elevator chutes that are eliminated, we make those walls look like they were always there. There are always demolitions, and there are always expansions and stuff going on there. There is a team that's dedicated there to do all of the demolition work, and what the Merchandise Mart does better than anybody that I know is, they preserve all of the usable materials. The brick is definitely one of them. The doors. All of those things get repurposed. Our job was to match the mortar perfectly, so that it's a seamless repair. We will intentionally make it imperfect, to match the original structure. That's a lot of the work that we do, mainly, there, is more what I would consider on the historical side, where we preserve the integrity of the original building. It's very detailed.

CE: You also finished a major project at 130 N. Garland, the Heritage at Millennium Park. Can you tell us a bit about that particular job?

JC: It's a 60-story building. We did concrete repairs. We did a full coating project, which means the entire building was essentially painted — it was coated. We had a three-color scheme; we brought it back to its original glory. And all balconies were stripped of their coating. Concrete repairs were done, and then recoated. We had 367 balconies that we did that to. It was a three-year project. We went around that whole



Getting the work done while minimizing the tenant impact can take a combination of finesse and muscle — whatever the job demands.



President Juan Corona (at right) with the office team at Corona Craft Restoration.

building. We did route-and-seal repairs, and we did something that is actually pretty cool, that is now implemented that I always tried to do when I was out in the field. We explored with some products that were compatible, and we were able to perfect how to — not completely, but probably to 80-90 percent — where it was really hard for you to see the evidence that there was actual work done there.


CE: We like to ask about some of the bigger challenges encountered in the field, to illustrate how a company overcomes them and gets the job done. Are there any challenges that you're particularly proud of having handled?

JC: The biggest challenge to any project is going to be delivering the ask while managing the actual execution of it. And what I mean by that is, people want their buildings repaired; people want a leak to stop whoever it's affecting, but they don't want to deal with everything that comes with it. They don't want to deal with the noise. They don't want to deal with the dust. They don't want to deal with the elevators being blocked off. They don't want to deal with a canopy out in front of their building. They don't want to deal with the ropes hanging over their windows overnight when it gets windy and it starts banging against the building. Making everybody happy — that has been the biggest challenge, I think, across the board.

I've developed a system for that: It's understanding what it is that they're asking. They have a meeting tomorrow; could you please not work in this section for two hours? That's all they were asking for. But the way that they ask for it, they don't know how to do that. It's kind of an art, to tell you the truth, for me, is

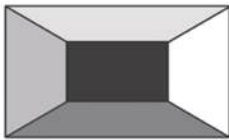
trying to figure out — how can I help you? We're in the service industry, so at all levels, we're still a customer service company. We want to provide a service. We want to execute a project, but we can be mindful. We can still keep the human element of it, and we can still treat it like it's our home, like we would want to be treated. I think that is the best approach. You can be considerate. You can try to be accommodating. But at the end of the day, we have to come to an agreement that we have a job to do. We can bend for you as much as we can, but at some point, maybe we have to stay a little bit longer one day, and you're going to have to deal with the noise a little bit louder. We'll make those tradeoffs. So, just learning how to do that. Refereeing and managing that whole thing is challenging.

CE: Finally, what is it that you think sets Corona Craft Restoration apart from others in the industry?

JC: Integrity. I think that that is really, truly, at the core, what differentiates us. Only because we steer our customers in the right direction. And sometimes that means, you know what? We're the wrong fit. "That's not what you want us to do — and if that's what you're looking for, maybe you should look elsewhere." We're very honest, very transparent, into actually solving problems. And that's what we really want to do. We're in the business of people. That comes first. We're still trademarking our services, our capabilities. Our integrity. At the core, I would really say that that's what stands us apart. 

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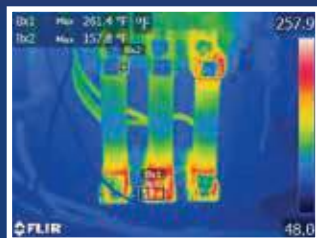
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Spotless Sewer Lines Play a Key Role in Lining Success

With a controlled-speed rotational nozzle like the Aqua Power 700, cleaning is faster and more efficient because of the consistent contact with the jets.

Pipe lining has become a go-to solution for renewing aging sewer and storm lines without the disruption of open-cut excavation. By installing a new liner inside an existing pipe, crews can restore structural integrity, seal leaks, and extend service life while keeping streets, sidewalks and landscapes largely untouched.

But the success of that liner depends on what happens first. Liners are installed by inverting or pulling them into the host pipe and holding them tightly against the pipe wall with air or water pressure, while steam or hot water is used to cure the resin and form a new structural pipe within the existing one.

However, blockages in the pipe formed by tree roots, hardened mineral scale, grease buildup, silt and debris can interfere with this process. If a liner is installed over these obstructions, it cannot fully contact the host pipe, which can lead to wrinkles, voids, weak spots or areas where the liner never properly bonds or cures. Over time, those defects can become failure points.

That is why pipe cleaning is not just a preliminary step — it directly affects the integrity of the finished liner. Fortunately, the right combination of nozzles and cutters allows crews to remove even the most stubborn buildup, allowing the liner to work properly once it is installed.

“The inside of the pipe must be spotless for the liner to work properly,” says Dan Story, an experienced trainer and Operations Manager at KEG Technologies, a leading manufacturer of nozzles and chain cutters used to clean sewer and stormwater lines. “In industry terms, this condition is described as being ‘gun barrel clean.’ Just as a firearm barrel must be meticulously cleaned to function reliably, the pipe interior must meet the same standard to ensure proper liner adhesion and long-term performance.”

Common Lining Techniques

Over the past several decades, contractors have adopted a variety of lining technologies, each suited to different pipe conditions, diameters and access constraints.

Cured-in-place pipe lining, known as CIPP, is the most widely used method for municipal sewer rehabilitation. In this approach, a flexible liner saturated with a thermosetting resin is inserted into the host pipe.

Once positioned, internal pressure forces the liner tightly against the pipe wall, and the resin is cured to form a rigid, continuous pipe. Because the liner relies on chemical curing, surface condition plays a direct role in performance.

Fiberglass-reinforced liners are a variation of CIPP designed for applications in which higher stiffness and load-bearing

capacity are required, including stormwater and drainage systems. These liners incorporate glass fiber reinforcement within the resin system, resulting in a finished pipe with greater structural integrity.

From a chemical standpoint, the curing performance of lining materials such as fiberglass resin can be compromised by factors including dirt, debris, roots or grease residue within the pipe, as well as an incorrect resin-to-chemical mixture.

A dirty pipe doesn't just block physical contact. It can also interfere with the resin's chemistry. When resin mixes with various residues in the pipe, it may not “wet out” properly, meaning it can't work the way it's designed to. In those areas, the resin can cure weakly, unevenly, or not at all.

Chemical-related liner failures usually present as one of several symptoms. The liner may remain tacky or soft, deform under normal flow conditions, crack prematurely, shrink away from the host pipe, or develop blisters or bubbles caused by trapped gases during curing.

Spiral-wound lining systems use a different approach, relying on mechanical assembly rather than resin curing. In these systems, a continuous PVC profile is fed into the pipe and spirally wound to form a new liner inside the existing pipe. The liner is installed at a reduced diameter and then mechanically expanded until it presses against the interior wall.

Because the liner is formed mechanically, this method is generally more tolerant of minor surface irregularities, although significant protrusions or obstructions still need to be removed to allow proper expansion and alignment.

Nozzles and Chain Cutters for Pipe Cleaning

According to Story, when relining failures occur, they can typically be traced to one of two causes: debris that remained in the pipe at the time of installation, or improper curing of the lining material.

To clean a sewer line thoroughly prior to lining, specialized jetting nozzles are operated in conjunction with a vacuum truck. The process combines high-pressure water and continuous debris removal to restore the pipe interior to a condition suitable for liner installation.

High-pressure water from the truck is delivered through a hose to the nozzle inside the pipe. The nozzle directs multiple water jets outward and backward. The rear-facing jets provide thrust, pulling the nozzle through the line, while the forward and radial jets scour the pipe wall. This action loosens grease, scale, sediment, roots, and other deposits adhered to the interior surface.



Resolving the worst cases in large pipe requires the use of special heavy-duty chain cutters that can remove even a "wall of roots."

As the nozzle advances, dislodged material is flushed downstream toward the access point. The vacuum truck simultaneously removes this slurry of water and debris.

When properly executed, this jetting-and-vacuum process leaves the pipe interior uniformly clean, free of loose material, and ready for inspection and lining.

However, the level of cleaning is only as good as the nozzle at the end of the hose, says Story. There are tiers of nozzles that are rated for water efficiency from Tier 1 (about 30-percent efficient), Tier 2 (50-60-percent efficient), to Tier 3 (75-98-percent efficient).

In the case of KEG's Tier 3 nozzles, the high-performance fluid mechanics design leaves little room for power losses and excessive turbulence.

"In many cases, using a high efficiency Tier-3 nozzle will provide significantly more cleaning force, at a greater distance, with less water," says Story.

When the objective is to aggressively scour the pipe wall prior to installing a liner, Story says a controlled-rotation nozzle is typically the most effective option.

"Controlled rotation refers to intentionally slowing the rotation and spin of the nozzle head or body. By reducing rotational



To clean a sewer line thoroughly prior to lining, specialized jetting nozzles are operated in conjunction with a vacuum truck.



Chain cutter nozzles like those from KEG utilize the power of high-efficiency water pressure to cut through a thick root mass.

speed, the nozzle maintains contact with the pipe surface for a longer duration, which increases cleaning effectiveness,” says Story.

KEG’s controlled-speed rotational nozzle, the Aqua Power 700, is designed for general pipeline cleaning and grease removal applications. By consistently running at 650 RPM, cleaning is faster and more efficient because of the consistent contact with the jets.

Although the skillful use of high-powered or controlled nozzles can sometimes dislodge partial obstructions in smaller pipes, tree root intrusions must be completely removed to avoid compromising relining operations. Resolving the worst cases in large pipe requires the use of special heavy-duty chain cutters that can remove even a “wall of roots.”

For the toughest blockages, KEG’s chain cutter nozzles utilize the power of high-efficiency nozzle water pressure to provide sufficient torque to cut through a thick root mass. When high-pressure water enters the chain cutter nozzle chamber, it is directed to spin the cutting chains at high velocity with enough torque to avoid seizing.

In pipe lining, success is decided long before the liner ever enters the pipe. No matter how advanced the lining system is, it cannot overcome a pipe that is coated in roots, grease, scale, or debris. High-performance nozzles, controlled rotation, and

heavy-duty chain cutters make lining work possible.

“When crews leave a pipe truly ‘gun-barrel clean,’ they are creating the conditions that will allow the liner to cure, bond, expand and perform exactly the way it was engineered,” says Story. ■■

For more information, call (866) 595-0515, fax (866) 595-0517, or visit KEG Technologies online at kegnozzles.com.



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U.S. Boiler Company's improved line of Citadel condensing boilers are designed for the widest variety of applications.

U.S. Boiler Company Expands Citadel Boiler Line

U.S. Boiler Company has expanded and improved its line of Citadel condensing boilers and volume water heaters. The Citadel is now available in seven capacities, from 399 to 1500 MBH, all with 10:1 turndown. AHRI certified and rated up to 97-percent thermal efficiency (98-percent for water heater), the Citadel is available in natural gas and propane configurations.

Citadel boilers conserve mechanical room space and simplify installation. They can be stacked two-high without the need for accessory racking systems. Zero side and top clearance optimizes heating capacity per square foot of mechanical room space.

Also new is the Citadel boiler's compatibility with U.S. Boiler Company's USB-Connect mobile app. The app expedites and streamlines installation, service and troubleshooting of all the company's condensing boiler models.

Because the Citadel is designed for the widest variety of applications, it's sold complete out of the box. Included at no additional cost are the low water cutoff and high and low gas pressure switches, making the boilers CSD-1 compliant. A standard, reinforced 3-in-1 vent connector facilitates the use of polypropylene, CPVC or stainless-steel venting —

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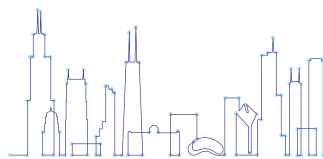
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Here are a few things to keep in mind about your membership and Chief Engineer events.

- Members are invited to monthly meetings that take place once a month October-May
- Meeting topics, speakers and times can be found online at chiefengineer.org
- Membership dues are good for one year. If not renewed, you membership becomes inactive, and you will need to renew before or upon entering events



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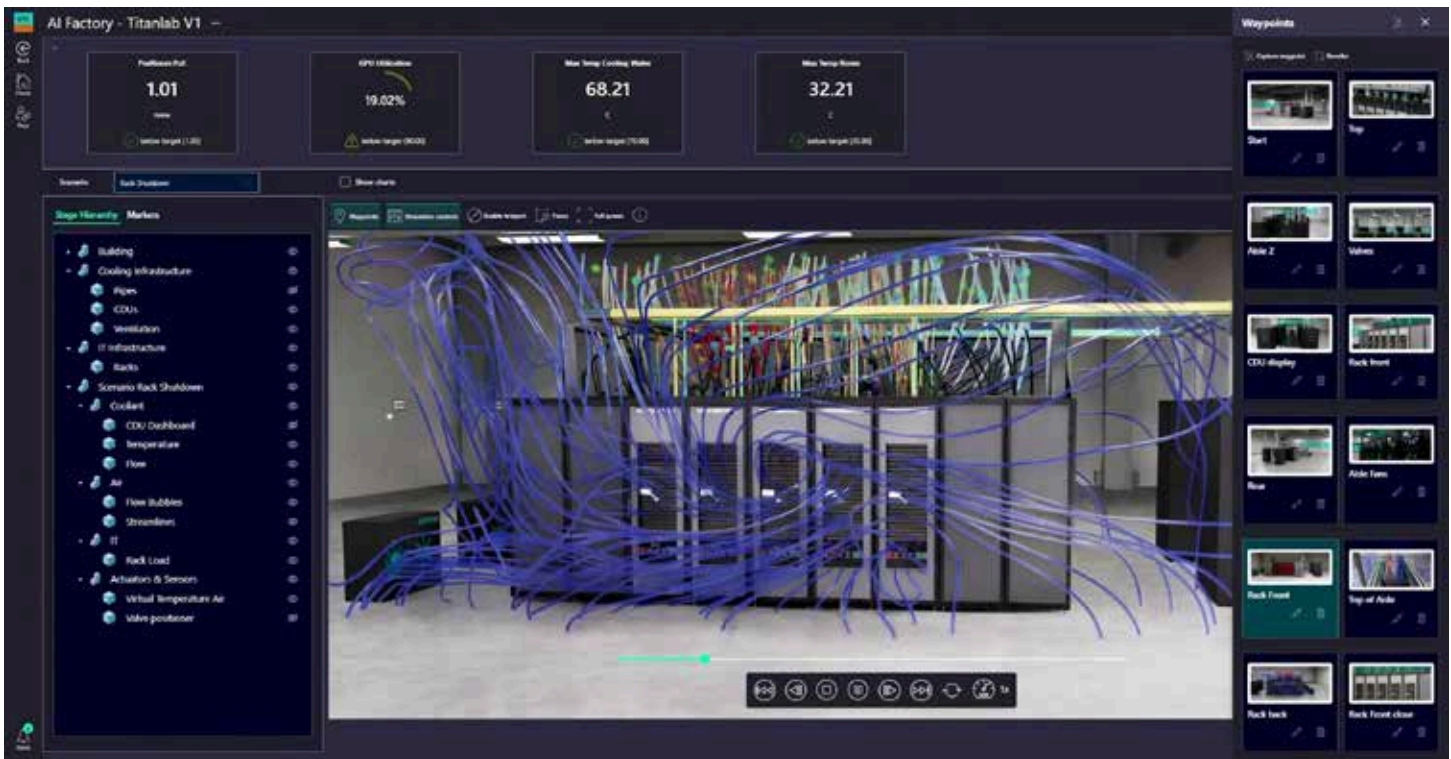
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Siemens' Digital Twin Composer builds Industrial Metaverse environments at scale, empowering organizations to apply industrial AI, simulation and real-time physical data to make decisions virtually, at speed and at scale.

Siemens Brings Industrial Metaverse to Life With Digital Twin Composer

Siemens recently announced Digital Twin Composer, a new software solution that builds Industrial Metaverse environments at scale, empowering organizations to apply industrial AI, simulation and real-time physical data to make decisions virtually, at speed and at scale.

Digital Twin Composer enables industrial companies to combine 2D and 3D digital twin data from Siemens' comprehensive digital twin with physical real-time information in a managed, secure real-time photorealistic visual scene, built using NVIDIA Omniverse libraries. With Digital Twin Composer, companies can rapidly build and maintain this global environment, containing all aspects of their product or production data — both virtual and physical — in a secure, managed high-fidelity 3D experience, throughout the lifecycle of the product, process or facility.

Digital Twin Composer provides contextualized, real-time insights and intelligence, enabling companies to visualize, interact with and iterate on any product, process or factory in its real-world context before physical design or construction — whether it's a new smartphone, a tanker in a shipyard, an autonomous electric vehicle, or a new AI factory on a greenfield or brownfield site.

PepsiCo and Siemens are digitally transforming select U.S. manufacturing and warehouse facilities by converting them into high-fidelity 3D digital twins that simulate plant operations and the end-to-end supply chain to establish a performance baseline. Within weeks, teams optimized and validated new configurations to boost capacity and throughput, giving PepsiCo a unified, real-time view of operations with flexibility to integrate AI-driven capabilities over time.

Leveraging Siemens' Digital Twin Composer, NVIDIA Omniverse and computer vision, PepsiCo can now recreate every machine, conveyor, pallet route and operator path with physics-level accuracy, enabling AI agents to simulate, test and refine system changes — identifying up to 90 percent of potential issues before any physical modifications occur. This approach has already delivered a 20-percent increase in throughput on initial deployment and is driving faster design cycles, nearly 100 percent design validation and 10 to 15 percent reductions in capital expenditure (Capex) by uncovering hidden capacity and validating investments in a virtual environment.


Many design, engineering and production teams still work independently, each relying on different tools and disconnected data systems. Digital Twin Composer reduces these barriers by unifying design, simulation and operations into one living and contextualized model that empowers engineers to test products, processes and facilities in minutes, validate automation long before hardware exists and operate the real product or facility from one digital twin.

"The new Digital Twin Composer delivers on our vision for the industrial metaverse. It helps manufacturers to overcome the unprecedented challenges of mastering complexity, accelerating production, reducing costs and increasing profitability," said Joe Bohman, executive vice president, PLM Products, Siemens Digital Industries Software. "Siemens and NVIDIA are partnering to help manufacturers bring the most complex products, processes and factories online faster, boost resiliency and sustainability, and continuously optimize performance."

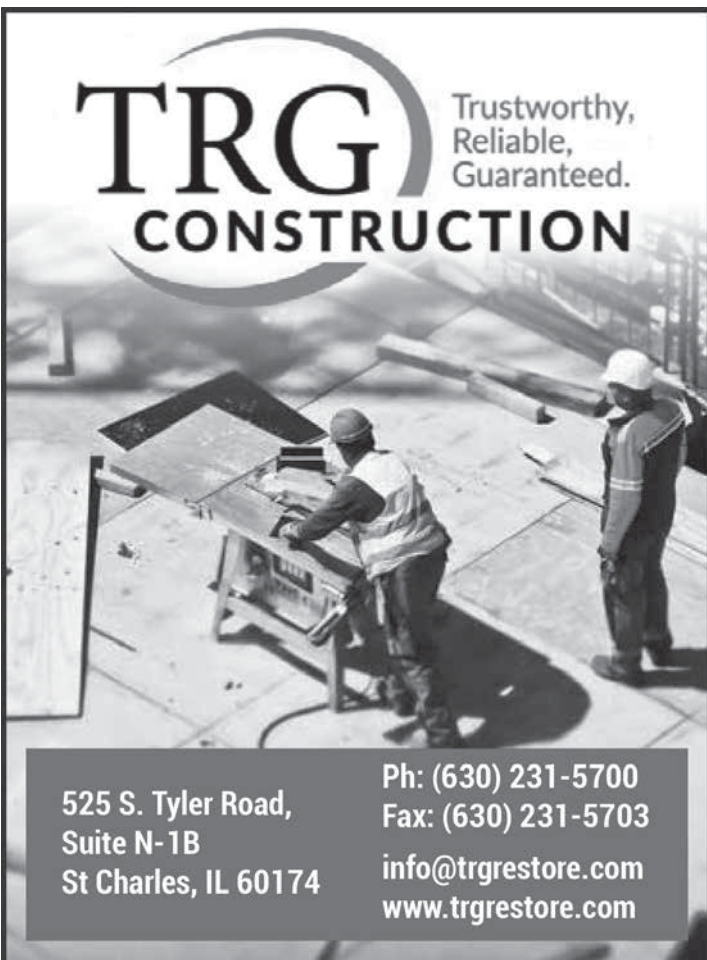
"In an era where every physical object and process will have a digital twin, Siemens' Digital Twin Composer establishes a digital thread that connects the silos of design, engineering, and operations across the Siemens Xcelerator ecosystem," Rev Lebedian, vice president of Omniverse and Simulation

Technology, NVIDIA, said. "By integrating NVIDIA Omniverse libraries into Digital Twin Composer, enterprises can take advantage of physically accurate simulation across their workflows to validate their entire lifecycle — from product design to factory logistics — in the virtual world before committing a single atom to the real one."

Digital Twin Composer is part of Siemens Xcelerator, an industry proven portfolio of software used by companies worldwide to develop digital twins that empower them to design, simulate and prepare their products, process and factories at speed and scale. Digital Twin Composer is used to connect the high performance, photorealistic and physically accurate 3D digital twin created using Siemens Xcelerator to real-world physical data sources as such manufacturing execution software (MES), quality management systems (QMS), programmable logic controller (PLC) code from a machine or factory asset or industrial internet of things (IIoT) data — from across an open ecosystem of engineering data. Further insights can be realized through integration with Siemens' industry-leading data science and AI software, Rapidminer and other AI solutions to deliver virtual world intelligence and real time insights to make decisions in confidence.

Launched at CES 2026, Siemens' Digital Twin Composer is currently in early access with select customers. 

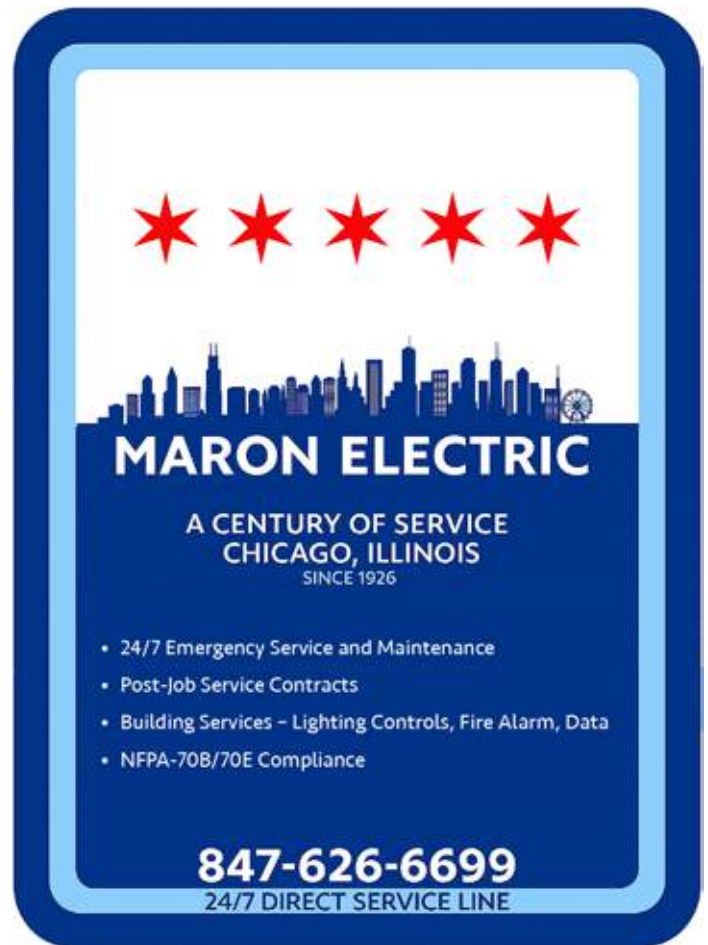
To learn more, visit www.siemens.com/global/en/company/digital-transformation/industrial-metaverse/introducing-digital-twin-composer.html



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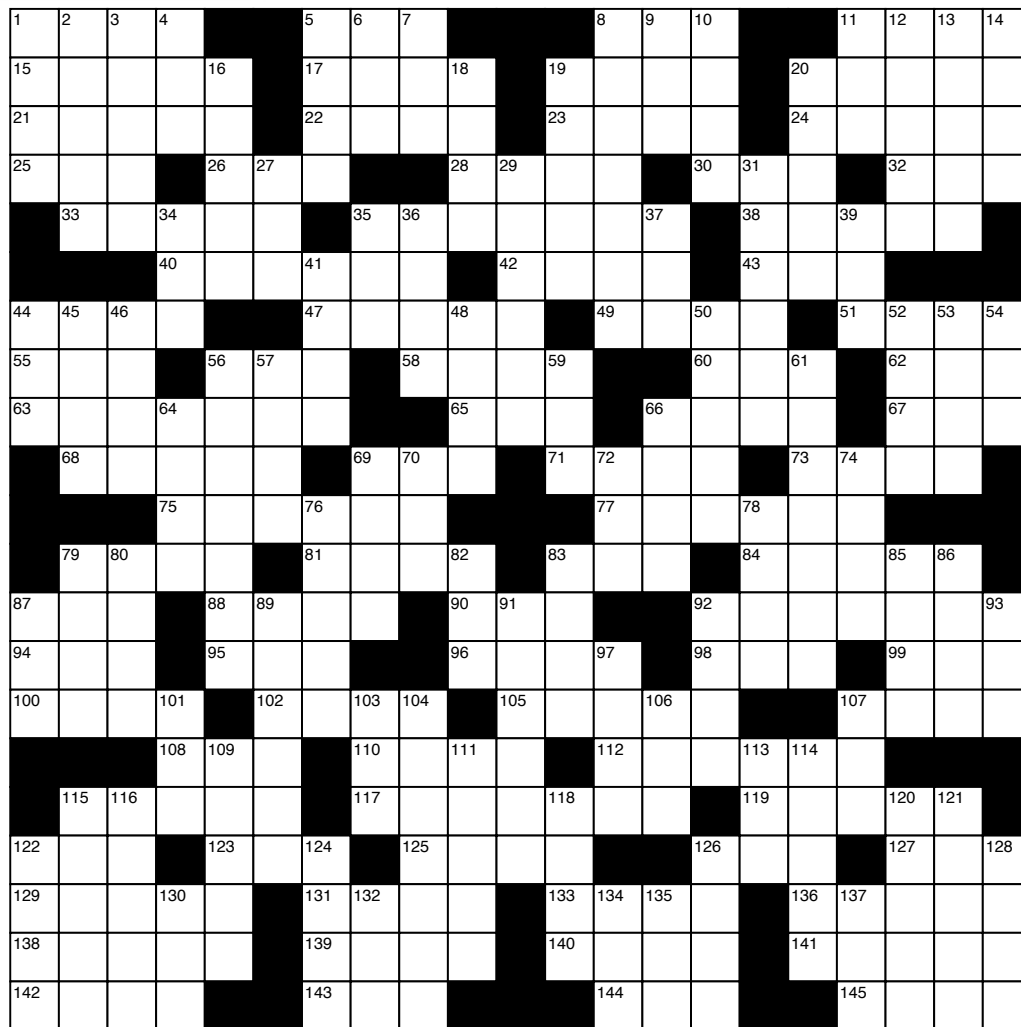
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- 1 France & Germany river
- 5 Madagascar franc (abbr.)
- 8 Corporate top dog
- 11 Elizabeth's nickname
- 15 Around
- 17 Covered with ice
- 19 Excuse me!
- 20 Glower
- 21 Italian physicist
- 22 Upon
- 23 Egyptian river
- 24 Say
- 25 Dine
- 26 Metronome marking
- 28 Teenage group
- 30 BB association
- 32 Serving of corn
- 33 Insane
- 35 Steering a car
- 38 ___-garde
- 40 Capital of Mali
- 42 Billions of years
- 43 Drink
- 44 Portend
- 47 Behavior
- 49 Peanuts, for example
- 51 Invitation abbreviaton
- 55 Card game
- 56 Environmental protection agency (abbr)
- 58 Frog
- 60 Male sheep

- 62 Aye
- 63 Scoffer
- 65 Pot
- 66 National capital
- 67 Rent
- 68 Wear away
- 69 Hold
- 71 At sea
- 73 Den
- 75 Overly (2 wds.)
- 77 Curtsy
- 79 Vessel
- 81 Stain
- 83 Quill
- 84 Restrain
- 87 Wood chopper
- 88 Scat!
- 90 United States
- 92 Relating to Freemasonry
- 94 Leg ending
- 95 Billion years
- 96 Fool
- 98 Avail
- 99 Hertz
- 100 Attorney (abbr.)
- 102 Baseball's Nolan
- 105 Biblical tower
- 107 Orient
- 108 Admiral (abbr.)
- 110 Precede
- 112 Chinese tea
- 115 Indian house
- 117 Falls
- 119 Type of gun

- 122 Spicy
- 123 Winder malady
- 125 Elm
- 126 Count
- 127 Fleed
- 129 Deduce
- 131 Japanese dress
- 133 Glide
- 136 Dessert topping
- 138 Radio detection and ranging
- 139 On top
- 140 Definite
- 141 Comforts
- 142 Tinter
- 143 Bog
- 144 That (possessive)
- 145 Sleeping places

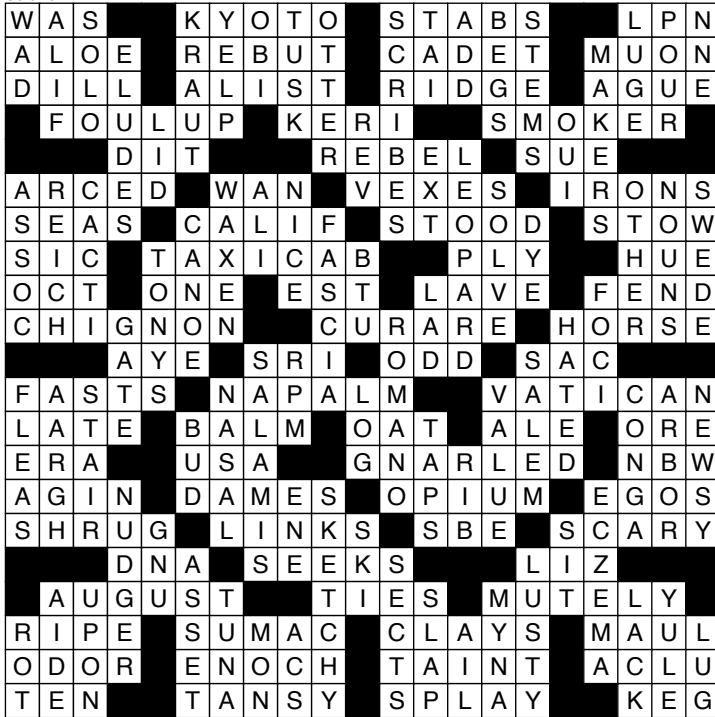
DOWN

- 1 Unhurt
- 2 Right angle to a ships length
- 3 Artery
- 4 Strong drink
- 5 "To:'s" partner
- 6 Least amount
- 7 Time zone
- 8 Hair knot
- 9 Conger
- 10 Bode
- 11 Sandwich
- 12 Dine
- 13 Viand
- 14 Frau's husband

- 16 Leg bone
- 18 Jellystone's bear
- 19 Red headed orphan
- 20 Fruit
- 27 Brand of non-stick spray
- 29 Ideal person
- 31 Balm
- 34 Compass point
- 35 Danish krone (abbr.)
- 36 Basic
- 37 African antelope
- 39 April (abbr.)
- 41 Far away
- 44 Jitney
- 45 ___ upon a time
- 46 Portal
- 48 Part of speech
- 50 Test
- 52 GS
- 53 Slue
- 54 Clock time
- 56 Defend
- 57 Look
- 59 Cell stuff
- 61 Vague sense of ill-being
- 64 Italian capital
- 66 Gaunt
- 69 Capital of Norway
- 70 Court
- 72 South southeast
- 74 Bullets
- 76 Black
- 78 Alack's partner
- 79 Leave
- 80 Bawled
- 82 Start to develop
- 83 Dad
- 85 Ancient Indian
- 86 Points
- 87 Expression of surprise
- 89 Brand of Chili
- 91 Inhibit
- 92 Ponder, with "over"
- 93 Central Time
- 97 Black
- 101 Talk
- 103 Wing
- 104 Uncharged nucleon
- 106 Goddess
- 107 Scrambled food
- 109 Accede
- 111 A vacation (2 wds.)
- 113 Ancient
- 114 Prod
- 115 Not yesterday
- 116 Music used as practice
- 118 What children make
- 120 Wipe out
- 121 Demolished
- 122 Round up
- 124 U.S. Air Force
- 126 Greek god of war
- 128 Loch ___ monster
- 130 Coupe
- 132 Snacked
- 134 French "yes"
- 135 Creative work
- 137 Scientist's office

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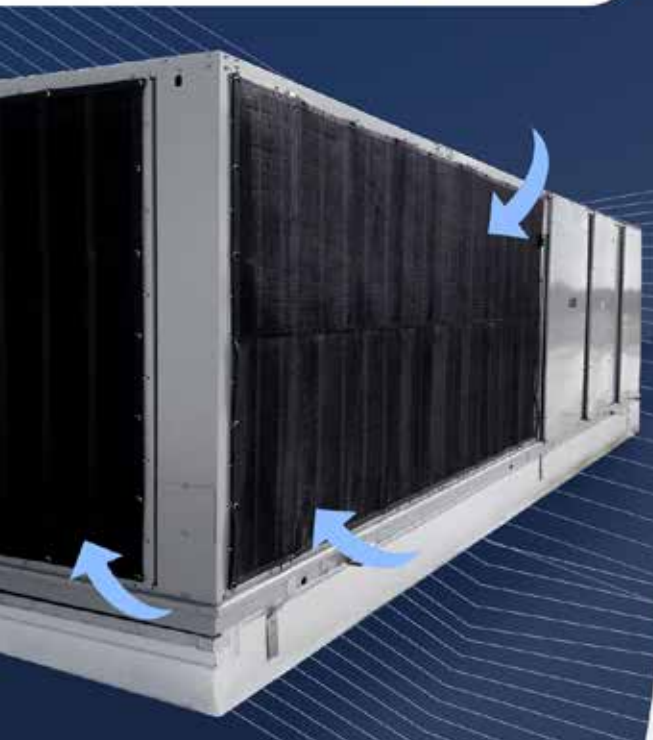


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Optimize the airflow and efficiency of your units



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Longer lifecycle of high efficiency filters, less coil cleanings and man hours

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