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The Voice of the On-Site Power Generating Industry









Microgrid Case Study

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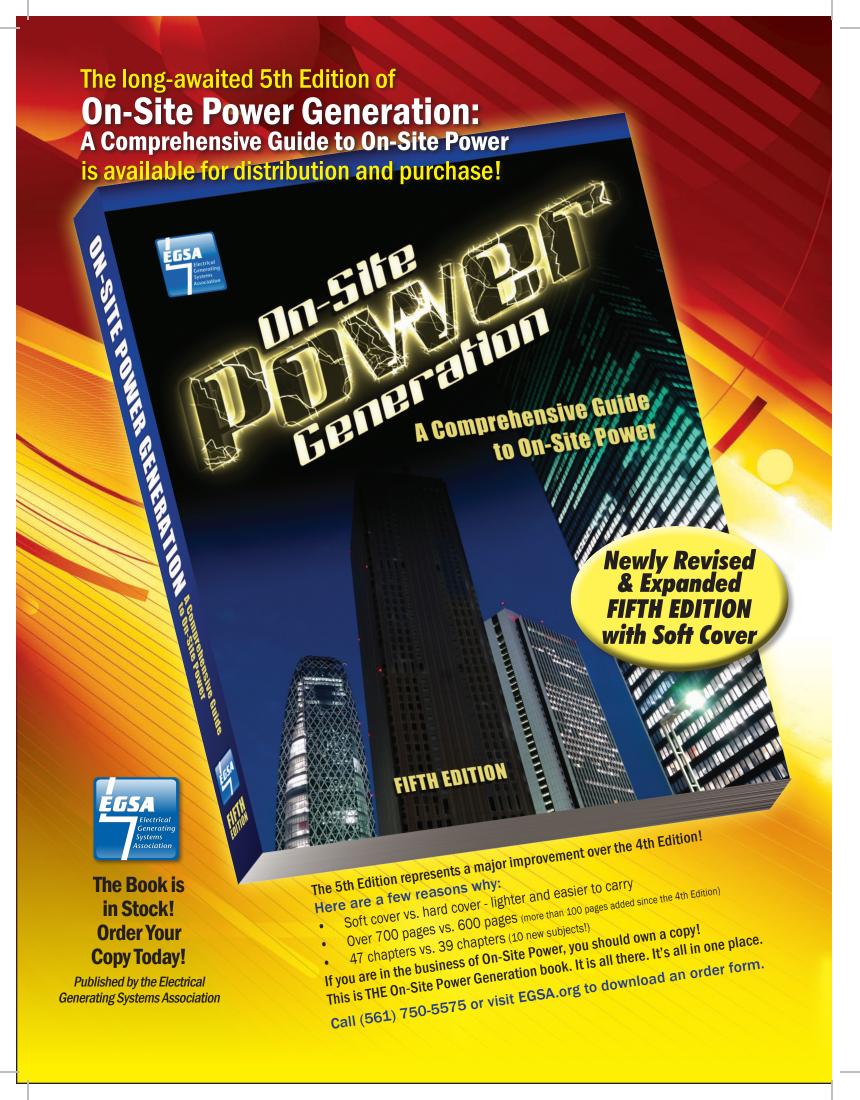
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EVENTS CALENDAR

Conferences

EGSA 2021 Fall Conference is Relocating

Many of our members voiced their concerns over the location of our 2021 Fall Conference in Seattle. As your opinions are very important to us, we want to advise that we have cancelled the event in Seattle and will be relocating the Conference to a different city, to be held sometime in October. Staff is working diligently to find a new home for our Conference and will send out a new notice as soon as the location and dates are confirmed. Thank you for your patience and understanding.

EGSA 2022 Spring Conference

March 6-8, 2022; Caesars' Palace, Las Vegas, NV

EGSA's Annual Spring Conferences feature educational sessions on a broad range of issues impacting the On-Site Power Industry. More information is available at www.EGSA.org or by calling (561) 750-5575

Education & Certification

EGSA 2021 George Rowley Schools

of On-Site Power Generation

For information, visit www.EGSA.org or call (561) 750-5575.

Basic Schools

June 7-10 - Houston, TX October 18-21 - Las Vegas, NV

Advanced Schools

May 17-20 - Kansas City, MO July 19-22 - Atlanta, GA

EGSA Load Banks School & Certification

July 27-29, 2021; Prime Power Services (Mableton, GA)

This 3-Day course will cover correct safety protocols, deciphering nameplate ratings of generators, different types of load tests, connections, testing requirements of the local authority having jurisdiction (AHJ), applying the appropriate loads for the test required, gathering/calculating/documenting load test parameters and results, site and environmental conditions, and potential problems/corrective actions. More information is available at www.EGSA.org or by calling (561) 750-5575.



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Powerline is published four times per year on a quarterly basis. Articles and information submitted for publication should be forwarded to the attention of the Editor at the address above 30 days prior to publication. Technical articles and articles of general interest to the electrical generation industry are actively sought and encouraged. Powerline reserves the right to limit information appearing in its pages to that which, in its sole discretion, will reflect positively on EGSA and the industry which it serves.

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FROM THE TOP



Kurtiss E. Summers (Kurt) 2020/2021 EGSA Board Chair kurt.summers@ austingenerator.com

Welcome Back

It was so good to see so many of you at our recent EGSA Spring Conference held from April 18th thru April 20th in Naples, Florida. It's been more than a year since we last met in person, which made this event even more anticipated! I am happy to report that the Conference was a success at every level!

- 216 Members in attendance with 55 First
 Time Attendees!
- 7 Committees met in person!
- 26 vendors exhibited in our trade show!

Our Key-Note Speaker who we had to postpone last year, Mr. Jason Schenker, was able to attend and provided great financial insight that both surprised and challenged all of us! His presentation can be found here: tinyurl.com/vv7mkf2d

And perhaps most important, we had no CO-VID cases post Conference, a clean bill of health for all attendees! Thanks to each of you for your care and thanks to our diligent staff whose efforts made the difference!

One highlight of this Conference for me was having the privilege of introducing our new CEO, Mr. Mir Mustafa and his family. Many in attendance were able to meet Mir and to hear his drive and passion for leading EGSA into the future. It was great for the Board of Directors to meet in person, conducting important Board business and beginning a fresh look at our long-term strategic planning with CEO Mustafa. These are very exciting times for EGSA! I encourage each of you to stay connected and informed on all things EGSA! Let me suggest that you start by reaching out to CEO Mustafa, introduce yourself and share your thoughts. In this issue you'll find an interviewarticle (page 19) on CEO Mustafa where he shares a bit about himself and his vision for EGSA. You'll also find his contact information on our website. along with all things EGSA. If you haven't visited recently, take a look! www.EGSA.org.

Here's a few noteworthy items in this issue of *Powerline*:

- Spring Conference Recap Article
- Meet our New CEO: Interview with Mir Mustafa
- Choosing a Load Bank for Microgrid Testing
- A Microgrid Case Study
- A TOYA Article
- Meet Your EGSA Director Kate Thomas.
- United Alloy Company Profile

Regarding the 2021 EGSA Fall Conference, rest assured the same safety protocols will be in place while expanding positive member experiences. Many have asked about the location and our staff and CEO are working to explore all options. Stay tuned for more information soon!

In closing, I am reminded of the vital work done every day by those within our Industry. With so much at stake it's clear EGSA needs to grow in membership and influence. As we look to expand both locally and nationally, the goal remains the same: To provide an environment where on-site Power Generation industry experts unite and share knowledge to drive the industry to higher levels of service and performance. Yes, we need to make it our priority to promote the Power Generation Industry, embrace the critical role our members play in power resiliency and take steps to bring business and industry solutions to every EGSA member.

The demand for power generation is on the rise and with it comes the need for reliable solutions. With safety and security at stake, let's all make the commitment to advance our Industry through our influence and support of EGSA. Yes, our future is as bright as ever!

Kurt Summers
Chairman of the Board



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EDUCATION



Nathan Harris EGSA Director of Education n.harris@EGSA.org

Getting Back on the Road

As vaccination numbers go up and COVID cases go down, more and more companies are lifting the travel restrictions that have been in place since early 2020. At EGSA we also started getting back into the traveling ways of old by holding our first George Rowley Basic School of On-Site Power of 2021 in March. The school was a huge success. We had 19 attendees and 9 instructors come to the school held in Miami, FL. EGSA followed this up in April with our 2021 Spring Conference in Naples, FL. The conference had over 200 attendees and zero reported COVID cases after the event. This is thanks to the health and safety protocols that staff enforced and all attendees practiced.

It feels great to get back to our normal schedule with George Rowley Basic and Advanced Schools being spread out across the country. This continued with another Basic School coming to Houston in June. One area that EGSA would like to improve on for future schools is more variety in the presentation materials. Specifically with the pictures and handouts that are shared inside the classrooms. EGSA is and has always been brand neutral, but we would like to show more variety during these presentations. Our instructors have put together a list of parts and gear that is highlighted during different presentations.

I would like to ask if you have photos of the following items (and are willing to share them for use in the school) please email them to *n.harris@egsa.org*:

- Automatic Transfer Switches
- Controllers
- Generator Paralleling Switch Gears
- Relays
- ECUs
- Governors
- Alternators (Internal Components)
- Load Banks
- Prime Movers (Diesel, Gas, etc.)
- Battery Heaters
- Encasements

We also like to have smaller components that can be shown in the class. If you have any of the following items (working or not) that you would like to donate, please email me:

- Protective Class Relays
- An Alternator Winding
- RTD's
- Thermocouples
- Tank level sending units (fuel, coolant, etc.)
- Various gauges and meters
- Various sending units (pressure, temperature, level, etc.)
- Magnetic Pickups (MPU's)
- Reed switch/magnet
- Thermowell's
- O2/NOx sensors
- Accelerometers
- Solenoid controlled devices
- PLC's
- Controllers (OEM or 3rd Party)
- Communication devices

If you have anything that you would like to donate outside of the list provided, or if you have any pictures of an interesting job/project that you would like to share, contact Nathan Harris at *n.harris@egsa.org.* •



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The EGSA Spring Conference brought our members to the sunny shores of Naples, Florida. The conference took place at the Naples Grande Beach Resort from April 18th through 20th and was attended by 216 Members which included 55 first timers and/or new members.

Everyone was eager to see colleagues and associates after having been denied the opportunity over the past year due to the COVID-19 pandemic that gripped our country and the world.

It was as if attendees had not missed a beat, as friendships were rekindled and new acquaintances were formed, all while observing the required health guidelines that were in place and enforced on-site at this beautiful venue.

Sunday Highlights

The EGSA Registration Desk opened at noon. Attendees received the new, and improved name badges complete with head shots. The photos were added to let attendees see the member's face in response to the face masks. Speaking of face masks, exhibitor and sponsor **XTI-360**TM provided a self-cleaning face mask for each attendee. Along with the face masks, attendees received a welcome gift compact tool kit compliments of sponsor **WEG**. Name badge lanyards were sponsored by **Davidson Sales** and USB Drives by **Global Power Components**. **Hug Engineering** also provided a complimentary Wellness Kit, complete with sunscreen, lip balm, sanitizer and hydration packet.

There were three Microgrid Educational Sessions held on Sunday afternoon. These sessions were taught by Brian Ponstein and Tom Drake from MTU America, part of the Rolls-Royce Group.

The Spring Conference festivities kicked off on Sunday afternoon with our traditional First Timer/New Member Reception, sponsored by **Fairbanks Morse**. Attendees who are new to attending an EGSA Conference were presented with an overview on the organization and given the opportunity to interact with some of the EGSA Executive Committee, Board of Directors, past Presidents, Committee Chairs and EGSA Staff members.

The Welcome Reception followed, sponsored by **Doosan Portable Power**. This reception was well attended as everyone was eager for the opportunity to become reacquainted with colleagues and friends after more than a year. It was a great way to get things started as we explored "Navigating the New Normal," which was the theme for this year's Spring Conference.



Tom Drake and Brian Ponstein of MTU America, part of the Rolls Royce Group conducted our three Microgrid Educational Sessions on Sunday.



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Spring Conference Emcee, Hall Walls shares a little levity as we emerge from the COVID-19 Pandemic.

Monday Highlights

Monday, the first full day of the conference kicked off with Conference Emcee, Hal Walls', humorous intro on doing business during the pandemic. (See pic above)

Once Hal had the opportunity to compose himself, he introduced 2020-2021 EGSA Chairman of the Board, Kurt Summers. In addition to welcoming attendees to the conference, Kurt had the honor of introducing EGSA's new Chief Executive Officer (CEO) Mir Mustafa. The office of CEO is new to the Association. Mir took to the podium to say a few words to the membership. If you'd like to learn more about our new CEO, an interview with Mr. Mustafa can be found on page 19 of this issue.



EGSA Chairman of the Board, Kurt Summers, Introduces EGSA CEO, Mir Mustafa to the audience.

Kurt Summers again took to the stage to update the attendees on recent developments within EGSA. These improvements include a completely revamped and improved EGSA Website; all-new online Rowley School Webinars; the long-awaited Load Bank Course and Certification at the Prime Power Facility near Atlanta, GA; as well as the new Learning Management System (LMS) platform that EGSA Education Director, Nathan Harris has been developing for online learning. Water stations in the general session were sponsored by **Power Systems Research**.

2021 SPRING CONFERENCE

Our Monday morning Keynote Speaker, Jason Schenker was graciously sponsored by **Gillette Generators, Inc.** Mr. Schenker's presentation was titled "*The Economic and Financial Future After COVID*," a fitting topic for our first in-person Conference since 2019.

A refreshment break sponsored by **Safety Power** was held on the trade show floor following our Keynote, giving attendees another opportunity to interact with Spring Conference Trade Show Exhibitors.

When attendees returned to the general session they were treated with a drawing for a BeatsStudio3 Wireless Headphones Giveaway sponsored by **AKSA Power Generation USA**. The lucky winner was Duncan Vincent from Reverso Pumps. Congratulations Duncan!

Dane Olsen of Generator Solutions Inc., New Vice-Chair of the DD Committee and the current chair of the TOYA Working Group provided a video comment on what the TOYA working group has done for the past year and what the future holds for the program. Please refer to more on the subject on page 32 of this issue.

Welcome Lunch

Following Monday morning's general sessions, attendees enjoyed a little time to wind down at our Welcome Lunch, sponsored by **Kohler**.

Seven Committee Meetings were held throughout the afternoon with a refreshment break, sponsored by **Siemens.**

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Top; Keynote Speaker, Jason Schenker takes the podium to speak on the Econominic and Financial Future After COVID. Bottom: Efe Parker of AKSA Power Generation USA presents Tuesday's giveaway to Duncan Vincent of Reverso Pumps.

Awards Banquet

The Monday Awards Reception and Banquet was sponsored by **Marathon Generators**. EGSA Chair Kurt Summers kicked off the night by recognizing Andy Briggs (Power Telematics, LLC) as one of three outgoing board members who was in attendance for completing his term as EGSA Director. The other two outgoing Directors who were not in attendence were Al Powers (Powers Generator Service, LLC.) and Marty Morrill (Applied Catalysts). EGSA extends thanks to these gentlemen for their service to the Association.



1. EGSA Chair Kurt Summer with wife Kathy & son Brandon 2. Dan Bigelow, Nathan Harris 3. Paul Feld, Thomas Black 4. Dan Barbersek, Steve Pinkerton 5. Justin McMahon, Thomas Black, Chris Nagle 6. Mike Vermilye, Randy & Nancy Weimer, Nancy & Steve Evans 7. Bob Piske, Tom Wein 8. T.J. Schwartz, Darrin Moorman, Richard Field, Jordan Rohrer 9. Cee Cee & Dennis Roundtree 10. Brenda Brown, Randy Heckenkemper, Herb Whittall 11. Brian & Beth Ponstein 12. Nancy & Randy Weimer

2021 EGSA Fall Conference - Relocating - Many of our members voiced their concerns over the location of our 2021 Fall Conference in Seattle. As your opinions are very important to us, we want to advise that we have cancelled the event in Seattle and will be relocating the Conference to a different city, sometime in October. Staff is working diligently to find a new home for our Conference and will send out a new notice as soon as the location and dates are confirmed. Thank you for your patience.



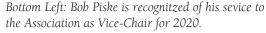




2021 SPRING CONFERENCE

Rowley School Instructor Recognition

Top Left: Five Years, Harold Jarrett Top Middle: 10 Years, Steve Evans Top Right: 35 Years, Herb Daugherty



Bottom Middle: Andy Briggs is recoginzed for his service to the Association as EGSA Director from 2018-2020.

Bottom Right: Paul Feld was recognized of his sevice to the Association as 2019 EGSA President.



Brian Ponstein of MTU America, part of the Rolls-Royce Group for his outstanding contributions to the Technical Oversight Committee.

Matthew Erickson, our 2020 Technician of the Year (TOYA), was in attendance with his wife, Kristin and baby daughter. Erick was presented

his TOYA trophy by EGSA Chairman, Kurt Summers in Texas last December. Part of the awards package included conference registration and travel expenses to an EGSA Conference. We were glad he could join us this Spring in Naples.



Due to the cancellation of both conferences in 2020, there was a presentation that was long overdue. Paul Feld was recognized for his tenure as 2019 EGSA President. Kurt presented Paul the outgoing President's Plaque and customary Past President's Jacket. Thank you Paul for manning the helm at EGSA in 2019.

Several Rowley School Instructors were also recognized for their years of service teaching at our schools. Harold Jarett of OmniMetrix LLC received a five year tenure plaque. Steve Evans of ComAp received his ten year tenure award, and Herb Daugherty received an unprecedented thirty-five year tenure award. Thank you gentlemen for your continued service to our association.



A few other awards were long overdue due to the pandemic, they were the Timmler and Carpenter Awards. These awards were slated to be presented at the Spring 2020 Conference that was to be held in Las Vegas last March. Our 2020 Carpenter Award was presented to Hal Walls of MineTerra for his long and outstanding service to the Association. Our 2020 Timmler Award was presented to

Tuesday Highlights

Tuesday started off bright and early with a delicious breakfast sponsored by **Woodward**.

Tuesday's focus was on Microgrid/ Renewables & CHP. David Stringer (DEIF) took the stage to get the session started with a DEIF Microgrid case study. Dave was later joined by Bill Becker (ComAp Controls) and Brian Ponstein and Tom Drake

Our 2020 Technician of the Year Award (TOYA) recipient, Matthew Erickson attended the Confernece with his wife, Kristin and the newest addition to their family.

(MTU) each of which presented their company's case studies on the subject.

Tuesday's general session concluded and attendees headed





Top: Hal Walls is presented the Leroy H. Carpenter Award for his long and outstanding service to the Association.

Bottom Left: Brian Ponstein is presented the William Timmler Award for his outstanding contributions to the Technical Oversight Committee.

Bottom Right: David Stringer, Bill Becker, Brian Ponstein and Tom Drake presented Microgrid/Renewables & CHP case studies on Tuesday morning.



1. Walter Petty, Nathan Harris, Paul Feld, Justin McMahon 2. Kevin Thayer, Jim Landis 3. Tom Wein, Barb & Steve Stoyanac 4. Abby & Walter Petty 5. Mike & Nancy Witkowski, Charlie Habic 6. Robert Simmons, Ben Seales, James Carlson 7. Ryan Nesloney, David Vennie 8. James Carlson, Robert Simmons, Jennifer & Bill Pafford 9. Hal Walls, Dan Barbersek 10. Nancy & Mike Witkowski, Paul & Sue Feld 11. Gary Sahrmann, Becki Salmon 12. Debbie Kelly, Kristin & Matthew Erickson (2020 TOYA Winner), John Kelly

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out for the scheduled networking activities. Due to inclement conditions on the water the fishing tournament was canceled. **Diesel Radiator** generously sponsored the Fishing Tournament. Many of the fishermen and woman opted to attend the Around-the-World tasting menu with wine pairings taking place at the resort.

The golfers headed off to the links for the EGSA Spring Golf Tournament. Golf Tournament sponsors included title sponsor **John Deere Power Systems** who also provided golf balls for the event, **Girtz** for the lunch totes and **Clay & Bailey** for the golf gift cards. Thank you to all our sponsors for generously supporting EGSA throughout the years.



The EGSA 2021 Spring Trade Show, held in conjunction with our Spring Conference, was the perfect opportunity for exhibitors to engage with attendees throughout the Conference.

Tuesday's Closing Reception was a final chance for attendees to connect before heading home or extending their time in sunny Southwest Florida.

This year's Spring Conference was far from the ordinary. Our EGSA Pandemic Complaince Officer (PCA), Emily Hartstone, not only planned the entire conference, she also put in place the necessary steps to help ensure the safety of attendees. These efforts included, but were not limited to, mandatory health

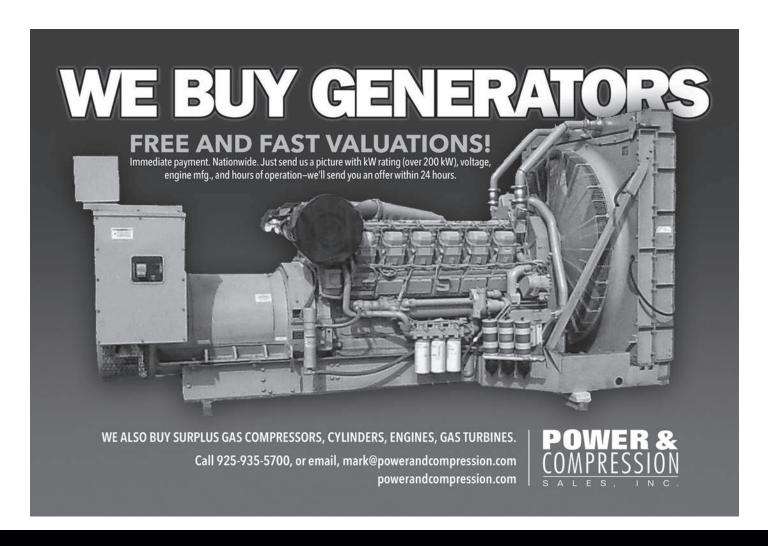
screenings and temperature checks each morning; socially distanced

seating in each of our events; floor decals to direct the flow of traffic in and around our general sessions and trade show floor; as well as providing self-cleaning face masks provided by exhibitor and sponsor **XTI-360**TM to all attendees.

The 2021 EGSA Spring Conference will go down in the books as a resounding success. We look forward to welcoming Members to our 2021 Fall Conference, details of which are forthcoming since canceling the event in Seattle. Please stay tuned for updates.







GLOBAL COVERAGE OF THE POWER GENERATION MARKETS

INDUSTRY NEWS - FROM KILOWATTS TO MEGAWATTS





Meet EGSA's New CEO, Mir Mustafa, JD

Mir M. Mustafa, JD, is EGSA's new CEO. Mir grew up and attended both undergraduate and law school in the Chicagoland area. He has over 15 years of expertise in the power generation sector and 10 years of executive level nonprofit association management expertise. After spending the last decade in Washington, DC, Mir and his family recently moved back home to Chicago. His wife, Zeenat, is the new Executive Director of the Institute of Politics at the University of Chicago, and his daughter, Zayna, just finished kindergarten.

Mir's professional history started with a job in structural chemistry at Abbott Laboratories before he transitioned into financial services at Citibank and then at The Northern Trust. After law school, Mir practiced law before co-founding an energy efficiency and renewable energy advisory firm in Chicago. Upon moving to Washington, DC, Mir accepted an opportunity to serve as the Executive Director for Business Development for the National Electrical Contractors Association (NECA). After leaving NECA, and just prior to joining EGSA, Mir was the Executive Director of Energy & Infrastructure for e-On Batteries, an early-stage battery energy storage company deploying Lithium-Iron-Phosphate (LFP) batteries and Battery Management Systems (BMS) for behind the meter (microgrid, electric vehicle charging, data center) and in-front of the meter (utility scale energy storage) applications.

Give us one word that describes you the best and why.

Passionate. I'm passionate about creating a better world and brighter future. On a personal level, that means creating, joy, happiness financial security, and opportunities for personal and professional fulfillment for my family. On a professional level, that means creating opportunities for our members to be more profitable, to help them get more work from existing customers, from new customers, and through adding new capabilities that help them enter new markets.

What are you most proud of in your career? In your life?

I'll take the second question first. In my life, I'm most proud of my wife and her amazing accomplishments and my six-year-old daughter who is kind, caring, compassionate and who in addition to my wife is the absolute love of my life. In my career I'm most proud of how I was able to move the needle for the industry while I was at the National Electrical Contractors Association (NECA). During my time there, my primary focus was on helping the members capture new opportunities in the distributed energy resources space. My efforts contributed to a 16% increase in work and \$27.2 Billion in new industry revenues.

What other CEOs do you look up to and why?

The CEO that I look up to the most is my former CEO at NECA, John Grau. Even though John was one of the most powerful and influential trade association CEOs in the country, he was first and foremost always humble. He never sought attention for himself, cared deeply for and always protected his staff, and helped transform the electrical contracting industry to bring it into the modern era.

What do you like to do in your free time?

I don't have a lot of free time. When I'm not working for EGSA, I like to give back through volunteering. I'm currently an officer, VP,

and General Counsel for BuildingAction, a Washington, DC based coalition advocating for the role that buildings and the built environment play as relates to upcoming infrastructure legislation. I'm also a board member for the Electrical Auto Association, soon to be renamed the Electric Vehicle Association, as I'm a huge proponent of electrification of the transportation sector. When I do have free time, I love to spend it with my wife and

daughter. Beyond that, I'm an avid reader and enjoy

What was your first impression of EGSA?

travelling internationally.

I was impressed by EGSA's storied history (since 1965), its devoted membership, how our different membership categories provide a forum the entirety of the onsite power generation industry, and how our members are helping to promote resiliency and shore up critical infrastructure, for their customers and our country, through their products and services.

What do you think is the biggest challenge facing EGSA today?

There's a paradigm change taking place within the energy sector, as the country is moving from centralized to distributed power generation. The biggest challenge for EGSA is to help our members navigate and lead this change or risk being overshadowed by other interests. This means giving our members the knowledge, tools, resources, and skilled technicians they need for growth, helping them add new capabilities, and stepping up our advocacy efforts.

How do you see the Association changing in five years, and how do you see yourself creating that change?

My goals for EGSA are to increase our membership by at least 25% within the next five years, and to more than double our revenues. I plan on doing this by revamping and expanding our networking and educational offerings. The staff and I have already begun changing our conference format, and I hope our members will see some new and exciting changes as early as our Fall Conference. We've started planning for a potential legislative fly-in event, later this year or early next year, where our members can meet with their elected representatives in Washington, DC to advocate for our interests. Additionally, we've taken the first steps to creating a more holistic educational experience for our members that goes beyond just technical education to include education addressing business operations and performance. We've also begun exploring the creation of new technical training to increase the pipeline of skilled workers.

If you could speak personally to each of our readers, members, nonmembers, end user community, etc. what is one thing you would impart to them as the EGSA CEO?

The only constant in life is change. Don't be afraid, embrace it and together we will rise to new heights. My passion alone isn't enough to get us to where we need to be, but together with your passion and your industry knowledge there is nothing we cannot accomplish. Lastly, my door is always open to you. I love hearing from our members and stakeholders, so please feel free to reach out to me any time.



Introduction

IEEE 1547.

Ticrogrids have been discussed, researched, and have par-Licipated in many demonstration projects for the last 15 years. This topic has shown great promise in that it fits with the consensus view of the electric power system future being very interactive and adaptive to the conditions that exist at any given time. Microgrids can be a way for electric utilities to provide more resilient distribution networks and could be a vehicle for cost effective integration of renewable sources into critical power systems.

Additionally, microgrids could be a vehicle for cost effective integration of renewable sources.

This informative guide provides an overview of the emerging microgrid market. We explain the growth of microgrids and how they fit within the overall power network. We also describe the typical components of a microgrid and examine the unique testing requirements for microgrids including compliance with

Microgrids offer a viable solution to modernize power delivery and help maintain a secure flow of energy to a local network of electricity users. Sometimes called "nanogrids" or "electrical islands," microgrids operate like a smaller power grid and can:

- Connect to the external area Electric Power System (EPS) or function alone as a designed and controlled island.
- Serve various sized installations. A microgrid can deliver power to a single facility or vast areas, such as a city, college campus, or large military installation.
- Generate, distribute, and store power independent of the central power grid.
- Deliver power even when the utility power goes out. A microgrid helps avoid outages by seamlessly switching to locally generated power.
- Provide greater control over the energy supplied to a local network.
- Leverage solar, wind, or stored energy to supplement

To ensure resilient performance within your microgrid, you must perform unique testing during commissioning and as part of an ongoing maintenance program. These can include resistive and reactive load testing, harmonics monitoring voltage ride through, and fault performance. Proper microgrid testing involves selecting and deploying the right load bank and monitoring solutions for your specific application.

The Phenomenal Growth of Microgrids in the U.S.

An increasing number of utilities, government institutions, and private sector facilities turn to microgrids every day. These local power networks offer benefits the larger EPS cannot, including enhanced flexibility, control, and security.

In a GTM Research report titled "U.S. Microgrids 2016: Market Drivers, Analysis and Forecast," analysts expect the country's installed microgrid capacity to grow 115% and reach 4.3GW over the next five years. Key factors driving this growth include:

- The desire of regulated utilities to modernize the grid and provide a "non-wires" alternative to capital infrastructure investments.
- The shift away from single-entity owned and operated projects to a multi-stakeholder ownership model.
- The need for regulated utilities to reduce congestion and peak substation demand.
- A substantial increase in large commercial and military adoptions to support critical operations.
- Continued deployment of community projects in the Northeast and Alaska.

The report also concludes that end customers, especially the military, own more than two-thirds of currently installed microgrids. By 2020, the U.S. military is projected to account for 32% of microgrid capacity. Also, researchers expect the use of renewable fuels to double from 2016 to 2020.

Essential Components of a Microgrid

Microgrids include a power generation source, local loads, electrical switchgear, and possibly inverters and energy storage. Specific elements consist of:

Generation and Storage

A microgrid contains individual systems or a coordinated combination of local generation assets. These assets may or may not be coupled with energy storage for controlled release of power to the islanded network.

Control System

A microgrid seamlessly connects and disconnects to the area EPS. To maintain stability, it balances load and coordinates energy sources and load resources within the islanded network. A microgrid also maintains sensory communications with the external EPS. It reacts to EPS conditions, meets interconnection requirements, and determines when to reconnect safely. A microgrid control system will comply with IEEE 1547 proposed standards for intentional islanding.

Dedicated Distribution

A microgrid offers a resilient distribution network that controls the external EPS connection. It provides protection from unsafe voltage, frequency, and current fluctuations within the islanded network.

Load

An islanded network requires proper planning and monitoring to ensure adequate generation, load management and distribution resources for any island scenarios.

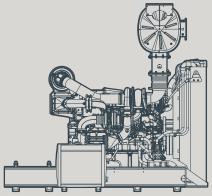




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Why Load Test Microgrids

Microgrids comprise several different technologies. The challenge involves getting these technologies to operate together in a stable manner so you can improve efficiency, security, and reliability. Testing systems and configurations before implementation help accomplish these goals and can improve safety, cost savings, and project scheduling.

Proper microgrid testing specifically addresses:

Control Systems – The smaller "island" control area of a microgrid leads to greater sensitivity to load changes and network disruptions. Therefore, load testing helps ensure control systems function as intended and comply with standards and regulations. Microgrid testing promotes stability, as well as balances power generation with load demand. Testing also confirms the microgrid will seamlessly synchronize with the external network.

Generation Functionality – Just as with traditional grid applications, you must test each microgrid generation element to verify functionality. Load testing generation resources makes sure they respond safely to load and power factor changes.

Disconnecting and Reconnecting from the External EPS

Proper microgrid testing ensures the voltage, frequency, and current parameters at critical nodes fall within safe limits. When they do, the entire microgrid remains stable while transitioning from the EPS to local operations.

Compliance with IEEE 1547 – Connecting renewable energy sources through a microgrid reduces the risk of interconnection problems since the microgrid performance is known. IEEE intends to develop future standards specifically for microgrids. Microgrid testing will help you meet these standards.

Microgrid testing using simulated load allows testing system functionality of a distribution feeder, without affecting customer loads.

Testing a dynamic microgrid will require a reactive component to the simulated load to properly determine handling of voltage fluctuations and faults on the external EPS.

Load Banks for Microgrid Testing

A grid emulation test setup can be configured using a generator and load banks in cases where connection to the electric power system is not available.

Load banks simulate the expected operational load profile. You can test a variety of load scenarios using independent phase control, programmable load profiles, and a full range of power factors. Microgrid testing with load banks helps you uncover problems before you begin live operation.

The load bank system you choose depends on the configuration of your microgrid and must directly correlate to the power produced. So, critical questions to answer before deploying your load bank solution include:

- What power factor do you expect to incur during the system operation?
- How many generation sources will you synchronize on the same system?
- How often are generation assets energized and put into temporary operation for system checks?
- Have you strenuously commissioned the control system to ensure reliable operation during islanded operations?
- What is the potential size and rate of load change during islanded operations?
- How will these changes affect the generation sources?
- What response parameters are required during load changes or transfers?

For larger microgrid systems on a distribution network, medium voltage load banks can be utilized. These require less equipment, create a smaller footprint, and make it easier to get an accurate picture of system performance. Fewer components also mean fewer points of failure.

In addition, medium voltage load banks promote better project safety. When medium voltage load banks are utilized (instead of the power grid), you can precisely control power fluctuations. Surges can create safety issues for personnel and damage equipment.

No viable substitute exists for testing microgrid technology, as installed, at full power and actual load levels before implementation. Load banks reduce deployment risk and help optimize the performance of microgrid operations.

What to Look for in a Load Bank Provider

When you begin panning your microgrid testing project, select a load bank vendor that can offer:

- The most extensive testing and commissioning experience with all components of a microgrid, including generation, storage, controls, and distribution.
- A comprehensive product inventory designed to test the functionality of every microgrid element at the voltages and conditions expected in all operating modes.
- The geographic coverage to support the regions building microgrids.
- Proven technicians who can work on the job site.
- A full understanding of the IEEE 1547 interconnection requirements and evolving interconnection standards.
- Safety measures integrated into the entire process from planning through decommissioning. •

Whitepaper was provided compliments of EGSA Member ComRent. Please visit www.comrent.com for more information on load banks and microgrid testing.



Partnership and State-of-the-Art Controller Made a Unique Sustainable Microgrid Solution Possible

oing "off the grid" is typically associated with one's disappearance from the normal course of human activity. However, it has a very different meaning for Headwaters Center in Winter Park, Colorado, a sustainable facility that recently benefited tremendously from the DEIF AGC-150 controller.

Situated among natural grasses, flowers and stunning views of the mountains, Headwaters Center has a crucial mission to bring education and awareness to the public about the impact that river water has on the economy, environment and the everyday lifestyles of Colorado residents.

With such an important mission, the last thing Headwaters Center wanted to do was to disappear. With the help of DEIF and strategic

partner Ageto Energy, going "off grid" meant creating a sustainable energy solution that could operate consistently and independently from the city's power feed, relying primarily on solar energy and battery storage, with only an occasional boost from two natural gas generators.



That's where DEIF's controller came in. And the key stakeholders involved in the project want to make sure everyone knows how successful it has been.

"We want to use more renewable energy, and to reduce our reliance on carbon-based fuels," Mike Murray, co-founder and COO of Fort Collins-based Ageto Energy says. "This Headwaters Center project is a great example of what can be done."

But like many technical projects of this kind, the Headwaters project was not always successful. Prior to DEIF and Ageto Energy becoming involved, the early attempts to make the Headwaters Center a truly energy-independent facility achieved only marginal success. But that all changed when Ageto Energy and

DEIF teamed up to retrofit the existing system.

"The system was running in a less optimized solution," Murray says. "We brought in DEIF and their new controller" to replace a non-DEIF controller. "That allowed us to parallel and synchronize the generators onto the [building's] AC bus. This

was an upgrade from the previous [non-DEIF] controller, which was not able to do that "

Ageto Energy worked with DEIF to reconfigure the power system so that energy generated by the solar panels could be more efficiently stored by the batteries, using the generators only for back-up power when needed. The ultimate solution was the DEIF AGC-150 controller, which enabled Ageto Energy to synchronize the two generators and run them parallel to the AC bus.

The batteries serve as the reservoir of the facility's energy storage system. The batteries store the power

generated by the solar panels on the building's rooftop, or from the generators themselves. "When the Ageto ARC controller calls for the DEIF Controller to start, it runs at a base load set point, in parallel to the AC bus," Murray explains, "and the DEIF controller gets a signal from Ageto to start the generator, ramping it up to its set point and keeping it there."

The new controller also provides important safety factors, monitoring the oil and cooling temperatures in order to protect the generators, Murray says.

"If we hadn't brought in Ageto and DEIF, we would have the generators running all the time, and we wouldn't be able to efficiently run the building," says Holli Ribel, Executive Director of Headwaters Center. "We rely mostly on the power of the sun and the battery system, and without the DEIF controller, we wouldn't be able to modulate the generator system for consistent energy."

When it came time to retrofit the system with the new controller, the operation went smoothly. Murray explains that the controller fit the same hole as the previous controller, "and it had everything built in to a single box. It also had the governor and AVR control all built in, with all of the paralleling and synchronizing capability that we required," Murray says.

The controller enabled the paralleling and synchronization of the generators onto the AC bus, allowing for integration of the solar panels, battery storage and two HiPower natural gas generators (130kW) for back-up power. This was a significant upgrade from the previous controller that did not have such capability.

DEIF's is an all-in-one controller, with an integrated six-line power flow display. This single controller can be programmed for mains power, bus tie breakers, generators and hybrid application, eliminating the need for other controllers in inventory. The controller also allows for emulation of an application with-



"DEIF was great to work with. The pricing was competitive and the controller allowed us to perform everything we were looking to accomplish."

Mike Murray

Co-founder and COO, Ageto Energy



"DEIF and Ageto were wonderful partners to work with. They were really collaborative with us, they were advocates for us if we needed anything or worked with other vendors, their customer service was superb."

Holli Ribel

Executive Director, Headwaters

MICROGRID CASE STUDY

out it actually running, using the low voltage, DC side of the unit, which helps in the design and application of the product before being put to use in the field. It is designed to loadshare with other non-DEIF controllers through an analog plus-or-minus five volt signal, making it versatile in its operation.

The ease of use of the new controller did not go unnoticed by Ageto Energy. "It was a quick, simple system to set up, the parameters were easy to set up, and we were able to take these standard nonparalleling generators and upgrade them to be parallel and synchronizing-capable to integrate it into the microgrid system," Murray says.

The DEIF controller proved to be an easy and quick retrofit for the project. The controller's parameters were simple to set up, allowing for standard non-paralleling generators to be upgraded to be parallel, synchronizing to the microgrid system.

One of the ultimate goals of both Ageto and DEIF was to simplify the Center's renewable energy system to allow non-technical people to utilize, monitor and manage the building's power without much outside support. "This is a user-friendly control system," Murray says.

"We were privileged to work with Ageto and DEIF," Ribel says. "Their customer service was just superb, and they went above and beyond. Their biggest goal was to make sure our building was efficient and successful, and they were always there, on call."



David Stringer from DEIF presented this case study at the 2021 EGSA Spring Conference in Naples, FL



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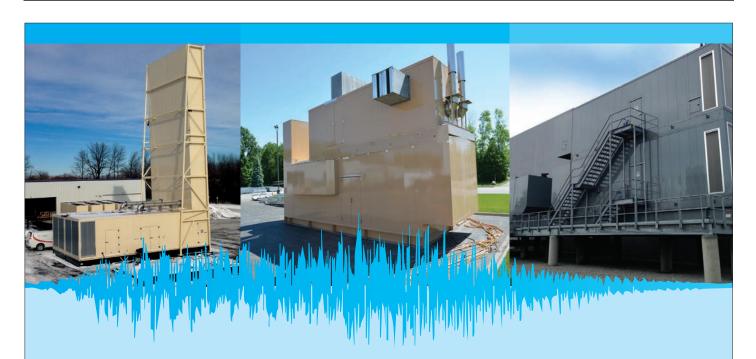
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Eco-friendly



Headquartered in Janesville, Wisconsin, in the heartland of America, all UA products are proudly "Made in the USA". In addition to their ISO 9001:2008 certification, UA has been recognized as a WBENC woman/minority owned business. While Unted Alloy is proud of these distinctions, one credential stands above all others: their extensive list of long-term satisfied Fortune 500 OEM customers.



Laser Operator Jose Resendiz, one of the 400 employees United Alloy employs between Janesville, WI & Seguin, TX

United Alloy's Newest Facility in Seguin, TX. United Alloy's buildings have received awards for their inspirational design.

UNITED ALLOY— Engineering for the Future

Founded in 1999 and headquartered in Janesville, WI. United Alloy (UA) is a 22-year-old, family-owned, metal fabrication and powder coating firm best known for metal tanks, skids, frames, and heavy steel fabrications. They have more than 400 employees in southern Wisconsin and central Texas who work with some of the best-known brands in the power generation and off-highway equipment market.

Tom Baer, the company's founder, created United Alloy based on his experience as a High School Fabrication Teacher where he developed an appreciation for metal fabrication, especially welding.

This appreciation for fabrication resulted in United Alloy's inception in a small 20,000 square foot facility in Janesville, WI. Over the course of the next few years, United Alloy began developing, designing and certifying several UL142 Certified AST (Aboveground Storage Tanks) files that allowed United Alloy to secure long-term, multi-million dollar contracts. This business has allowed for several multi-million dollar expansions. Their current facility in Janesville now has over 330,000 square feet of manufacturing space.

The Ingredient Making Your Product Better

United Alloy's reputation as a leader in the design and manufacture of fuel storage systems is based on history of cross-collaboration with customers. Their highly experienced sales & engineering team takes the customer's vision and transforms it

www.EGSA.org Powerline • Q2 2021



Some of the tanks UA stocks for its customers, 5 gallons up to 30,000 gallons.

into reality. The quality management systems of UA's ISO-9001 customers who are seeking an alternative manufacturer. The new certified processes, uses state-of-the-art technology to ensure product compliance with the customer's vision in mind. United Alloy's dedicated manufacturing workforce ultimately brings feet. With room for future expansion at both facilities, United Al-

this vision to fruition.

United Alloy continues to build its reputation by continually re-investing not only in the facilities, but also in the communities in which they are located. Community partnerships include teaming with local technical colleges like Blackhawk Technical College in Wisconsin, UA and the Seguin Economic Development Corporation in Seguin, TX. United Alloy believes that these types of investment and partnership are the key to building a strong and engaged workforce and the company's sustainable growth long-term.

A \$35 million expansion to its facility in Seguin, TX, is United Alloy's largest investment to date. This expansion was announced shortly after it's 20-year celebration in October of 2019. The facility was completed in early 2021. The expansion highlights the commitment and ability to serve a larger network of current customers as well as enabling UA to bring in new

facility represents a duplication of the capabilities of its Global Headquarters in Janesville, WI, all within its 120,000+ square

> loy will continue to develop and build on its history of Quality, On-Time Delivery and continued investment in Advanced Manufacturing processing.





Top: DOT Certified, Titled Duty Specific Trailers for Power Generation & Industrial use. Bottom: Complex Base Frames & Weldments built within very tight tolerances with Modular Tables.

The EGSA Connection

United Alloy has been an EGSA member since 2009. Since joining the association Luke Jaynes, President of United Alloy, has been a valued insert representing EGSA at conferences and keynote speeches. Luke Jaynes started with United Alloy in 2007 and learned and grew in the organization holding many roles within the Sales, Costing & Production Departments and culminating in his progression to President in 2019.

United Alloy is as committed to this partnership with EGSA, as it is to its commitment to inspiring the design & manufacture of fuel storage solutions, the main "Ingredient" of the On-Site Power industry.

EGSA NEWS

Tracking Valuable EGSA Member Contributions

As a formal Association, it is important to remember that EGSA was built on volunteer contributions. The commitments that each of you make and keep, on behalf of EGSA leads to the betterment of our Association, as well as the On-Site Power Industry.

One of the most important goals that we, as an Association have is to continue to grow our membership and grow our member participation. The 'heavy lifting' of the organization gets done by the membership!

The online chart tracks our member achievements and milestones. In order to be considered for a leadership role in our organization, EGSA has established guidelines that provide a transparent route for milestones that must be achieved in order to be considered. This list is our formal way of tracking Members' achievements and valuable contributions made on behalf of EGSA and to provide a roadmap for interested Members who wish to be considered for leadership roles within the Association.

We began this chart in earnest in January of 2012. We rolled out a program where EGSA Staff tracks and recognizes our members who make these formal contributions to the Association and to our industry at large.

For obvious reasons, this list is not foolproof. We encourage members to speak up if our historical data is not correct! The chart is housed real-time on our website (www.egsa.org/AboutUs/Leadership.aspx).

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The list includes our active participants, minus our retired members. Since 2012, anyone who has retired has been removed from the active list and placed on a retiree list.

We apologize if we have omitted anyone or left off a valuable member contribution. Please correct us if you find an error by contacting Peter Catalfu, EGSA Communications Manager at *p.catalfu@egsa.org*.

Stay in tune with your Association. Get involved. We need your support! ■

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Meet Your EGSA Director

Kate Thomas

In each of the upcoming issues we will be sharing information on some of the volunteers who donate their time for the betterment of the Electrical Generating Systems Association and the industry as a whole. Without their hard work and dedication to EGSA, much of the efforts and directives simply wouldn't be possible.



EGSA Director - Kate Thomas - Term 2021-2023

Rx Monitoring Services, Inc. was started in my garage when I was 8 years old. My dad had a vision for a new product that would revolutionize the power quality industry and my mom knew how to finance the brand-new company. I never thought I would ever work for them, I barely understood what the company did. Fast forward 20 years, I was working as an actuary in the benefit consulting industry...and I hated it. I wanted to do more of the business and consulting side and less of the endless spreadsheets and num-



ber crunching. Luckily, my parents' company was still in business and one of the salesmen was retiring, leaving a job vacant. I jumped at the opportunity, quickly learned how important power quality is in hospitals, data centers, and most other mission critical fields, and realized that RxMS products and ser-

vices brought something completely different to the industry – engineers who listen to and make changes quickly based on customer feedback. Since I have started, RxMS has introduced 5 new products, established a completely new revenue stream, and expanded our data center business immensely while retaining the healthcare side, which the company was founded on serving.



About 5 years ago, while in the TSA line leaving another industry conference, Steve Stoyanac happened to see the conference badge on the conveyor belt. He gave a great elevator pitch about why RxMS should investigate EGSA. We went to the first conference and found EGSA was more than a tradeshow and networking opportunity like most conferences, but a place to learn about the electrical generator industry and to collaborate with companies from every part of the industry. I have learned more at EGSA than anywhere else.



The committees are my favorite part of the conferences because they allow every participant to get involved with the industry. I have been the Secretary of the International Trade Committee and was just voted to Vice Chair. I also will be the board liaison for the Government Relations Committee for the Fall Conference.

What do you like to do in your free time?

I travel a lot - I live in Florida, have a place in San Diego, and my company's headquarters are in New Hampshire. I always jump at the chance to take a trip to meet a client or visit a friend. I am very happy to get back to traveling this year! Also, I am trying to get better at golf!

What is one thing most EGSA Members probably do not know about you?

I still hold the single season softball triples record at my university.







Top picture: Hiking through the White Mountains Second picture: Easter 2019 with Kate's

grandparents and sister

Third picture: On a trip to Iceland with Kate's friend of almost 30 years!

Last picture: Kate's amazing friend group affectionally known as the "Happy Cows"



EGSA Technician of The Year Award (TOYA)

Everything we read these days seems to talk about the troubles and difficulties of the last year. The pandemic has undoubtedly presented us with new challenges in our daily lives and the Technician of the Year Award (TOYA) is no different. The cancelled conferences really made us wonder if we should just suspend the award for 2020. Instead, we took a chance by doing things a little differently.

In this community of generator professionals and EGSA members, we understand better than anyone just how crucial the work is that our technicians do day-in and day-out. All too often that work goes on unnoticed or underappreciated. That's why we created the TOYA award in the first place. Something to highlight these skilled technicians. There were no news stories of neighborhoods cheering or pounding on pots and pans for generator technicians and service workers.

The Dealer/Distributor Committee felt it was more important than ever, to keep this tradition of acknowledging our outstanding technicians than it had ever been before. There were many challenges ahead of us to ensure TOYA would continue to serve as tour de force for our industry. So much of our outreach, marketing, and pomp delivered through in-person interactions at the conferences and tradeshows. Logistically, everything had to change. So we developed a new campaign with social media posts, virtual interviews, and Dispatch emails to spread the word and introduce some of these exemplary technicians.

We were extremely fortunate, geographically speaking, as we introduced our semi-finalists for 2020 in a sort of countdown. We realized that the soon-to-be named 2020 TOYA winner Matthew Erickson of PowerSecure Inc., and the 2019 traveling trophy holder in Loftin Equipment were in driving distance of each other, as was Kurt Summers our 2020 EGSA President.

Paired with a later announcement date, this gave an amazing opportunity.

An intimate awards ceremony was held at a local restaurant with representatives from Loftin Equipment, and PowerSecure with a small number friends and family. The whole event recorded to share with our members, Kurt was able to present Matthew with the TOYA award, jacket, and toolset. While Loftin shared a few words on what it means to be the company holding the traveling trophy for Technician of the Year and 'passed the torch' to PowerSecure.

As we look toward the future, there is a rejuvenated vigor in the Dealer/Distributor Committee and TOYA Working Group to continue innovating. Finding ways to improve this great honor of being named Technician of the Year and what that means. With the advent of the Apprentice and Journeyman level certifications, we want to ensure both levels of technician can be recognized for their continued efforts of self-improvement. In recent years, we've also opened up the nomination process from strictly a technician's supervisor or company ownership, to allow nominations from peers and co-workers, even customers/ end-users and the technicians themselves.

There is a lot of work ahead of us to ensure the continued success of the TOYA program, and even though the pandemic has limited some of the membership participation, we are still hard at work. If you believe in the importance of our industry's technicians and want to help us achieve these goals, join the D/D Committee, raise your hand, and reach out to the committee leadership in Michelle Hilger (D/D Chair) or Dane Olson (D/D Vice Chair). Their contact information can be found at egsa.org/About-Us/Committees/Distributor-Dealer.



Application for Membership

Under the leadership of its Board of Directors and operating through its various committees and staff, EGSA strives to educate, provide networking opportunities and share relevant knowledge and trends with industry professionals including manufacturers, distributor/dealers, engineers, manufacturer representatives, contractor/integrators and others serving On-Site Power consumers.

		BERSHIP berships categories are for corporations and their memberships cover all employees of the company.	Annual Dues	Initiation	TOTAL DUE
for a 1. T 2. T 3. T 4. T	Full Manager Full	urer Membership Any individual, sole proprietor, partnership or corporation seeking membership must apply lembership as a manufacturer if they meet one or more of the following criteria: anufacture prime movers for power generation. anufacture generators or other power conversion devices producing electricity. anufacture switchgear or electrical control devices. anufacture or assemble generator sets, UPS systems, solar power, hydropower, geothermal, or any other power production ersion system including related components or accessories for national or regional distribution.	\$1,055	\$200	\$1,255
deal	er for p	Dr/Dealer Membership Any individual, sole proprietor, partnership or corporation actively engaged as a distributor or products listed under Manufacturer Membership may apply for Full Membership as a Distributor/Dealer. If an organization ider Manufacturer Membership, it is not qualified under this section.			
or Ed track Man	quipme tually o tufactur	or/Integrator Membership Any individual, sole proprietor, partnership or corporation actively engaged as a Contractor ent Integrator of products listed under Manufacturer Membership, not bound by brand, geographic territory or conbligated as a Distributor/Dealer of a specific product. These firms typically purchase products from a Distributor/Dealer, rer or Retailer, adding value through installation, product knowledge, relationships, unique services, etc., and then re-sell g product to an end-user.	\$395	\$100	\$495
repr	esentat	urer's Representative Membership Any individual, sole proprietor, partnership or corporation actively engaged in the ion of products listed under Manufacturer Membership may apply for Full Membership as a Manufacturer's Representative. ization qualifies under Manufacturer Membership, it is not qualified under this section.			
man	ageme	anagement Company Membership Any individual, sole proprietor, partnership or corporation engaged in energy int, including Energy Service Companies (ESCOs), Independent Power Producers (IPPs), Integrators, Aggregators, and other exprises may apply for Full Membership as an Energy Management Company.	\$270	\$100	\$370
SA has	two A	MEMBERSHIP ssociate Member types, Associate Regular and Associate Full . Companies have the choice of joining as an Associate ror Associate Full Member. Individuals can join as an Associate Regular Member only.	Annual Dues	Initiation	TOTAL DUE
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socia	te Reg	ular Membership (Select Appropriate Category Below)	\$270	\$100	\$370
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1. Contact Information				
Company				
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How did you hear about EGSA? ☐ Web site ☐ Pow	verline magazine 👊 Colle	eague 🖵 POW	/ER-GEN ☐ Other	
Why are you joining EGSA? — Certification Program	☐ CEU Program ☐ P	ower Schools	☐ Buying Guide Listing ☐ O	ther
2. Member Classification Please use the w	orksheet on page one of	this application	to determine your membershi	p type.
Full Memberships ☐ Manufacturer (MF) ☐ Distributor/Dealer (DD) ☐ Contractor/Integrator (CI) ☐ Manufacturer's Representative (MR) ☐ Energy Management Company (EM)	Associate Membershi Regular Associate Me Full Associate Membe	mhershin	(Select Appropriate Category) Trade Publication (AA) Trade Association (AB) Engineer (AC) End User (AD)	Service (AE) Educational Institution (AG) Individual (AI) Military (AM) Retiree (AR) Student (AF)
3. Membership Dues (Please fill in the apamount from the dues schedule on page one.) Membership	propriate TOTAL	U.S. Money	nent Method (Payable in Order, or American Expres # Am	
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On-Site Power Generation: A Comprehensive Guide to On-Site Power (option	·			•
Florida Residents: Add 7% Sales Tax to ** i	tems \$	Card #		Exp. Date
** Shipping and handling is included for Continental US				
All others should call EGSA Headquarters for shipping charges for **items.	\$ TAL \$			
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5. Products/Services Please describe the nat Distributor/Dealer, please indicate which manufacturer school, your major and your anticipated graduation date.	s you represent and/or di			
Do you buy AND sell equipment? ☐ Yes ☐ No 6. Sponsor(s) : A"Sponsor" is an EGSA Member we favorably on this application; however, if a Member recoms	rho interested you in filling mended that you consider	out this application	quipment? □ Yes □ No on. It is not mandatory that you request that individual's name a	and company name for our records.
Available Codes: 01Batteries/Battery Chargers 02Control/Annunciator Systems 29Education 30Emission Control Equipment 04Enclosures, Generator Set 05Engine Starters/Starting 08Filters, Lube Oil, Fuel or 28Fuel Cells 03Fuel Tanks and Fuel Stor Systems 09Generator Laminations		Systems	18 Relays, Protective or Synchronizing 19 Silencers/Exhaust Systems/Noise Abatement	22 Trailers, Generator Set 23 Transformers 24 Uninterruptible Power Supplies
06 Engines, Gas Turbine 10 Generator Sets 11 Generators/Alternators		s, gauges, relays, witches or Sets	20 Solenoids 21 Switchgear and Transfer Switches (Automatic or Manual), Bypass Iso- lation Switches, and/or Switchgear Panels	25 Vibration Isolators 26 Voltage Regulators 27 Wiring Devices or Receptacles
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EGSA JOB BANK

EGSA Job Bank Guidelines

EGSA will advertise (free of charge) EGSA Member company job openings in the Job Bank. Free use of the Job Bank is strictly limited to companies advertising for positions available within their own firms. Companies who are not members of EGSA and third-party employment service firms who service our industry may utilize the Job Bank for a \$300 fee. Blind box ads using the EGSA Job Bank address are available upon request; company logos may be included for an additional fee. EGSA reserves the right to refuse any advertisement it deems inappropriate to the publication. To post an EGSA Job Bank ad (limited to approximately 50 words) please visit www.EGSA.org/ Careers.aspx.

USA Midwest

Commercial Engine Technician - Field, Power Systems

Altorfer CAT

Location: Davenport, IA

- Provide exceptional service to customers by performing maintenance, diagnosis, and repairs to Electric Power Generation and Industrial equipment.
- This includes paralleling switchgear and electrical controls.
- Inspect and recommend service repair options.
- Communicate between customer and field dispatch.
- Other duties as assigned
 Please apply at: https://careers-altorfer.icims.com/
 jobs/3738/commercial-engine-technician---field%2c power-systems/job?mode=view

Commercial Engine Technician - Field, Power Systems

Altorfer CAT

Location: East Peoria, IL

- Provide exceptional service to customers by performing maintenance, diagnosis, and repairs to Electric Power Generation and Industrial equipment.
- This includes paralleling switchgear and electrical controls.
- Inspect and recommend service repair options.
- Communicate between customer and field dispatch.
- Other duties as assigned

Please apply at: https://careers-altorfer.icims.com/ jobs/3716/commercial-engine-technician---field%2c-powersystems/job?mode=view

USA Midwest

Project Engineer - Power Generation

Altorfer Industries

Location: Addison, IL

The Project Engineer will be responsible for working with Product Support team to provide solutions to customers on large power generation upgrade projects and repairs. This position will serve as a technical liaison between the sales team, service department and the customer to support new sales.

EGSA Certified Technicians Preferred

To apply: https://careers-altorfer.icims.com/jobs/3734/ project-engineer---power-generation/job?mode=view&-mob ile=false&-width=720&-height=500&-bga=true&-needsRedir

ect=false&jan1offset=-360&jun1offset=-300

Outside Sales Great Lakes Territory

Felling Trailers, Inc.

Location: Sauk Centre, MN

We are searching for a driven Sales Professional who is interested in growing professionally and financially by representing our products to new and existing dealers/customers. Reporting to Sales Manager, the region includes but is not limited to: MN, WI, IL, MI, IN, OH & KY.

Essential Duties and Responsibilities:

- Increase sales with our existing dealer base and develop new dealers in the assigned territory providing training and product support.
- Maintains a thorough working knowledge of all Felling Trailer lines, their specifications, options and features. Fields calls/e-mails from dealers & customers and responds to their questions in a timely manner.
- Consults with Sales Manager, Sales Coordinator, and Engineering on the design and build of custom trailers.
- Participates in trade shows as needed and provides input to management on the value of trade shows.
- 3 years trailer industry experience needed. The
 position is home office based with extensive
 travel, 70% of the time, throughout the assigned
 region. Because of this we prefer that the selected
 individual resides within the SW territory. Sales
 territory management and market knowledge,
 as well as previous trailer sales experience is
 strongly preferred.

To apply: Submit resume to nathan.Uphus@felling.com Application Deadline: 10/1/2021

USA Southwest

Generator Career

GEN-TECH of Colorado LLC.

Location: Denver

GEN-TECH Power Generation Specialists is expanding and looking to fill several postions in Denver CO, Albuquerque NM, Las Vegas NV, Phoenix AZ, Tucson AZ.

- Service Technician
- Rental Generator Technician
- New Equipment Sales

Benefits:

- Medical, Dental, Vision
- · Life insurance
- 401(k)
- · Holidays, Vacation
- Sick time, personal time off
- Training and Certification opportunity
 All Inquiries send to Naceille Means at Contact@
 gentechus.com or call us at (800) 625-8324 (24 hours a
 day 7 a week)

GEN-TECH is an Equal Opportunity and E-Verify Employer. Visit us on the website at www.gentechusa.com "Committed to Providing Excellence"

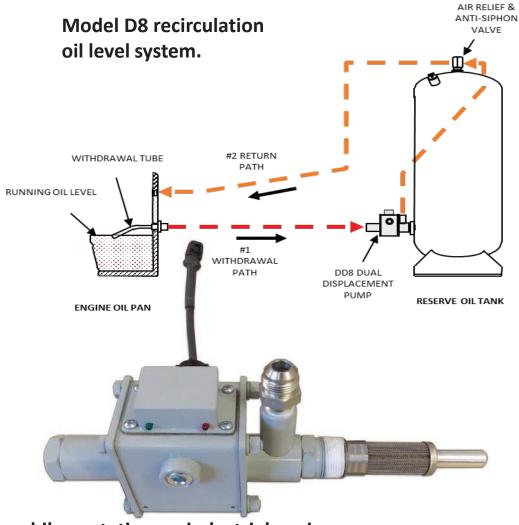
Manufacturer's Rep Seeking Principals

Leading Mid-South manufacturer's rep is seeking additional product lines. We have decades of experience in all aspects of the onsite power generation industry. We are interested in adding quality complementary manufacturers to our line of superior products serving the industry. Our record of outstanding success can help you achieve your sales and market share goals. Please respond if you have an area where you desire additional sales and market share.

Please respond to: *J.Kellough@EGSA.org* (Reference PLMJ13JB-1)

Are you changing your oil too often?

- *Automatic oil makeup.
- *Long oil changes because your engine crankcase just got bigger by the added volume of the oil makeup tank.



- > For mobile or stationary industrial engines.
- > Tank mounted with 1-1/4 NPT or SAE #24.
- > 12 or 24 VDC; Pump running and Tank empty LEDs.
- Arctic weather capable.

Reserve Systems Inc. reserve.systems@mindspring.com (661) 256-2275