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Spurring 2016 Spring Conference Preview



10 the Next



EGSA 2016 Spring Conference

San Antonio, TX
March 20-22

50 Years

Green Energy and
Green Money: Coincidence?

EGSA Power Generation
Market Pulse Survey

EGSA Heads 'South of the Border'
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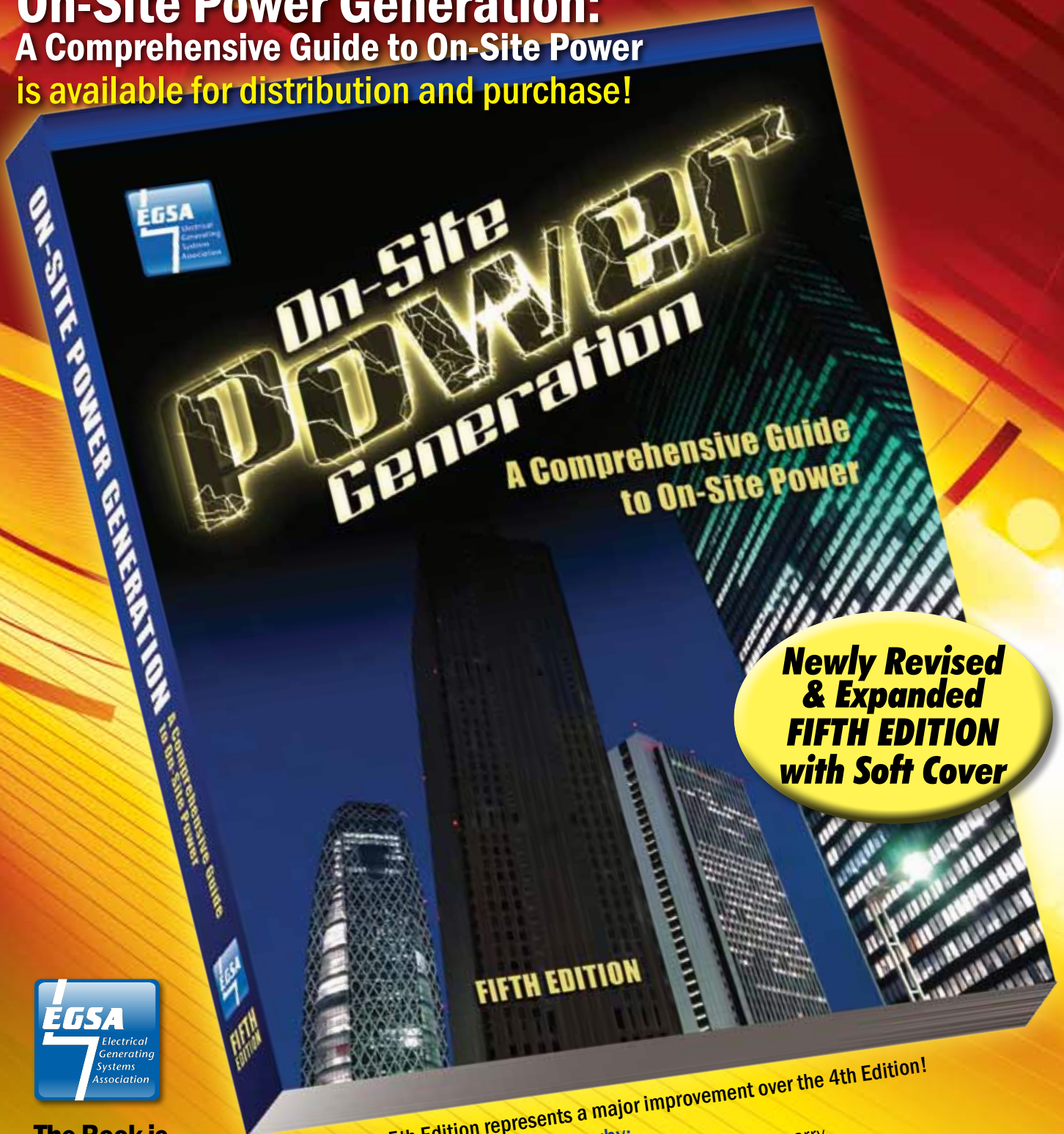


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EVENTS CALENDAR

Conferences

EGSA 2016 Spring Conference

March 20-22, 2016; San Antonio, TX

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

EGSA 2016 Fall Conference

September 11-13, 2016; Sacramento, CA

EGSA's Annual Fall Conference features educational sessions on a broad range of issues impacting the On-Site Power Industry. More information will be available at www.EGSA.org or by calling (561) 750-5575.

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Basic Schools

February 9-11 Scottsdale, AZ
June 7-9 Charlotte, NC
August 16-18 Sterling, VA
December 12-14 Orlando, FL*

*To be held concurrently with POWER-GEN International 2016

Advanced Schools

April 4-7 Austin, TX
July 11-14 New Orleans, LA
October 17-20 Nashville (Brentwood) TN

Industry Trade Shows

POWER-GEN International 2016

December 13-15, 2016; Orlando, FL

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2016 President Bob Hafich



Bob Hafich
2016 EGSA President
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emergencysystems-inc.com

Meet our 51st EGSA President, Bob Hafich! An active member of EGSA since 1997, when Bob, (along with his brother Joe Hafich), attended their first EGSA Conference at the insistence of Tom Richards, EGSA President 1988 (Katolight) and Al Prosser (Katolight then, MTU now).

Bob has been a spokesperson for EGSA Membership from almost day one. His leadership strengths and his passion for the Membership Committee to succeed with their goals have served the Association well.

Bob served as the Membership Chair from 2008 until 2011. During this time, he is remembered fondly for thinking ‘out of the box’ and engaging fellow members with the “Hafich Challenge,” a membership contest that Bob championed while Chair to extend our branding message and encourage fellow members to engage their peers to consider EGSA membership. Overall, we gained 24 new members from the contest, with the majority still active in EGSA business! Bob has also earned several accolades in EGSA, including the Carpenter Award (2010), the Timmler (2012) and the President’s Award (2012). Coincidentally, both Bob and Joe have served on the EGSA Board of Directors, with Bob serving twice.

Bob, together with his brother Joe are the leadership team at Emergency Systems Service Company (ESSCO) of Quakertown, PA. Established in 1974 by Joseph A. Hafich and his wife and business partner, Lillian, ESSCO had humble beginnings as a sole proprietorship engaged in the business of selling, servicing and repairing gensets.

ESSCO has also been an authorized distributor of Katolight since 1987 and remained such until Katolight was purchased by Tognum, the parent company for MTU Onsite Energy in 2007. Today, ESSCO remains an authorized distributor for MTU,

serving Central and Eastern Pennsylvania, Southern and Central New Jersey and Northern Delaware. Bob is President of Sales and Administration, while Joe is President of Service and Operations.

We welcome Bob as our 2016 EGSA President and wish him much success in his role this year. Here is a chance to get to know him better, with our annual presidential interview. Take a look!

“Who is the most influential person in EGSA during your years of active participation? Why do you think that it is true?”

Bob Hafich: “Tom Richards. Tom took me, along with my brother Joe and Al Prosser to our first EGSA meeting in Baltimore 1997. I am not sure if it was Al’s first EGSA event or not? I saw the respect that Tom received from everyone that he came into contact with during the 3-day event. I observed the personal and professional relationships that he developed there. I thought ‘what a great organization’ and ‘how good this could be for Joe and me.’ Tom went out of his way to introduce us to everyone and we were welcomed with open arms. He also strongly urged us to get involved as the next generation of EGSA. I am so glad that we listened.”

“What was your first impression of EGSA?”

Bob Hafich: “I was so impressed with the professionalism of the organization and the camaraderie and relationships that I saw members sharing. Everyone was so welcoming. I saw the potential and I wanted to be part of it!”

“Where would you like to see EGSA headed in the next 50 years?”

Bob Hafich: “I want to see EGSA continue the current path and truly become the dominant voice of the On-Site Power Industry globally. I want to

see all end users educated on our Technician Certification Program and require their generators be serviced by EGSA Certified Technicians.



Above: (l to r) Joe M., Lillian and Bob Hafich. Emergency Systems Service Co. was established in 1974 in Quakertown, PA.



Bottom Left: The Gang’s all here! (from l to r: Kenny (son-in-law), daughter Shelby, grandson Arlo, Kim and Bob Hafich)

Bottom Right: Fun photo at the Fountain Hotel in Wildwood, NJ. According to Bob, when he and Kim were first married, they vacationed there every summer with their daughter, Shelby. Now that Shelby has a child of her own, it remains a place of fond memories!

Continued on page 12



Michael Pope
EGSA Director
of Education
m.pope@EGSA.org

Is There Anybody Out There?



You are giving it your all; the group is sitting in front of you and you are well into your presentation. But just a minute... some folks are looking at their handhelds, you can tell that others have mentally left the room by their glazed eyes, only a few are taking notes and you realize that you have lost most of them. Is this session turning out to be a waste of everybody's time, including yours?

EGSA volunteer instructors teach a total of about 200 hours every year at the George Rowley Schools of On-Site Power Generation. Companies that send their people to these schools expect professional, knowledgeable and effective instructors that are able to increase the knowledge of their staff.

Teaching the Teacher

Our Rowley School instructors are all experts in the topics they teach. And they have a wide variety of backgrounds that include electrical and mechanical engineering as well as technical sales. We have some business owners, a manufacturer's rep., consultants and some who are professional power generation instructors.

Very few of them had any training on training. They became presenters because of their technical knowledge and the need to communicate that knowledge.

Are your "presenters" in this category?

Your Board of Directors recognized the importance of making our Rowley Schools as effective as possible. We started an Instructor Enhancement Program several years ago. All Rowley School instructors are required to participate. Our consultant, Bill Heacock, specializes in technical training techniques; his webinars for our instructors have been instrumental in improving our presentations at the Rowley Schools.

Could your presentations be improved?

Some of Our Instructor's Opinions

"Bill Heacock's training kept my attention and helped me learn how to keep the attention of those that I train. I feel that Bill's training was extremely useful and not only did I change my presentations for the EGSA Rowley Schools but also changed how I put together my presentations for my current employer!"

Todd Lathrop, Eaton
(Transfer Switches)

"I did a series of web activities with Bill and EGSA some years ago. It was a very helpful exercise. I really liked Bill's feedback on the taped session - it changed the way I do presentations and PowerPoint. It can be difficult to get feedback that is not subject matter based, but Bill did an excellent job of critiquing instructors on their presentations. His suggestions really help me reach my audience, and I believe retention has improved because of it."

Walter Chrysam, Alban CAT Power Systems
(Basic Electricity, Generators/Alternators)

"I think the knowledge I gained was invaluable, especially concerning the delivery of technical instruction."

Tim Hinde, Woodward
(Governors, Voltage Regulators)

"The webinar was very insightful and was packed with valuable information, not only on common missteps that I was already committing, but also ways to enhance the presentation for more effective learning."

Jim McDonald, PowerSecure, Inc.
(Engine Exhaust Emissions)

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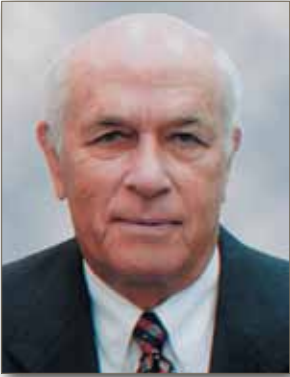
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Snapshot for 2016



Herb Whittall
EGSA Technical Advisor
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Unfortunately, due to some medical problems I was unable to attend the EGSA Fall Conference in Denver, so we have some catching up to do!

Here's a snapshot of where we are heading into 2016:

The UL 2200 Review/Revise Work Group met in Denver with Jeff Jonas (Generac Power Systems), Steve Oxtoby (Kohler Power Systems), Steve Sappington (Caterpillar, Inc.), Steve Stoyanac (Chillicothe Metal Co., Inc.) and Mike Witkowski (Pritchard Brown, LLC) in attendance. This EGSA Working Group is partnering with UL to try and make UL 2200 safe and also more user-friendly, especially in regards to genset enclosures. If you are interested in helping this group, please contact Steve Sappington at sappisr@cat.com or, plan on attending the next EGSA Conference, March 20-22 in San Antonio, TX and attend their Working Group meeting on Sunday morning at 11:00 a.m. (March 20th).

The Codes & Standards Surveillance Committee met on Monday afternoon with 50 people in attendance. They had a presentation from Erik Reynolds (Intertek ETL) concerning "Functional Safety." The presentation covered such items as Global Trends and Requirements, how to properly assess a Safety Integrity Level rating, Failure Mode and HAZOP analysis and IEC 61508. The Committee also discussed the status of NFPA 70, 99, 110 and 111, which are all of interest to our membership and we have members on each of those standards committees.

IEEE 1547 and its various sections were discussed, along with Herb Daugherty's summary of the IEEE 1547 meeting (October 27- 29th), where they were working on a rewrite of IEEE 1547 Standard for Interconnection and Interoperability of Distributed Energy resources with Associated Electric Power Systems interfaces. There was also discussion by various subgroups on subjects such as Voltage Regulation, Voltage and frequency Ride Through, Anti Islanding, Energy Storage and Communication Monitoring and Control. We need to be as involved as we can in order to

make sure that the Standard does not include any requirements such as Voltage and frequency Ride Through that would preclude the use of synchronous rotating engine driven generator sets. An informal count of the attendees shows the following: Test Labs – 4; Academia – 5; Utilities – 31; Manufacturers – 24. Of the Manufacturers, several were from the Inverter Industry except for these EGSA members: Marcelo Algrain (Caterpillar, Inc.), Ken Gebauer (ASCO Power Technologies), Dennis Pearson (Woodward) and Rich Scroggins (Cummins Power Generation). Luckily, Herb Daugherty is also a member of the IEEE Conformance Assessment Program Steering Committee, which is responsible for establishing requirements for certification of systems to the IEEE 1547 Standard. We really need additional EGSA Members to attend these meetings in order to protect our industry from a bad standard.

The July/August issue of IEEE Industry Applications magazine has two articles that should be of interest to EGSA Members. On page 36, there is an article titled "Striving for Zero Planned Outages" and on page 56, an article titled "An Overview of IEEE 3007 Series Standards" which, when published, will replace the IEEE Color Books.

Herb Daugherty attended the November 9 -13 meeting (San Diego, CA) of the NEC Code making panel 13, which covers Articles 445, 480, 695, and 700's.

Here is a summary of his report:

Article 445 added the requirement to mark generators with Subtransient Reactance, Synchronous and Zero-Sequence Reactance, Insulation Class and Maximum Short Circuit rating.

Article 480 added the requirement that Batteries and battery Systems be "Labeled". Article 700 added Section 700.3(F) that when Emergency Systems have only a single source of alternate power, then a permanent switching system to add another source when the single system is down the other source must be installed. A new Article 712– Direct Current Microgrids - Definition was added.

Continued on page 12

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Continued from page 10

NFPA TIA Log Number 1175 regarding NFPA 111 Standard for Electrical Energy Emergency and Standby Power Systems agreed with Steve Sappington's request to return the language of Table 4.2.2 Types of SEPSS to the language in the current edition.

Apparently, the additional rating (Data center Continuous Rating) for ISO 8528-1 were not voted in at the TC 70 meeting in Milan in October. However, in Milan they did decide to update ISO 8528-5 2013 Specifications for Generating Sets and ISO 8528 – 6 2006 Test Methods over the next three years. ISO 8528 is titled Reciprocating Internal Combustion Engine Driven Alternating Current Generating Sets. ISO 8528 – 8 Exhaust Emission Measurement – Engine Determination has been published.

In the September/October edition of the NFPA Journal on pages 30 and 31, Jeffrey Sargent wrote an article concerning how changes for the 2017 NFPA 70 National Electrical Code (NEC) will make the NEC align more closely with the requirements of NFPA 70E Electrical safety in the Workplace. A number of proposed changes target the installer/maintainer community, a group that is particularly vulnerable to hazards associated with the use of electricity. The most dangerous of these is Arc Flash. The proposal in the 2017 NEC calls for the basic warning label for Arc Flash at service equipment to provide the nominal system voltage and the arc flash boundary and reference to the level of protective clothing required. ■

Continued from page 7

I want EGSA to help set the benchmark and drive our community in the specifications for new equipment, retrofits and service."

"How do you think new members can benefit most from their involvement in EGSA?"

Bob Hafich: "Get involved. Join, participate, watch, listen and learn. Speak up and contribute what you can. The more that you give, the more you will receive. Let it benefit your business and personal life. Develop friendships and relationships that will last a lifetime."

"Do you recall a story that epitomizes EGSA colleagues working together for the good of the industry?"

Bob Hafich: "I think that the formation of EGSA Working Groups is the best examples of EGSA members working together for a collective goal. This is where you have individuals that are often promoting the same type of product but from different and sometimes competing manufacturers working together to form a standard that is for the good of the industry. It is so refreshing to see these people put their competitiveness aside and work together as a team."

"What do you enjoy the MOST about being a Member of EGSA?"

Bob Hafich: "Again, it is the people, and that includes the EGSA Staff. It always comes back to the people and the business relationships and personal friendships that my wife, Kim, and I have built over the years. It is like a big family, or class reunion, that I look forward to attending every 6 months. For close to 20 years, my brother and I, along with our wives have been attending, We have made friendships with people here that we have now seen their children grow from babies to college age. Couple that with the fact that I always take some type of new knowledge home from every conference and you just can't beat it."

"Are you a Member of any particular Committee? If so, do you have a particular story you would like to share about that experience?"

Bob Hafich: "I have been a member of the Membership Committee since I began to attend. I was also mentored by several good leaders during my tenure. Steve Stoyanac (of Kim Hotstart at that time, and Chillicothe Metal Co. currently) was the Chair of the Membership Committee when I began work at the committee level. I also learned a lot from Ken Niekamp (also of Chillicothe Metal Co.). It was also where I made my first EGSA friendships with several people. One of my favorite memories was when Deb Laurents and I would get together right after the meeting and prepare the minutes. It was usually at the bar over a drink," he laughs.

At this point in Bob's career, he still works long hours but makes time for music and physical fitness. He finds time for the gym three or four nights a week and has a great passion for music. "I installed an excellent sound system on my outside porch and enjoy relaxing when the weather is good with a cocktail and a fine cigar while listening. I also enjoy cooking especially grilling out in the summer time with the family. Speaking of family, Bob and Kim now have a 2 year old grandson named Arlo, who is a VIP among the Hafich clan.

If you find yourself contemplating EGSA Membership and are on the fence, please use Bob as a resource. Thank you Bob and we look forward to your leadership in 2016! ■

We're Back in the Saddle Again in 2016!

Are You Ready to Join EGSA in Spurring on our 51st Year?

The 51st annual EGSA Spring Conference is taking place in San Antonio, TX from March 20 through 22nd and we certainly hope you can join us. Join EGSA at the Hyatt Regency, San Antonio Riverwalk as we "Spur on our 51st Year" in on-site power. Considered the heart of San Antonio, the famous Riverwalk is rich in history and showcases the Texas passion for historic preservation. From the Drury Plaza, an art deco skyscraper built in 1929, to the King William Historic District, the private residence of Carl H. Guenther, founder of Pioneer Flour Mill, you can expect to step back in time in the local downtown area.

Fast forward to the mid-2000s, when the City began expanding the Riverwalk, and you will find the Museum Reach, completed north of downtown in 2009. This 1.33 mile extension features works of art, native plants and a pedestrian walkway to the San Antonio Museum and the historic Pearl Brewery complex. River taxis actually pass through a lock and dam system between the old portion and the new one.

Our EGSA spring micro-site has the full details on the Conference, but here are the highlights to get you up and riding! For additional details, please visit www.egsa.org/spring.



2016 EGSA Spring Conference General Session - Monday, March 21, 2016

Tucker Carlson, Keynote Speaker

Today's Political Landscape & What's Ahead in the 2016 Race for the White House

Tucker Carlson is the anchor of Fox and Friends Weekend and the Editor in Chief of The Daily Caller. Get ready for insightful political information that you can use!

Tucker will join EGSA to share his personal insights and anecdotes as we approach the GOP and Democratic primaries. Pull up your boot straps as we host Tucker in Texas for a peek at what the next 4 years are going to look like in the White House.

Schedule-at-a-Glance

Sunday, March 20, 2016

- 12:00-6:00 p.m. Registration Desk Open
- 12:00-6:00 p.m. Exhibitor Showcase Set-Up
- 5:00-6:00 p.m. First-Time Attendees/New
(By Invitation Only) Members Reception
- 6:00-7:30 p.m. Welcome Reception

Monday, March 21, 2016

- 7:00-11:45 a.m. Registration Desk Open
- 7:00-7:30 a.m. Exhibitor Showcase Set-Up
- 7:30-8:30 a.m. Exhibitor Showcase/Breakfast
- 8:30-8:45 a.m. President's Opening Remarks
- 8:45-9:45 a.m. **Today's Political Landscape
& What's Ahead for the
2016 Race for the White House**
Tucker Carlson, Keynote Speaker
- 9:45-10:15 a.m. Exhibitor Showcase/Break
- 10:15-11:00 a.m. **EPA Emissions for Generator Sets**
Terry Seger, Cummins Power Generation
- 11:00- 11:45 a.m. **Casino CHP:
Betting with the House**
Gary Farmer, Curtis Engine and Equipment
- 12:00-1:00 p.m. Welcome Lunch
- 1:00-5:00 p.m. Committee Meetings
- 6:30-10:00 p.m. Awards Reception & Banquet

Tuesday, March 22, 2016

- 7:30 a.m.-Noon Registration Desk Open
- 7:30-8:30 a.m. Exhibitor Showcase/Breakfast
- 8:30-9:15 a.m. **The Dangers of
Normalized Deviance**
Mike Mullane, Stories From Space, LLC
- 9:15-9:45 a.m. Meeting Of Members
- 9:45-10:15 a.m. Exhibitor Showcase/Break
- 10:15-11:00 a.m. **Alternative Energy
Panel Discussion**
- 11:00-11:45 a.m. **Transforming Your Presentation Skills**
Ingrid Gudenas, Effective Training Solutions
- 1:00-5:00 p.m. Networking Events
- 7:00-8:30 p.m. Closing Reception



Terry Seger

Director, Distribution Sales, North America & Caribbean - Cummins Power Generation

EPA Emissions for Generator Sets – 2016 Update

There have been numerous changes in the federal law since the January, 2011 emissions standards became effective. During this informative EGSA Member presentation, Terry Seger will cover current U.S. federal EPA emissions standards as they apply to stationary and mobile generator sets.

This presentation will delve into the review of the law, as it applies to the operation of generator sets, as well as some of the technologies available today. His presentation will also address some of these recent changes, as they apply to engine performance, customer awareness and installation considerations.



Gary Farmer

Power Systems Engineer – Curtis Engine and Equipment

Casino CHP – Betting With the House

To round out Monday's General Session, we offer another great EGSA Member presentation. Gary Farmer of Curtis Engine and Equipment will be presenting an interesting case study on the Horseshoe Casino, one of Baltimore's leading entertainment attractions.

Behind the scenes, the facility receives a portion of its power by a central utility plant including a Combined Heat and Power (CHP) plant producing both electric power and thermal energy in the form of hot water. Both are produced from the custom designed and built engine-generator set fueled by clean burning natural gas and utilizing heat from the engine and exhaust to heat water to supplement the facility's boilers.



CHP concepts and general applications will be presented followed by information specific to the Casino describing the overall CHP system design including performance requirements, physical constraints, financial incentives and methods integrating it into the overall facility operation.

General Session – Tuesday, March 22, 2016



Richard "Mike" Mullane
Stories From Space, LLC
Astronaut/Professional Speaker/
Mountaineer/Author

The Dangers of Normalized Deviance

Upon his graduation from West Point in 1967, Colonel Mike Mullane was commissioned in the United States Air Force. As a Weapon Systems Operator aboard Phantom aircraft, he completed 134 combat missions in Vietnam. In 1978, he was selected as a Mission Specialist in the first group of Space Shuttle Astronauts where he completed 3 space missions aboard the Shuttles "Discovery" and "Atlantis" before retiring from NASA and the USAF in 1990.

Join Astronaut Mike Mullane on Tuesday morning, as he uses the space shuttle Challenger disaster to define the term, Normalization of Deviance, its safety consequences, and how individuals and teams can defend themselves from the phenomenon. Where the result is frequently a predictable surprise that is far more damaging to budget/schedule (and possibly to employees' health and welfare) than would have occurred if the safety/quality priority had been maintained throughout the resolution of the upset condition.



Best of San Antonio Walking Tour

If you are looking to experience the distinctive flavor and rich history of San Antonio, then look no further! This gem of a City has the distinction of being ranked the #2 US travel destination and #9 worldwide destination by *Conde Nast Traveler*.

Come see why San Antonio is "every Texan's favorite city", why even Will Rogers himself dubbed San Antonio as "one of four unique cities in America."

This networking tour kicks off with lunch, followed by a walking tour of the Alamo, the famous San Antonio Riverwalk, along with architectural and various city highlights. On the return trip, we'll even stop for a snack.

We hope you'll join us and discover what all the buzz is about!

A "Power"ful Place to Fish

The EGSA Spring Fishing Tournament will bring our anglers to Calavares Lake, about 20 miles southeast of downtown San Antonio. This is the perfect locale for EGSA members, as Calavares Lake reservoir was formed in 1969 by the construction of a dam to provide a cooling pond for a complex of power plants, to supply electricity to the city of San Antonio. Calavares Lake was one of the first projects in the nation to use treated wastewater for power plant cooling.

You may even catch a "Texas Triple Crown" which consists of a Redfish, a Hybrid Striper, and a Catfish. Be sure to join us on the lake for some great networking with your EGSA colleagues!

From Stone Quarry to Polished Golf Course

EGSA's 2016 Spring Golf Tournament will be held at a course which prides itself on being "San Antonio's Most Unique Golf Experience" – that's because it was not originally a golf experience at all! At the turn of the century, the Quarry Golf Club was nothing more than a limestone rock quarry.

The front nine is links styled like you might see in Scotland or Ireland – rolling hills, large, expansive bunkers and sloping greens. The back nine is where the course gets its name. One hundred years ago it was an active limestone quarry pit providing stone for a growing San Antonio area. Most famously, the quarry provided the bonded pink limestone that makes up the State Capitol of Texas. Today, it is a beautifully maintained course for you and your fellow EGSA associates to enjoy!

Southwest Research Institute (SwRI) "Gearhead" Tour

Calling all EGSA Gearheads! Southwest Research Institute (SwRI) is one of the oldest and largest independent, nonprofit, applied research and development organizations in the United States. SwRI's technical divisions offer a wide range of technical expertise and services in such areas as chemistry, space science, nondestructive evaluation, automation, engine design, mechanical engineering, electronics, and more.

The Institute occupies more than 1,200 acres and provides more than 2 million square feet of laboratories, test facilities, workshops, and offices for more than 2,800 employees who perform contract work for industry and government clients.



Digging in Your Heels for Exclusive Industry Networking is Easier than you think! Join EGSA on one of our four Networking Opportunities

On Tuesday at the conclusion of the General Session, participate in one of our four formalized networking opportunities in San Antonio. Whether you're seeking a little friendly angler competition, and exclusive foursome for a round of golf, a gearhead educational tour or food and fun at the Alamo, one of our excursions should suit your needs. Sign up when you register for the Conference!



Threat vs. Opportunity: Alternative Energy Panel Discussion

Join EGSA and our panel of experts in the fields of micro grids, energy storage, solar, wind, and other green energies as we launch a public discussion on alternative energy solutions and their possible impact on the back-up power market.

The goal of this presentation is to showcase how emerging energy technologies could change on-site power with regard to back-up power, in both the short and the long term.

Moderated by Hal Walls of Clariant Corporation, our panel will address the following topics:

- Will these alternative energy sources cut into residential, commercial, or industrial engine driven genset sales in the foreseeable future?
- What is a micro grid? Could micro grids replace or complement standby generators?
- What roles will solar, wind, and other alternative energies play in the emergency back-up field in the near future, and over the longer term?
- How might gensets and micro grids improve the resiliency of our electric power system against natural and man-made threats?
- If your customer approaches you with questions about micro-grids or integrating alternative energy sources, how can you help him/her? Are there some general guidelines that can be applied to ensure a safe and reliable power system?

Have a question to contribute?

Our members are encouraged to submit questions to e-mail@egsa.org for panel consideration by March 1, 2016! Don't miss this opportunity to be a part of this important conversation.



Ingrid Gudenas

CEO – Effective Training Solutions

Transforming Your Presentation Skills

To round out our General Session on Tuesday, Ingrid Gudenas will join EGSA with her unique presentation on transforming your presentation skills. Ingrid is the CEO of Effective Training Solutions and has coached and mentored thousands of senior executives, managers and professionals in over 30 countries for the last 32 years.

Her presentation will be presented as a workshop to hone your skills and speak more effectively to groups and give a great presentation. Your communication will be more powerful, engaging and compelling. The presentation will also include live coaching with dramatic “before” and “after” results. ■

We're Trying Something New for our Conferences in 2016!

When we surveyed our membership last year, several active members thought we could add value at the EGSA conferences by offering an education class. Ask, and you shall receive!

Looking to powerpack your conference? EGSA is offering a module from the George Rowley School of On-Site Power Generation, called **Advanced Generator Systems: Sizing to Service**. This course addresses specific considerations in sizing and installing power systems and will be particularly useful to anyone who consults with generator set customers. This is the first time we have included one of our courses into a Conference, so when making your online reservations on the EGSA Spring micro-site, you can add this class for just \$149. Make sure you land in Texas by 10:00 am, so that you don't miss the afternoon class that begins Sunday at 1:00 pm!



Course Instructor
Brian Ponstein,
Sales Application Engineer, MTU Onsite Energy Corp.

We hope that you will join us in San Antonio.
If you have questions, please ask!

Register Today!

egsa.org/spring

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Green Energy: Threat or Opportunity?

This is the second article in a series leading up to the 2016 EGSA Spring Conference in San Antonio where we will have a panel discussing this very question. The first article (Nov/Dec 2016 Powerline Magazine) looked at where our energy comes from today, the evolving Green energy technologies, and the possible threat to the RICE-DG industry. This article looks at the cost of energy, both direct and indirect, current state of energy management, and the technologies needed for Green energy to continue to expand.

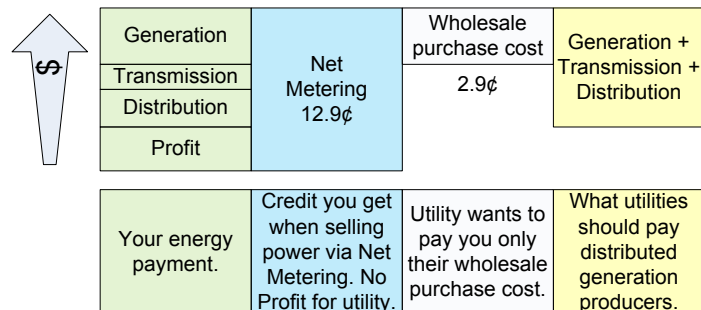
Green Energy and Green Money: Coincidence?

Steve Evans – Director of PCS Business Development, ASCO Power Technologies, a division of Emerson Electric. © 2016

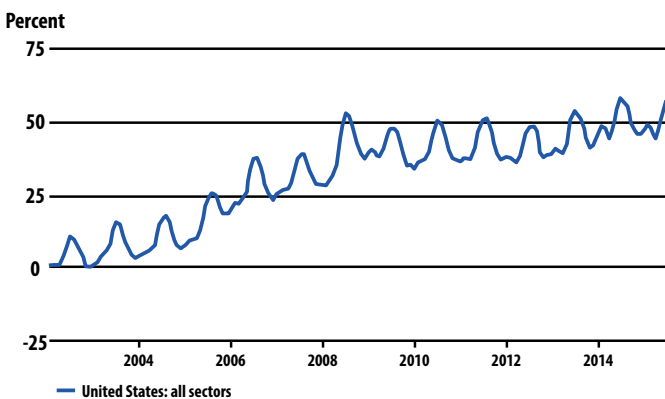
For various political and environmental reasons, large coal and nuclear plants, the backbone of our national grid for generations, are coming off line and being replaced by natural gas, solar, wind, tidal, hydro and other green sources. While we probably all agree this is the right thing to do, what will the costs be, both direct and indirect? How will it impact us in the future? What opportunities can we, as providers of fast response power generation, find in this changing marketplace?

We are saving energy, but not necessarily saving money. US electrical consumption is down below 2007 levels. However, since 2002 average rates are up about 50%. Why? Several reasons: utilities being forced to buy more expensive renewable energy, support of renewable energy via net metering, decommissioning “dirty” plants, and, oddly enough, because consumption is down. Seems like a “Catch 22” for consumers, doesn’t it? Utilities have fixed costs and profit goals: most are for-profit companies with profits guaranteed by regulation. If volume comes down, electric rates must to go up in order to maintain profits. We can thank cheap natural gas prices for holding rate increases down to this level!

fett’s NV Energy to drop net metering in favor of paying wholesale electric rates to residential customers with solar systems. The most newsworthy part of this is they granted the request retroactively. Within days Solar City and Sunrun laid off almost their entire NV workforce, almost 1000 people, ironically the day before Christmas. NV Energy claims the new rate structure is fairer to those that don’t have solar panels. The battle continues in court, but this could be the death of residential and commercial solar power in Nevada. It is simply no longer affordable to be green.



Average retail price of electricity, monthly
Indexed to Jan 2002 as percent



Source: U.S. Energy Information Administration

Without government subsidies we would not have nearly the solar and wind resources we have today. The political environment is changing. On December 23, 2015 the Public Utility Commission (PUC) of Nevada granted a request by Warren Buf-

Figure 1. The Distributed Generation Net Metering Debate. Electricity is purchased at different points in the grid, so Transmission and Distribution costs vary. The closer to the point of use, the lower the T&D costs are.

I am not saying that all government subsidies are bad. All of us energy consumers, via the Rural Electrification Act (REA) and other government actions, have spent over a trillion dollars over 4 decades building more than 642,000 miles of transmission lines and 6.3 million miles of distribution lines that constitute the national grid. Unfortunately, like a lot of the USA’s infrastructure, that national grid now needs billions more in investments to continue operating reliably and to meet the new threats of cyber security.

This is the perfect storm for electric rates to soar: consumption is down, costs are up, and substantial investment is required in the near future. How will this affect the Reciprocating Internal Combustion Engines – Distributed Generation (RICE-DG) industry? These pending increases in energy costs will push even more companies and individuals to find alternative forms of energy, further reducing energy purchases and driving up the per kWhr cost.

The most common types of renewable energy, photo-voltaic solar (PV) and wind, combine to make less than 5% of the total electrical energy consumed. What will it take to enable renewable energy to gain a larger share of the market? The most obvious answers are affordable energy storage, money (discussed above), grid control systems, and changing the existing regulations.

Energy Storage Systems

There are two capabilities to consider when evaluating energy storage systems, kW and kWhr. Kilowatts sets the rate of charge/discharge and kilowatt-hours is the duration of the discharge. An automotive analogy is that the kW is the power your car has, while the kWhr is the range you would get from a tank of gas. The Smart Grid of the future will need both high kW/short duration and lower kW/longer duration energy storage.

The most common Energy Storage Systems are UPS or battery-based systems. These are very flexible and reliable with high or low kW ratings, but the direct relationship between kWhr and cost normally limit these to short time applications like data centers or a bridge between an outage and the start of the RICE-DG. Properly managed and engineered lithium-ION technology shows great promise. Tesla has been in the news, as their battery manufacturing facility near Reno nears completion with the promise of cheaper lithium-ion batteries.

Pumped hydro is another popular method, although it requires the right geography. The key advantage here is, as long as they are online, they can reverse from charge to discharge mode instantaneously and provide reactive power for voltage support. The amount of stored energy can be huge; limited only by the size of the higher elevation lake.

Mechanical energy storage, usually flywheels, is another good source for fast discharge, high kW, energy storage. The two competing technologies are fast-rpm with large weight and ultra-fast rpm units with lesser weight.

Emergency power by the numbers

Let's compare a Tesla PowerWall installation to a conventional dry-gas genset for a home.

The PowerWall battery is sold in 3.3kW, 6.4kWhr, 350v, units for \$3000. Multiple units can be paralleled for more capacity. For this example, we'll use 6 units to provide 19.8kW at 38.4kWhr. A complete system needs a charger(s) plus an inverter(s) from a third party: roughly \$5000.

At full discharge rate of 19.8kW, it will last 2 hours and needs 2 hours to recharge once the power is back on. That configuration is \$23,000 or \$11,500 per hour of full capacity backup! These are sold as an alternative to residential gensets. Under normal household loads, as long as you don't cook or use hot water or wash clothes, you might be able to run a few days on this system.

A residential grade 20kW dry-gas genset typically sells for less than \$5,000 and, properly maintained by a skilled EGSA technician, will run for the entire duration of the outage and beyond as the grid capacity will be compromised by all the PowerWall units re-charging.

Assuming the installation costs are roughly equal, obviously a genset is much smarter financially.

Compressed air storage has the advantages of safe, well-known technology, cheap potentially unlimited storage, and the ability to capture the heat or cooling when the air changes pressure. LightSail Energy of CA even uses Formula 1 style racing engines as compressors for their speed, efficiency and ability to capture the heat and cooling.

Control of the Grid.

There are two modes for inverter-based power generation just like there are for RICE-DG gensets: they must switch from voltage and frequency-based regulation in standby mode to kVAR and power regulated when parallel with another source, usually the grid. These are often called "voltage-based inverters" or Grid-Tie Battery Backup (GTBB) for standby operation. "Current-based inverters" or High Voltage Battery Free (HVBF) are used for parallel operations. The cost for a dual mode inverter historically has been substantially higher, so most systems are purchased for a specific use: grid support being the most cost effective and thus the most popular.

Wind and solar energy are commonly called Variable Energy Resources or VERs and are usually uncontrolled generation: get whatever power you can whenever you can. The big problem with VERs is what happens when the sun goes down, or the wind stops. This is where energy management and/or energy storage comes in. To those of us in the critical power business, none of these ideas are new. We have had load management and generator management, in combination called Power Management, and UPSs for energy storage for many years.

With VERs, two challenges to the Power Management System controller is the speed at which VERs can change, and the ratio of the size of the VERs to the size of the grid. This ratio is called the "penetration" of the VERs to the grid. If the penetration is low, it is of literally no consequence to the Power Management System. For example, a 10kW solar panel on a building that consumes between 100kW and 1 MW, a penetration of 1%, no control or interaction with the solar inverter is necessary. It may produce power whenever it can. If there are 250kW of solar panels on the same 100kW to 1MW building, it is likely you will export power back to the grid. That makes the power system much more complex and crosses the line from a simple power management system to a micro grid controller.

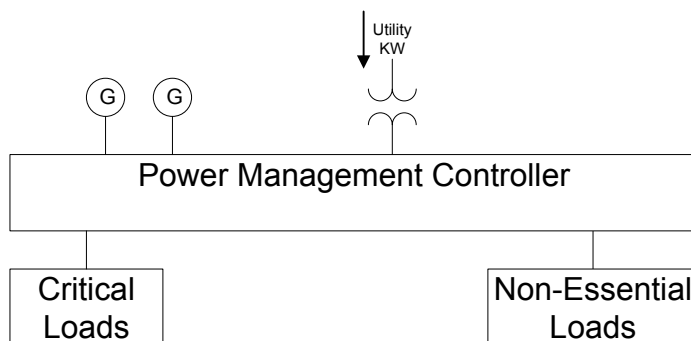


Figure 2. Classic Power Management controllers have only RICE-DG and utility sources, uni-directional power flow from utility, and a few categories of loads. Non-Essential or lower priority loads (NEL) are those that may be interrupted for extended periods of time in order to maintain the higher priority loads and/or they may not be fed by the emergency power system at all.

What is a Micro Grid?

Power Management System, or Controller are terms we have used for years in our industry for the functions of load control and generation control – adding and removing loads and generation as needed to reach certain objectives, usually energizing as many loads as possible, while consuming as little fuel as possible. In addition to the variations of solar PV and wind, VERs may also include predictable uncontrolled generation (like tidal and flow-of-river hydro) and limited capacity generation like energy storage systems. The distinction between the Power Management Systems we have known for years and the Micro/ Smart Grid of the future seems to be the ability to manage different types of power generation, energy storage, power flow to/ from the grid and the size of the grid. The more complex Micro/ Smart Grids also include features like power quality management, phase balancing, power factor correction, management of short term interruptible loads like HVAC, hot water heaters, refrigeration and electric vehicle charging.

Managing a power grid includes the reserve capacity, essentially the ratio of the amount of power consumed to the maximum amount available. For example, if your microgrid has 1MW of generation online and is consuming 900kW, you would have a spinning reserve of 100kW or 10%. If you have another genset of the same size available but not running, you would have 1MW of contingency reserve. The lower the spinning reserve is, the better the system efficiency. In the nationwide grid, this Spinning Reserve can be huge. North American Reliability Corporation, the regulatory authority for the national grid, has complex methods to calculate this amount, but it is approximately 3% of the demand and increases by the amount of Variable Energy Resources – usually wind plus solar – con-

nected. Thus the more VERs in the system, the higher the reserves need to be. You can see that adding VERs does not take equal amounts of traditional power generation off line: it just shifts the revenue to the VER instead.

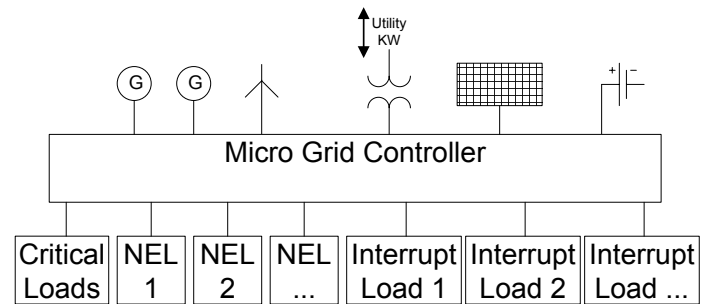


Figure 3. Micro Grid controllers usually have multiple types of energy, bi-directional power flow with utility, and more categories of loads. Interruptible loads are those that may be interrupted for short periods of time, for example HVAC, refrigeration, and hot water heaters, to facilitate power management and keep critical loads energized.

Regulations, Certifications:

Green-minded building owners now have the option of having new construction, in addition to LEED certification, Net Zero Energy Building or NZEB qualified. *Consulting & Specifying Engineer Magazine*, December 2015 issue: “The International Living Future Institute (ILFI) offers a Net Zero Energy Building Certification, which provides its own definition of net zero energy (NZE). Because the ILFI certification is currently the primary method of certifying NZEBs... ILFI requires 100% of a

The First 15

What steps go into a Micro or Smart Grid controller? This is easiest to explain by an example. Starting with a stable power system of any size, if a fault occurs the Smart Grid needs to be able to recover a stable operating point. This fault could be as simple as a tree falling on a power line or as complex as a hurricane; the sequence of events is the same, only the magnitude and duration change. After this fault these steps are an example of what has to happen to recover a stable power system.

In the first...

...15ms after the disturbance, detect, locate, initiate protection, determine how to minimize the disturbance, determine what loads to shed.

...150ms Isolate faults, create islands of power – Micro to Mega Grids – as needed. Switch the short term energy storage to discharge mode. Alert alternate sources.

...1.5 seconds, shed non-critical loads (water heaters, refrigeration, HVAC) and notify interruptible rate contract (IRC) customers they will be called to shed their load.

...15 seconds add fast starting RICE-DG or similar energy sources to either support via paralleling or replace loads via IRCs /ATSs.

...150 seconds continue load management: add less-critical loads on or alternate loads as spinning reserve margins allow. This continues for the duration.

...15 minutes add fast start combustion turbines for grid support.

...1.5 hours add fast start steam turbines (usually those that burn oil or gas in a boiler and HSRG fed combined cycle units).

...15 hours add base load, usually coal or gas, steam turbines.

This is just an example, of course. The recovery process can be stopped at any time if a stable operating point is reached or the cause of the disturbance is repaired. Then normal operating Power Management takes over again to accomplish spinning reserve and fuel efficiency goals.

building's energy needs on a net annual basis to be supplied by on-site renewable energy. Under this system, combustible energy sources are not allowed." In other terms, NZEBs are micro-grids with enough alternative energy – but no RICE-DG – to balance the energy they consume over a year with the energy they return to the grid. Does this mean their energy bill will be zero? Do you think the grid operator will provide this energy balancing for free?

Most in the emergency power business are familiar with NFPA 110. Section 5.2.1: "Energy converters shall consist only of rotating equipment." 5.2.1.1: "Level 1 energy converters shall be representative products built from components that have proven compatibility and reliability and are coordinated to operate as a unit." Perhaps someone could argue that a wind turbine + energy storage device could qualify if they were "coordinated to operate as a unit." However, it would require enough energy storage to run the required time.

Above, we detailed that the increase in inverter-based power generation to the national grid was met with increases in the spinning reserve requirement. Part of the reason for that was the ability to survive and recover from a fault. A power system fault requires additional energy to feed the fault, and while maintaining the system voltage, so the fault can be detected and cleared. Inverter based power generation normally cannot do this. Thus NFPA100 section 5.2.1.2 also apparently supports RICE-DG: "The capability of the energy converter, with its controls and accessories, to survive without damage from common and abnor-

mal disturbances in actual load circuits shall be demonstrable by tests on separate prototype models or by acceptable tests on the system components as performed by the component suppliers." A fault on an inverter-based system may not be coordinated, that is a fault may be detected by the inverter and not clear the fault by opening an electrically-nearby fuse or circuit breaker, thus the entire system could be down until the fault is manually found and cleared. With their limited reactive power capabilities, the other big challenge to inverter-based power generation is the ability to handle motor loads.

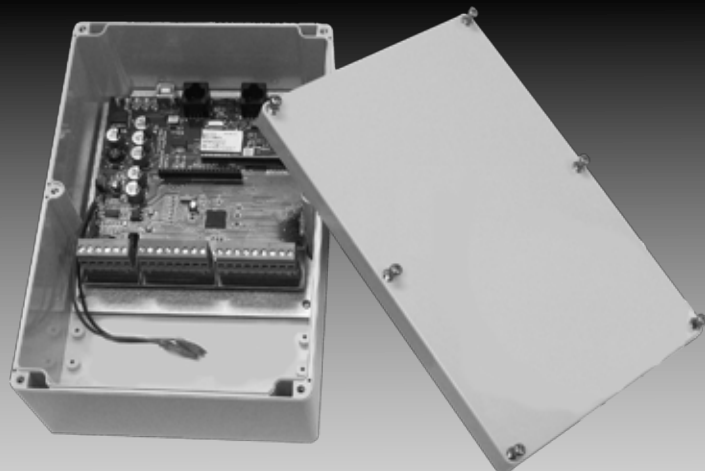
Each utility has their own requirements for interconnecting a generation source to their local grid. Although standards like IEEE 1547 are in place, utilities often make a case to the Public Utility Commission (PUC) that they need more stringent interconnect guidelines. Thus, it is still necessary to have that discussion early in the planning stages of a micro grid project. Based on supply and demand, sometimes utilities are receptive to distributed generation, sometimes they are not. Almost all utilities are interested in controlling peak demand, so the offer to peak shave/peak lop or IRC might be better received. EGSA members interested in offering micro grids or distributed generation might be well served helping their customers understand their local utilities interconnect standards.

Currently, it is not legal for you to sell power to your neighbor; only registered utilities can sell power. However, this is exactly how the Smart Grid works. In a disaster, one of the first things the Smart Grid does is isolate the fault and create micro

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grids. There are many instances of regulations like this that will need to change to make the Smart Grid a reality and treat utilities fairly financially.

Measuring the Microgrid

With all the changes in the grid, one thing is certain is that we will be seeing a lot more transgressions in the grid. Taking the large coal and nuclear units offline will, as Germany has seen, destabilize the grid or, as some are saying, 'make it softer.' Most of today's electronics are much less susceptible to power fluctuations, but when they do fail, the costs can be large. Thus the need for power quality metering.

Power Quality Metering (PQM) is different from RMS metering. While an RMS meter can indicate slow swings in voltage, PQM captures voltage and current spikes – up and down – and very short duration outages that can cause phase sensitive devices like inverters and VFDs to fault. PQM can also help pinpoint sources of harmonics that can overheat conductors and trip circuit breakers.

The best PQM systems also include a method to accumulate time-stamped data from several different points (meters) in the power system and display these in a central location. This helps to quickly diagnose system problems or faults with time-stamped data.

Opportunities for EGSA Members

To help our customers prepare for the grid of the future, there are several suggestions we can offer.

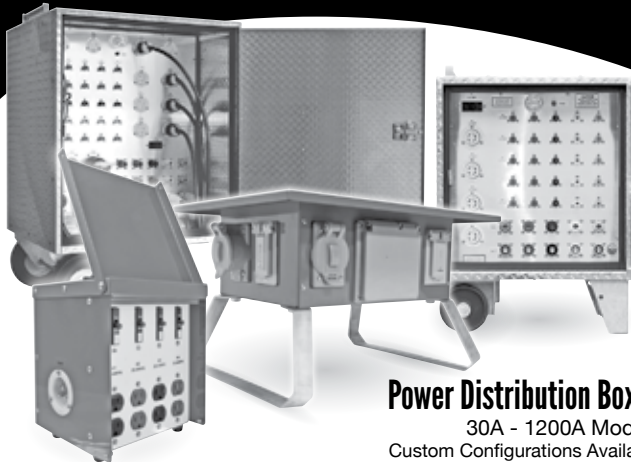
First, every genset should have the ability report its data and status to a central power monitoring system. Even if the budget does not allow a CPMS (Critical Power Monitoring or Management System) today, it probably will someday. Adding the ability to communicate early in the sales process is usually not a large cost.

Second, every ATS, even in a basic standby system with one generator feeding an ATS, the ATS should have the ability to communicate with the CPMS system. This will allow future demand management or IRC integration.

Third, it might benefit your business to check with your local utility on behalf of your customer and see if they offer an interruptible rate contract (IRC) program. If so, most ATSs can accept a full-load test input, the easy way to potentially save your customer 10-20% on his power bill. Most utilities are offering discounts for being an IRC customer; simply connect the command from the utility (they normally like to use their own hardware, but sometimes they will send IRC commands over the internet) to the ATSs full load test or remote control input, sometimes called Feature 17.

Fourth, to help diagnose issues and restore quickly after a fault, Power Quality Meters should be located at key locations in the power system, for example ATSs, generators, utility feeds, and loads that are likely to contribute to or susceptible to power quality transgressions. Again, it is much easier and cheaper to install these during the purchasing phase then after they are installed. The incremental cost could be small between PQM over RMS metering when purchased initially and installed by the factory.

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Fifth, a Critical Power Monitoring (or Management) System is the key to understanding and integrating this power system into the Smart Grid of the future. Even if the financial aspects or the local utility does not support Smart Grid integration today, your customer will be ready in the future and will get the other benefits of energy intelligence today.

We Have a Long Way to Go.

The Smart Grid has many hurdles before it becomes widely used and accepted. Micro (and I'll add nano- and mega-) grids with alternative energy sources and multiple levels of load management are possible today and could be a good business opportunity in the right markets. Every indication is that electric rates will continue to climb, making micro grids, combined heat and power systems, and alternative energy systems more attractive financially.

In the end, though, no other technology comes close today to RICE-DG for affordability, reliability and run time duration. We should be careful to not rest on our laurels for too long. We should encourage our customers (of all sizes) to prepare for the future with critical power management and control systems capable of interfacing with the eventual Smart Grid or Micro Grid. We should keep a vigilant eye on emerging technology, contribute to standards development so that we stay ahead of the curve, and are ready technically to continue to provide our customers with the best equipment and services to meet their power system needs. ■

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About the author:

Steve Evans – Director of PCS Business Development, ASCO Power Technologies, a division of Emerson Electric.

Steve is a former Board Member of EGSA, an instructor with the George Rowley schools of On Site Power Generation, and author of the chapter on Power Management and co-author of the chapter on Synchronous Generators in the 5th edition of the EGSA On-Site Power Generation – A Comprehensive Guide to On-Site Power. He has authored several technical articles for Powerline and other magazines, domestic and international.

Steve has been involved with electrical power generation, transmission, distribution, conversion, and control for 35 years. He has contributed to standards development with IEEE 1547.

In his current role with ASCO, Steve is supporting various sales efforts and new product development.



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Don't miss out, there's still time!

For more information and booth availability please contact EGSA headquarters at (561) 750-5575.



“I attended Bill Heacock’s webinar a couple years ago, after which I completely revised the electrical starting systems presentation into its present form. Bill Heacock reviewed a video of me teaching last year. He provided generally positive feedback on the technique that I used.”

Bill Kaewert, SENS
(Electric Starting Systems)

“Professional technical training is much different than teaching. Bill’s expertise can benefit everyone that does technical training. And this skill will continue to be more and more valuable as the need for more technical people in the industry continues to grow.”

Steve Evans, ASCO Technologies
(Genset & Critical Power System Controls,
Generator & System Protection)

“The personal attention that Bill took with all of us really paid off. This course is a must for any instructor or presenter. I would also recommend it for anyone who wants to sharpen their skills in public speaking or just in our daily business and personal lives in dealing with people.”

Bob Hafich, Emergency Systems Service, Co.
(2016 EGSA President)

What’s In It For You?

Now, for the first time, you and your staff can benefit from this same training. We are offering this program to our members!

These webinars will be invaluable in improving your presentations skills, whether it is a company meeting, a lunch-and-learn, sales presentation or training... even presenting a paper at an EGSA Conference!

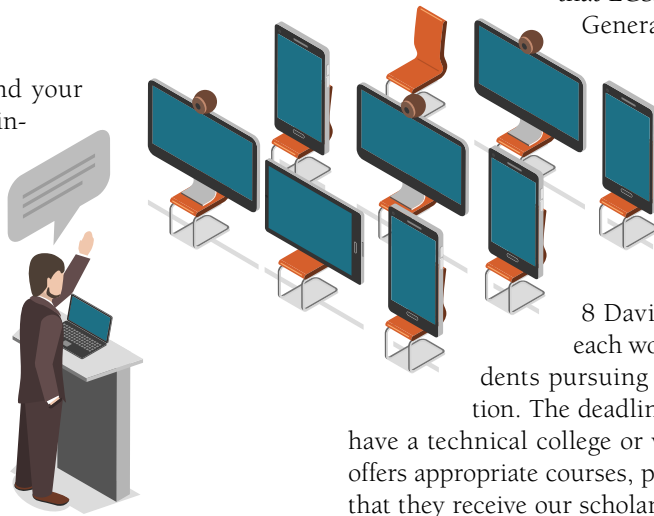
EGSA is proud to offer you a series of two webinars, each comprising:

Phase 1: Adult Learning Principles – Online workshop (90 minutes)

Phase 2: Presentation Skills & Instructional Strategies - Online workshop (90 minutes)

Phase 3: Optional analysis of 20 minute video taken during your instructor’s presentation

Registration details, including costs, will be available on the website as soon as we have a choice of dates to offer. We will let members know by email as soon as they are finalized.



“And in Other News....”

3,000 Registrations from On-Site Power Generation Industry professionals have been received for the Rowley School since 2000. During the past 5 years, registrations have averaged 257 per year. The majority of companies that send one person to a Rowley School soon send others, based on the report back from that first attendee.

The sheer volume of information presented during the 3 (Basic) or 4 (Advanced) days is more than most humans can retain! Comments about information overload are not unusual. Fortunately, attendees will not need all that information immediately on their return to work, and possibly not for months. They will, however, have a far greater understanding of the theory and operation of the components that make up an electrical generator system. When a question arises in their future, they will be able to use their memories from the school, class notes, the 2 inch thick folder of handouts, and the 700-page On-Site Power Generation: A Comprehensive Guide to On-Site Power 5th edition reference book to refresh their knowledge.



The Sound of Silence.

To those using or specifying exhaust systems, don’t forget that EGSA has created The Guide for Rating Generator Exhaust Silencers. There is no other guide or standard available in North America. You may download it from egsa.org/publications/standards; the reference number is 201S-2014

Scholarship Season.

Every year EGSA offers up to 8 David I. Coren Memorial Scholarships, each worth \$2,500, to technical college students pursuing a career in On-Site Power Generation. The deadline for applications is May 1st. If you have a technical college or vocational school in your area that offers appropriate courses, please let me know and I will ensure that they receive our scholarship applications package.

Giving Back.

Finally, we offer a huge THANK YOU to the generous companies that are contributing to the Rowley Schools by providing our instructors... and to the instructors themselves for their time, dedication, creativity in keeping their courses interesting, and for sharing their knowledge. It is a well-used phrase, but be proud: you are truly giving back to our industry. ■



This slide is a part of the EGSA introduction at all Rowley Schools.

EGSA Power Generation Market Pulse Survey

By Nicholas Phillips, wattsON Power

Report Objective

The EGSA Market Trends Committee annually surveys the EGSA Membership on how their business is performing and their power generation market opinions. The survey is conducted in August and asks respondents to compare year-to-date results with the previous year and polls for near-term, forward-looking projections.

Survey results are intended to provide member companies with a “pulse” or sense of the on-site power industry at large and an opportunity to compare their impressions with other EGSA Member companies. Survey results are neither designed nor are they intended to include or provide price sensitive or competitive data.

Survey Methodology

An email invitation to participate was sent to more than 2,000 primary and secondary contacts at EGSA Member companies, for whom email addresses are on file. EGSA incentivized those who completed the survey with a chance to win a \$200 gift card to be chosen by random drawing from those EGSA Members who completed the survey and included their contact information.

Survey Results and Conclusions

The 57 survey respondents represented a wide cross-section of the membership and returned a good distribution of the data. For purposes of reference and without comment, data from the 2015 survey is represented by red colored bars on the charts. ‘Geographic markets served’ is a new data point collected this year, so there is no comparative data. In this year’s survey, 2 new freeform questions were added regarding 1) the impact of advancements in reciprocating engine power generation technology

and 2) identification of the greatest challenges facing the onsite power industry. These new questions yielded a significant increase in commentary from respondents.

A summary of each question, along with a chart or graph illustrating the distribution of responses, may be found in the pages following. Pertinent comments and Committee observations concerning each question’s results also are included in the report.

The Market Trends Committee Noted a Number of Conclusions From the Survey, Including:

- EGSA Members expect the 2015 power generation market to finish above 2014 levels. Twenty-nine (29) of 55 respondents (53% - down from 74% in 2014) reported growth in 2015 year-to-date power generation related sales over 2014; Sixteen (16) respondents (29% - some 9% more than 2014) indicated relatively flat sales in 2015 year-to-date; and ten (10) respondents (18% - 3x as many as in 2014) indicated sales in 2015 have declined from 2014 levels.
- Overall optimism surrounding the outlook for the upcoming year has waned 17% amongst respondents as compared to more bullish sentiment a year ago. Forty-three (43) of 55 respondents (78% - down from 2014’s 95%) anticipate growth in 2016 power generation related sales compared to 2015; an additional twelve (12) respondents (22% up from 5% in 2014) anticipate relatively flat sales while zero respondents forecasted declining sales.

The Market Trends Committee

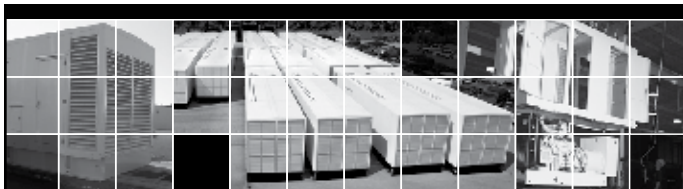
Chaired by John Hoeft, the Market Trends Committee provides EGSA with a forum in which market trends and other market data closely related to the power generation industry may be discussed in a way that benefits the Association and its members.

Beyond discussion, the Committee has the responsibility and ability to develop and make recommendations to the Board of Directors regarding programs and methods for the compilation of statistical information. The Committee focuses on complete power generation packages as well as component level trends to enhance the Association’s market knowledge of trade, product sales, growth rate, emerging technologies, economic trends, market forecasts and other statistical data in an effort to assist Association members in accomplishing their objectives.

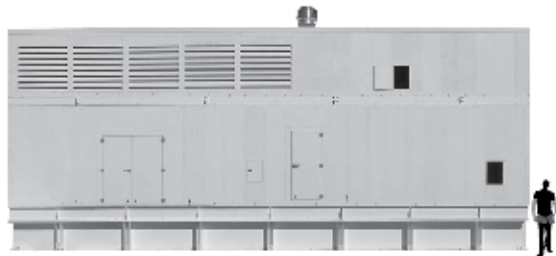
The Committee recently offered all EGSA Members an opportunity to participate in the Power Generation Market Survey to gauge members’ impressions concerning current business conditions relating to the genset industry. As a courtesy to our members, EGSA has produced this summary of the survey results. For more information about the survey or the Market Trends Committee, contact John Hoeft at jhoeft10@gmail.com.

EGSA does not require any respondent to provide proof of income, sales volume or company size via supporting data or third party verification.

EGSA makes no claims regarding the statistical accuracy of the survey’s results as they relate to current or future real world economic conditions. EGSA makes no claims or recommendations concerning the use of this survey’s results for marketing or sales projections. As designed and conducted, this survey is strictly intended to gauge impressions concerning company performance as well as current and short term future market conditions across the entire range of EGSA Membership.



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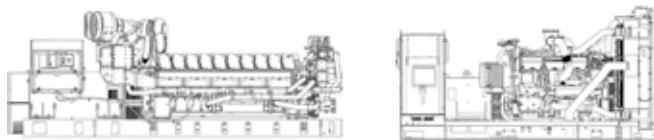
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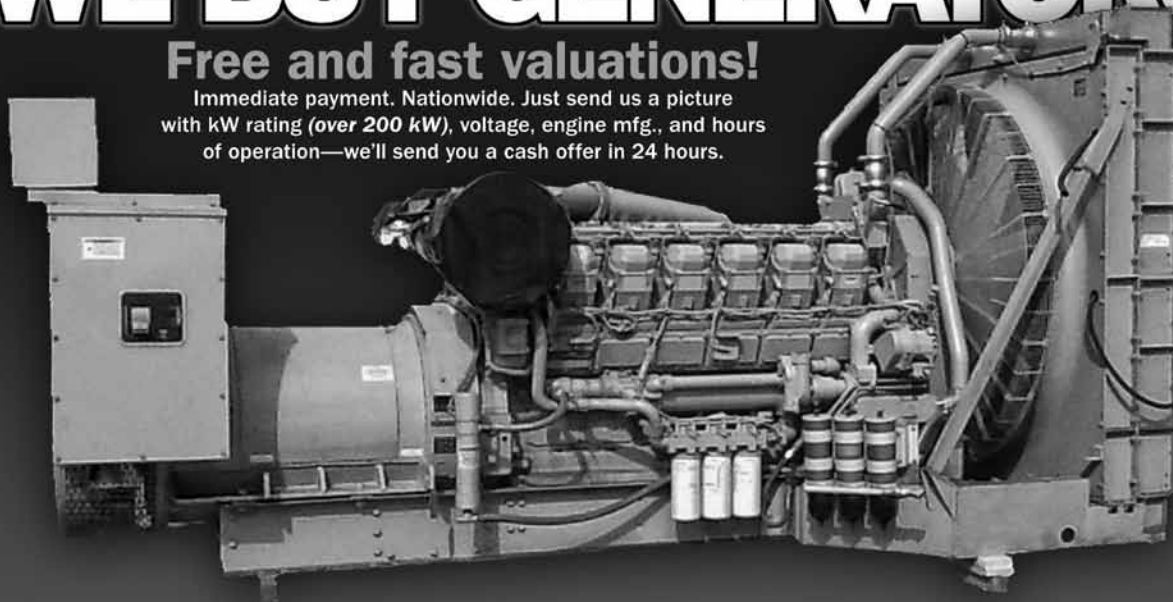


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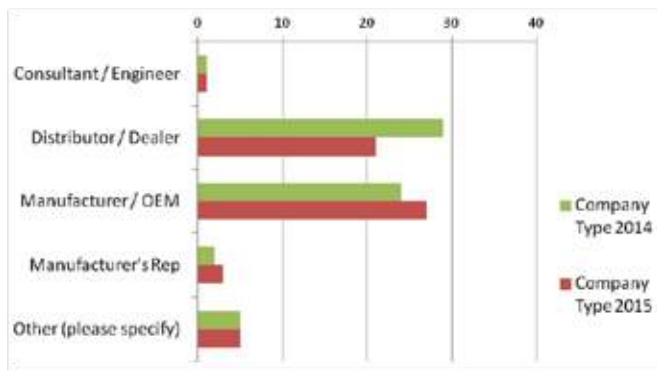


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- Employee staffing levels over the past 6 months reflect a stable or growing market amongst EGSA Member companies. Twenty-three (23) respondents (41%) reported increases in staffing levels over the past 6 months; (50%) reported relatively flat employee growth. Five (5) respondents indicated employee reductions, up from zero (0) in 2014, a figure inline with 2013 survey data.
- Twenty-seven (27) of 55 respondents (49%) anticipated employee staffing levels to remain relatively flat to plus/minus 3% over the next 12 months. Twenty-four (24) of 55 respondents (44%) are anticipating increases in employee staffing levels in the range of 4-20%.
- The Northeast region is the most represented with 45% of respondents having sales in the region. The Southeast, Mid-West and South Central regions are similarly represented with an average of one-third (35%) and the West region was the least represented at less than 25%. Forty-six percent (46%) of respondents do business outside of the United States. Twenty-five percent (25%) have sales in Canada and only seven percent (7%) have sales in Mexico.
- Key market segments for EGSA Members participating in the survey as reflected by those with a high percentage of importance ranking of 1, 2, 3, 4 included: Healthcare, Data Centers, Other Commercial Facilities and Oil and Gas. It is important to note here that Healthcare surpassed the Data Center segment from the 2014 results and additionally Oil & Gas remains within +/- 2% of 2014 of all "Top" categories despite the downturn in oil price.
- The outlook for 2015 includes a continued shift towards a greater percentage of sales attributed to Tier 4 product. While 37% of respondents reported 2014 sales of Tier 4 (Interim or Final) product to account for at least 10% power generation business year-to-date, this figure increases to 45% of respondents expecting Tier 4 to account for at least 10% of 2015 power generation sales.

1. Which of the following best describes your company type?



Comments

2015 Forty-eight (48) of 57 survey respondents (84%) were represented as Distributor / Dealer or Manufacturer / OEM companies, -1% from 2014.

The response from Distributor / Dealer and Manufacturer / OEM swapped from ~40% DD / 50% OEM to ~50% DD / 40% OEM.

2014 Fifty-three (53) of 62 survey respondents (85%) were represented as Distributor/Dealer or Manufacturer/OEM companies.

2. Which of the following best describes your position?



Comments

2015 27 of 54 respondents (50%) were in executive management positions a gain of 15% over 2014.

13 of 54 respondents (24%) were in a sales related position.

6 of 54 respondents (11%) were in marketing, up 5%.

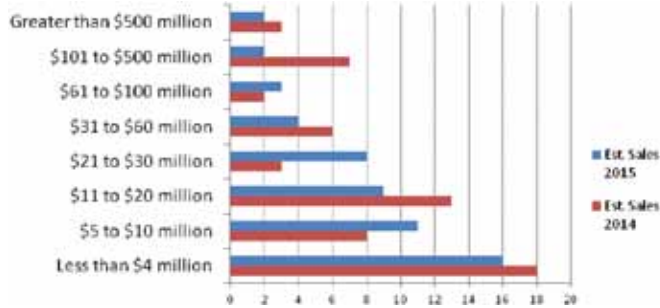
85% of respondents represent executive, sales or marketing related positions in these classes, 14% more than 2014.

2014 22 of 62 respondents (35%) were in executive management positions.

16 of 62 respondents (26%) were in a sales related position.

4 of 62 respondents (6%) were in marketing.

3. What were your estimated power generation related sales in 2014?

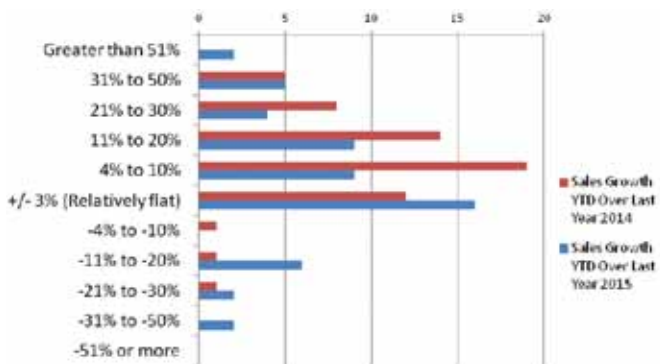


Comments

2015 Forty-nine percent (49%) of respondents reported they had less than \$10 million in power generation related sales in 2014 with 29% of the total reporting in the "Less than \$4 million" category, about the same as last year's survey (30% < \$4 million).

2014 Forty-three percent (43%) of respondents reported they had less than \$10 million in power generation related sales in 2013 with 30% of the total reporting in the "Less than \$4 million" category compared to 24% in last year's survey.

4. Which of the following best describes your company's ESTIMATED 2015 power generation related sales growth (or decline) over 2014?



Comments

2015 A total of 29 of 55 respondents (53%) reported growth in 2015 year-to-date power generation related sales over 2014 (down from 74% in 2014).

A total of 16 respondents (29%) reported relatively flat sales in 2015 YTD, a gain of 9% in comparison to 2014 (20%).

Ten (10) of 55 respondents (18%) indicated sales in 2015 YTD have declined from 2014 levels, more than 3x as many as 2014.

23% fewer respondents reported growth (4% or greater), shifting to sales growth for current year.

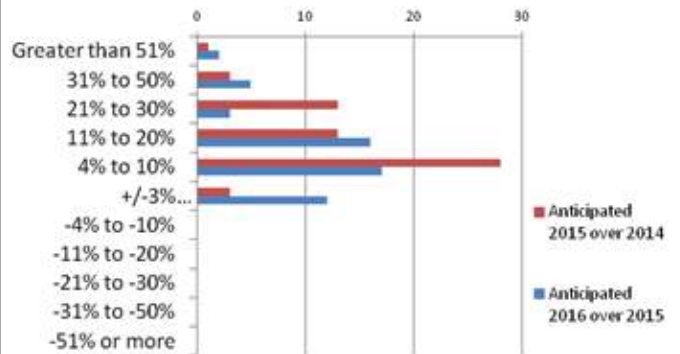
2014 A total of 46 of 62 respondents (74%) reported growth in 2014 year-to-date power generation related sales over 2013.

A total of 12 respondents (20%) reported relatively flat sales in 2014 year-to-date in comparison to 2013.

Three (3) of 62 respondents (5%) indicated sales in 2014 have declined from 2013 levels.

15% more respondents reported growth (4% or greater), shifting to sales growth for current year.

5. Which of the following best describes your company's ANTICIPATED 2016 power generation related sales growth (or decline) over estimated 2015?



Comments

2015 A total of 43 respondents (78%) anticipate growth in 2016 sales levels.

Twelve (12) respondents (22%) anticipate relatively flat sales in 2016 in comparison to 2015.

No respondents anticipate less sales in 2016.

Overall optimism surrounding the outlook for the upcoming year has waned 17% amongst respondents as compared to more bullish sentiment a year ago.

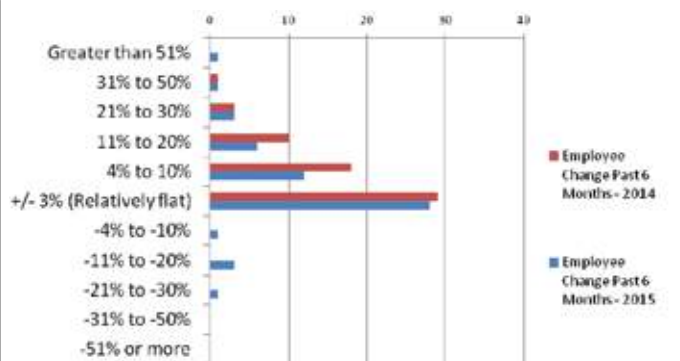
2014 A total of 58 respondents (95%) anticipate growth in 2015 sales levels.

A total of 3 respondents (5%) anticipate relatively flat sales in 2015 in comparison to 2014.

0 respondents anticipate negative sales in 2015.

Overall there is optimism surrounding the outlook for the upcoming year as compared to a year ago.

6. Which of the following best describes your company's employee growth (or reduction) in the past 6 months?



Comments

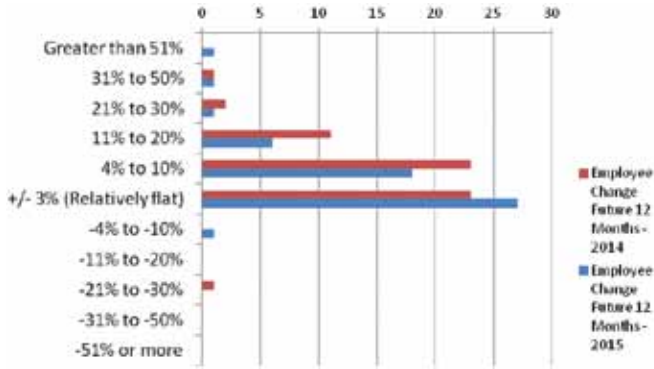
2015 Twenty-three (23) of 56 respondents (41%) reported employee increases with 28 of 56 (50%) reporting relatively flat employee growth over the past 6 months.

Five (5) of the 56 respondents (9%) reported employee reductions. This reduction figure is in alignment with the 2013 survey.

2014 Thirty-Two (32) of 62 respondents (52%) reported employee increases with 29 of 62 (48%) reporting relatively flat employee growth over the past 6 months.

Zero (0) of the 62 respondents reported employee reductions.

7. Which of the following best describes your company's employee growth (or reduction) in the next 12 months?

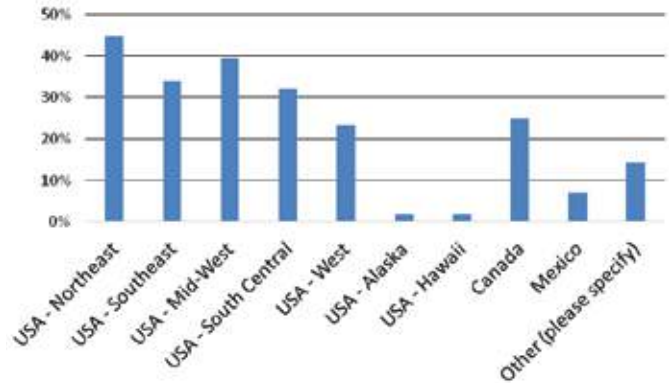


2015 Twenty-Seven (27) of 55 respondents (49%) anticipated employee staffing levels to remain relatively flat over the next 12 months.
 Twenty-Four (24) of 55 respondents (44%) are anticipating increases in employee staffing level in the range of 4-20%.
 The trend toward employee staffing growth in 2016 has declined twenty-three percent (23%), yet sentiment over reduction in employees is within the same margin as 2014 (less than 2%)

2014 Twenty-Three (23) of 62 respondents (38%) anticipated employee staffing levels to remain relatively flat over the next 12 months.
 Thirty-Four (34) of 62 respondents (56%) are anticipating increases in employee staffing level in the range of 4-20%.

Comments

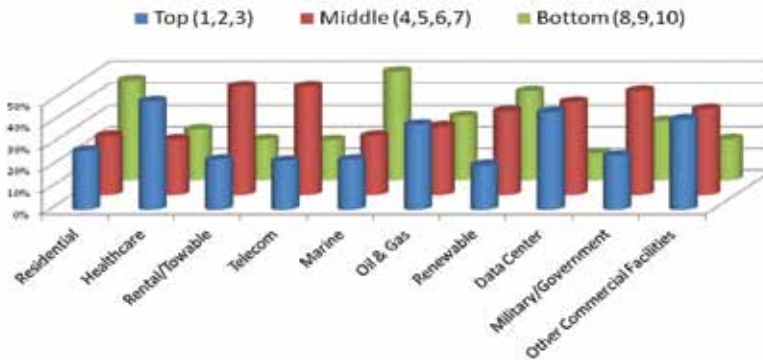
8. Thinking about your sales figures, in which geographic territories did your sales PRIMARILY occur? (select 1, many or all related)



2015 This is a new question added this year to measure the geography territories respondents represent.
 The Northeast region is the most represented with 45% with the Southeast, Mid-West and South Central regions within an average of one-third.
 The West region is disproportionately represented at less than 25%.
 Forty-six percent (46%) of respondents do business outside of the United States. Twenty-five percent (25%) have sales in Canada and only seven percent (7%) have sales in Mexico.

Comments

9. Please rank the following markets 1 to 10 in the order of their importance to your company with "1" being the most important and "10" being the least important.



The market importance level indicates where EGSA Members focus their engineering, sales and marketing efforts. Please note that these levels are "of the moment" and do not necessarily indicate a company's ongoing or future marketing strategy.

2015 Key market segments for EGSA Members participating in the survey as reflected by an importance ranking in the "Top" category of 1, 2, 3 included Healthcare, Data Center and Other Commercial Facilities. The least important segments included marine, residential, and renewables. Healthcare replaced Data Center as the most important market, while marine became the least important market over residential.
 Note that Oil & Gas remained within +/- 2% of 2014 of all "top" categories.

The market importance level indicates where EGSA Members focus their engineering, sales and marketing efforts. Please note that these levels are "of the moment" and do not necessarily indicate a company's ongoing or future marketing strategy.

2014 Key market segments for EGSA Members participating in the survey as reflected by an importance ranking in the "Top" category of 1, 2, 3 included Data Center, Healthcare and Other Commercial Facilities. The least important segments included residential, marine and renewables, no change from last year's results.

Comments

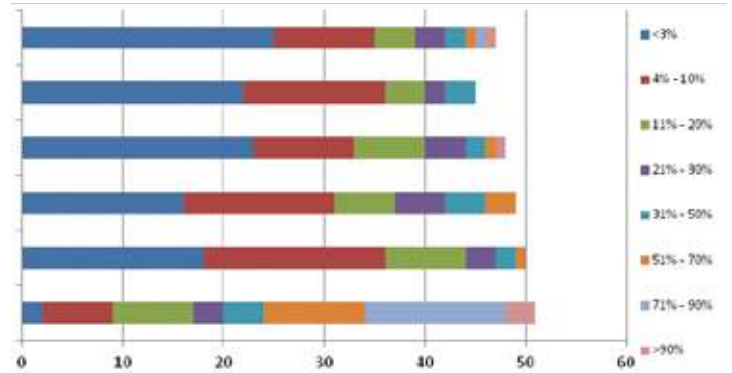
10. Please indicate your company's ESTIMATED 2016 power generation sales growth (or decline) over 2015 in each of these categories?

- 1. Residential
- 2. Healthcare
- 3. Rental/Towable
- 4. Telecom
- 5. Marine
- 6. Oil & Gas
- 7. Renewable
- 8. Data Center
- 9. Military/Government
- 10. Other Commercial Facilities

	2015	2014	2013	
Comments	<p>The outlook for 2016 by market segment reveals a close correlation to the market segments that were of top importance, with the exception being Military where segment growth represents a 9% growth over 2015's outlook. Oil & Gas outlook fell 17%, while residential fell 15%.</p> <p>The following are the percentage of total responses, by market segment, indicating a positive outlook for 2015 (in descending order):</p>			
	Other Comm. Facilities	69% (63%)	Data Center	68%
	Data Center	65% (68%)	Other Commercial Facilities	63%
	Military/Govt	57% (48%)	Healthcare	61%
	Healthcare	47% (61%)	Oil and Gas	58%
	Rental/Towable	45% (49%)	Rental/Towable	49%
	Telecom	42% (45%)	Military/Government	48%
	Oil & Gas	41% (58%)	Telecom	45%
	Renewable	28% (32%)	Residential	37%
	Marine	25% (20%)	Renewables	32%
Residential	22% (37%)	Marine	20%	
			<p>The outlook for 2014 by market segment reveals a close correlation to the market segments that were of top importance. The following are the percentage of total responses, by market segment, indicating a positive outlook for 2014 (in descending order):</p>	
		Data Center	70%	
		Other Comm. Facilities	62%	
		Healthcare	53%	
		Telecom	47%	
		Oil & Gas	47%	
		Rental/Towable	45%	
		Military/Govt.	37%	
		Residential	34%	
		Renewable	27%	
		Marine	25%	

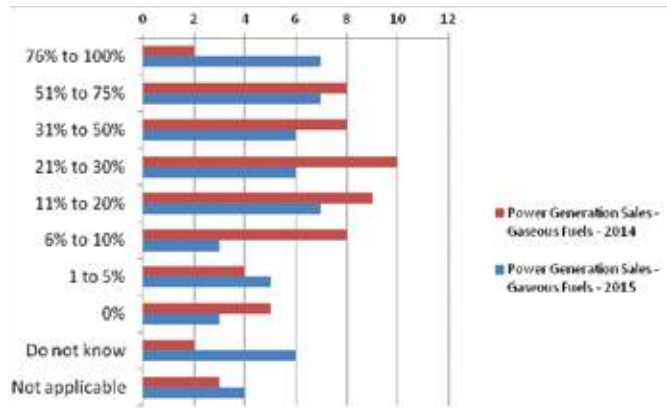
11. What percentages of your total power generation related sales would typically be attributable to each of the following applications (duty cycles)?

- COGENERATION (The simultaneous production and use of electrical and thermal energy from a prime mover – unlimited annual running hours – less maintenance).
- PEAK SHAVING (2000 – 5000 annual running hours, typically 3,400 hours per year at a slightly higher than continuous rating and paralleled to the utility)
- CONTINUOUS (100% rated load, unlimited annual running hours – less maintenance)
- PRIME (varying load profile, unlimited annual running hours – less maintenance)
- DEMAND RESPONSE (<500 annual running hours with utility compensation)
- STANDBY (varying load profile, unlimited running hours during an outage)



	2015
Comments	53% (consistent with 56%) of respondents indicated that over 50% of their sales were derived from standby duty applications
	89% (up from 73%) of respondents indicated that peak shaving duties account for 20% of sales or less
	83% (up from 75%) of respondents indicated that cogeneration accounts for 20% of sales or less

12. Considering only non-residential related business, what percentage of your ESTIMATED 2015 power generation related sales is attributed to gaseous fuel applications?



2015 Considering only responses other than "Not applicable" and "Do not know" - 36 of 54 respondents (67%) mentioned that gaseous fueled applications account for at least 10% of their estimated 2015 sales.

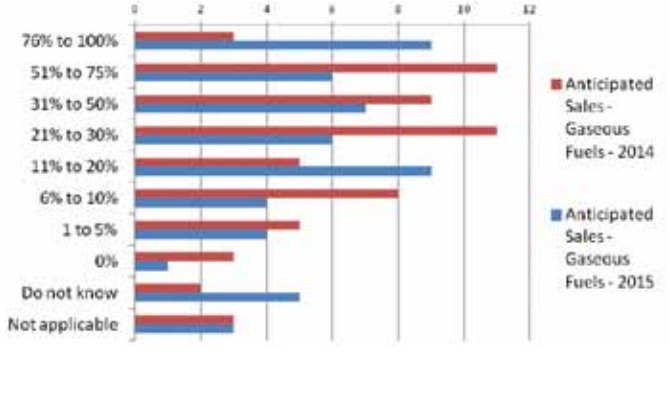
Along those same lines, 20 of 54 respondents (37%) mentioned that gaseous fueled applications account for at least 30% of their estimated 2015 sales.

2014 Considering only responses other than "Not applicable" and "Do not know" - 37 of 54 respondents (69%) mentioned that gaseous fueled applications account for at least 6% of their 2014 sales.

Along those same lines 18 of 54 respondents (33%) mentioned that gaseous fueled applications account for at least 30% of their 2014 sales.

Comments

13. Considering only non-residential related business, what percentage of your ANTICIPATED 2016 power generation related sales will be attributed to gaseous fuel applications?



2015 Considering only responses other than "Not applicable" and "Do not know" - 37 of 54 respondents (69%) mentioned that it is anticipated that gaseous fueled applications account for at least 10% of their 2016 sales.

Along those same lines 22 of 54 respondents (41%) mentioned it is anticipated that gaseous fueled applications account for at least 30% of their 2015 sales.

2014 Considering only responses other than "Not applicable" and "Do not know" - 39 of 55 respondents (71%) mentioned that it is anticipated that gaseous fueled applications account for at least 10% of their 2015 sales.

Along those same lines 23 of 55 respondents (42%) mentioned it is anticipated that gaseous fueled applications account for at least 30% of their 2015 sales.

Comments

14. What is the greatest advancement (e.g. technology, regulatory, etc.) that could positively affect the reciprocating engine power generation market?

2015 Respondent consensus points to the advancements in technologies surrounding the application of gaseous fuels, improvements in product quality and the impact of the Internet of Things as the greatest advancements positively affecting the reciprocating engine power generation market. Distributed generation and demand response programs were pointed to as example applications of positive advancement in regulation and technology.

Comments

15. What is the greatest advancement (e.g. technology, regulatory, etc.) that could positively affect the reciprocating engine power generation market?

2015 A majority of respondents named emissions and specifically the EPA as the greatest challenge facing reciprocating engine power generation. Talent acquisition and technicians were listed as the next greatest challenge, followed by instability in domestic and global economies, the impact of renewables and investor owned electric grids and foreign parts content products receiving "final assembly" and sold as "North American" products.

Comments

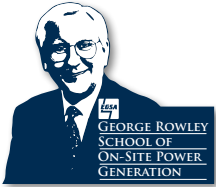
16. Additional comments regarding the power generation market?

2015 General comments continued the theme of emission and regulatory concerns with respondents citing the following:

- A need to better understand the EPA Clean Power Plan and its impact on coal-fired generation
- As more Tier 4 Final diesel prime may force implementation of more spark-ignited engines, it was suggested that a forthcoming change in the federal administration could translate to enforcement of tighter regulations on the reciprocating engine power market.
- One Distributor/Dealer Executive reminds industry stakeholders to "... Have Fun!"

Comments

EGSA Provides Education & Certification Benefits!



THE GEORGE ROWLEY SCHOOLS OF ON-SITE POWER GENERATION

One of the key components of growing professionally is to keep rising to new challenges and opportunities. Keep your skills sharp by participating in our educational programs and stay abreast of technologies that support the Power-Generation Industry! EGSA offers a rigorous, two-tiered educational program, with schools throughout the U.S. that outline the technical aspects of power generation.

Perfect for staff new to the industry or someone who needs a refresher course, our Basic School is appropriate for anyone who needs a foundation in generator technology (sales, marketing, parts, service, even administrative staff). With our Advanced School, expect our highly skilled and knowledgeable instructors to go into great detail on subjects like paralleling, speed, load control, generator protection and voltage regulation and more. Need more information? Visit our website to see what offerings we have for this calendar year!

Continuing Education Unit (CEU) Program

After attending one of our On-Site Power School classes, demonstrate what you have learned with Continuing Education Units! CEUs are awarded after you attend one of our schools.

TECHNICIAN CERTIFICATION

Generator technicians vary in skill level from employer to employer and market to market. Finding a way to identify a proficient and knowledgeable technician, or even identifying a technician's skill level can be challenging.

The EGSA Technician Certification Program has expanded to meet these challenges! We now offer 2 levels of Certification.

Apprentice Level *(certification valid for 3 years)*

The Apprentice level exam provides technical college students, recent graduates, military personnel and other 1st or 2nd-year technicians with proof that the basic skill set has been met.



Journeyman Level *(certification valid for 5 years)*

Our Journeyman exam assures an employer that this technician meets or exceeds 3 years of practical field experience. It tests in 61 individual areas of expertise and was upgraded in 2014 to reflect current technology.



Membership in EGSA guarantees that for under \$200, generator technicians can achieve the industry standard. The benefits are immeasurable! Visit our website for additional detail on the program.



egsa.org



Electrical Generating Systems Association
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Group Photo Above: EGSA Members Put their Association First on Wednesday! Left to right –Kim Giles (EGSA), Mitch Dinnerman (APS), Ed Higgins (APS), Tom Corona (APS), David White (APS), Will Ferrigno (APS), Patrick Curry (AGT), Mike Hilger (AGT), Peggy Nunez-Piske (AGT), Jerry Gibson (AGT), Bob Piske (AGT), Kurt Summers (AGS), Sandy Wilson (KGE), Joel DeWall (Generac Power Systems), Shirley Aston (KGE), Greg Linton (KGE), John Kelly, Jr. (KGE), Debbie Kelly (KGE), Jessica Smith (KGE) and David Smith (KGE).

EGSA Heads 'South of the Border' for Generac Power Systems' Annual Dealer Conference

North America is a big place to cover, even for a global association like EGSA! Your Association does its best to take the EGSA message to all corners of the world, but it can sometimes be a challenge to identify areas and groups that can provide an audience large enough to take the message directly to the people. EGSA would like to graciously thank our manufacturing member, Generac Power Systems, Inc., for providing such an environment to share the EGSA branding message directly with their residential and industrial dealers during January in Riviera Maya, Mexico.

Your EGSA Staff put together a comprehensive plan back in November to reach as many dealers as possible during the annual conference this month. There were several ways we attempted to reach the more than 1,400 attendees one-on-one with the EGSA message.

Prior to the event, Generac published a list of all participating vendors, we executed social media postings and word of mouth. Our marketing team identified active EGSA Members that would be in attendance beforehand to solicit introductions and help attendees learn more about EGSA. We not only

reached out to Generac staff, we also relied heavily on several EGSA Distributor Dealer Members to assist in the challenge of reaching such a large audience.

From the evening receptions to the vendor display area, Generac provided ample networking opportunities. As a part of our sponsorship package, which included signage, verbal recognition and advance email opportunities, EGSA was also provided with a tabletop exhibit in the vendor display area. Our booth was positioned directly adjacent to the entrance and more than 50 membership kits were given away via memory sticks that included everything one would need to know about being a member of EGSA. We also offered to waive the initiation fee for any new member joining until the end of February.

Several active EGSA Members helped bring attention to our association branding by wearing a special shirt designed with the EGSA logo 'front and center' on the left chest and their own company logo on the sleeve. This generated many conversations about EGSA and we stood out among the sea of other company branding. There were 30 Members who participated in this quest to share information about EGSA, our products and our services to the on-site power community present during the conference.

Speaking of active members, EGSA would like to thank the following members for helping us generate buzz on EGSA before, during, and after the Conference (alpha order by last name):

Will Ferrigno, Mitch Dinnerman and Staff - Assurance Power Systems (APS)

Ryan Jeske, Group VP, Generac Power Systems, Inc.

John Kelly, Jr. and Staff - Kelly Generator & Equipment (KGE) – EGSA President 2011

Greg Linton, Kelly Generator & Equipment – EGSA President 2009

Bob Piske and Staff - Arizona Generator Technology, Inc. (AGT) – EGSA Board of Directors 2016 – 2018

Kurt Summers, Austin Generator Service (AGS) – EGSA Board of Directors 2016 – 2018

Bonnie Thomas, Tradeshow Coordinator, Generac Power Systems, Inc.

Tom Wein, Generac Power Systems, Inc., EGSA Board of Directors 2015 - 2017

Continued...

Support the EGSA TOYA in 2016!

Take a Look at Our EGSA Technician of the Year Award Program and Nominate a Worthy Candidate!

Get ready to shamelessly promote your EGSA-certified colleague by nominating him (or her) for the 2016 EGSA TOYA!

Every one, at every level, wants to be recognized for doing a great job! The TOYA is **THE** capstone to any technician's career, inciting further personal and professional growth. Can you imagine the competitive advantage of having a TOYA winner on YOUR team?



The 2016 process is scheduled to kickoff as follows:

Application Announcement:
May 16, 2016

Application Period Ends:
July 15, 2016

Review of Applications Takes Place:
July 16 – July 29, 2016

Final Winner will be Notified:
August 1, 2016

The Rest of the World Finds Out:
During the exciting announcement at the Awards Banquet in Sacramento, CA on Monday, September 12, 2016.



Electrical Generating Systems Association (EGSA) • 1650 South Dixie Highway, Suite 400, Boca Raton, FL 33432
(561) 750-5575 • EGSA.org • email@EGSA.org

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In addition to making it easy to transport EGSA Membership information back to the States, our display went 'paperless' for the trip, with the exception of our 5th Edition *On-Site Power Generation: A Comprehensive Guide to On-Site Power* sample, the 2016 EGSA Buying Guide and our 2016 Rowley School brochure (both of the latter, hot off the presses and every copy spoken for prior to departure!).

It was a very productive initiative, with many moving parts and a great team to carry out the marketing efforts. There were so many firms that heard of EGSA for the very first time.

On this subject, if you come across a great 'grassroots' effort like this, we'd like to hear from you. From time to time, we will report on these efforts to keep members informed and aware that we are truly 'beating the bushes' when it comes to not only marketing the Association and our products and services, but gaining new members that add greater value to the industry as a whole. Send your ideas on this subject to Kim Giles, EGSA Marketing Manager, at K.Giles@EGSA.org. ■



EGSA Members Will Ferrigno, John Kelly, Jr., Bob Piske and Tom Wein were very helpful, writing a letter of introduction for EGSA to their Generac dealer colleagues and urging them to learn more about EGSA while in Mexico. This letter garnered great attention during the vendor showcase, with more than 144 individuals stopping by the tabletop display! Special thanks to Ryan Jeske, who oversaw the coordination and approval of this effort.

Sunbelt Transformers **NEW Packaged Products** Division

OUR PACKAGED PRODUCTS DIVISION HAS THE KNOWLEDGE AND EXPERTISE TO BUILD COMPLETE PACKAGES AND TO PROVIDE COMPLETE TURNKEY SOLUTIONS FOR OUR CUSTOMERS.

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To obtain a quote on your next project, please contact **Aaron "A.J." Jones, P.E.** our Sales and Applications Engineer at ajones@sunbeltusa.com or call toll-free **1-800-433-3128!**

POWER-GEN International deemed a huge success for the EGSA Power Pavilion in 2015!

For the past few years (2012 until 2014), POWER-GEN International has been hosted in Orlando by show organizers, PennWell. EGSA Members (EGSA On-Site Power Pavilion exhibitors, Conference speakers, attendees and others) have generated solid participation from year-to-year. This year, it was great to experience something different!

In December of 2015, POWER-GEN International took us on the road to Las Vegas, just in time for EGSA's 50th anniversary, and what a surge of energy! We appreciate everyone who came out to support our Association last month!

Speaking of supporting EGSA, every year EGSA purchases premium trade show floor space in bulk from PennWell and sells it to our members. By allowing EGSA to purchase the heart of the tradeshow floor, show organizers allow us to bring our members great value...a prominent and cohesive location...and no one has to guess where the on-site power exhibitors are, because we are on the red carpet (literally, the EGSA On-Site Power Pavilion has red aisle carpeting!)

With that said, as EGSA Members, please make every effort to purchase your exhibit space from your Association. The 'cost per square foot' in exhibit space is exactly the same and let's face it, in a tradeshow environment, it is all about "location, location, location." Beyond making it easier for show attendees to find your on-site power exhibit, and greatly reducing the 'wear and tear' on their feet during the power-packed 3 day event.



Thanks to our sponsors, EGSA was able to keep costs at the same level for each member to attend our Las Vegas Power Party providing a bit of friendly competition and entertainment!



The Secret's Out! The EGSA Power Party is the Place to Be...

In conjunction with the tradeshow, EGSA hosts a signature reception, the annual EGSA Power Party, held directly following the opening day of POWER-GEN International each year. It is the singular best way to bring all of our industry pros together in one city and in one room.

Because Las Vegas is a bit more expensive than Orlando, the Board approved a sponsorship program to help offset the costs of the event, and to keep the ticket cost at the same price that we have for the last 5 years. We were also able to bring a little "Las Vegas style" to the reception with a craps table to keep things lively (i.e. competitive) and entertaining.

With a total of 242 on-site power professionals in one room, we hope our members enjoyed a great return on investment for the \$60.00 price of admission! We are always eager to offer great networking opportunities and ways to bring our members together. Other than our EGSA Spring and Fall conferences, this is truly a reception not to be missed if you enjoy networking in on-site power.

If you are not an annual attendee, perhaps you can join us in Orlando in 2016? Even if your plans call for a dinner that Tuesday evening, our reception starts directly following the tradeshow hours for PGI, just make your dinner reservations for later in the evening and you are flexible enough to attend both. ■

The EGSA Board of Directors would like to express our thanks to the following member companies for their generosity in sponsoring the 2015 EGSA Power Party.

Clariant Corp. Doosan Leroy Somer
PowerSecure Ring Power Corp.

Join us annually for this opportunity to bring value to our industry. When we say that you could "stack the deck," we actually mean it!



Air-Compressors | Generators | Lighting Systems





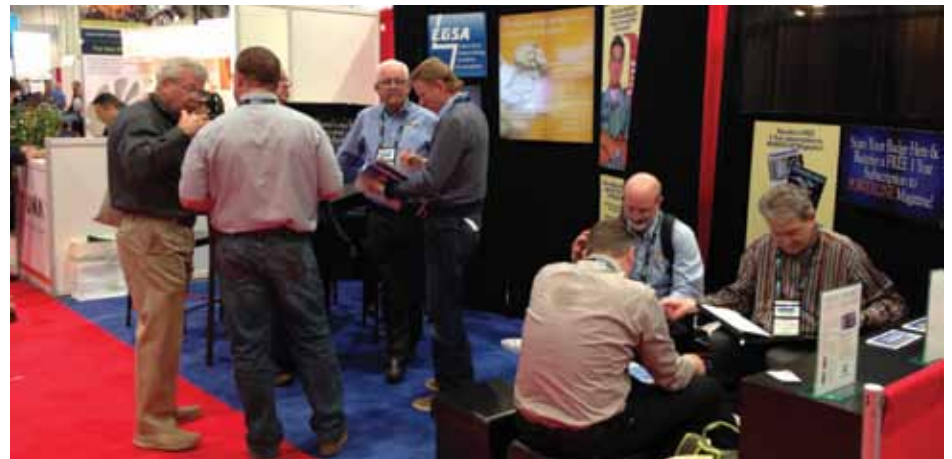
It was great to see so many members from across the country! Here, several members of the Chillicothe Metal Co. team took time to network with their colleagues from Eugene, OR and Spokane, WA. **l to r:** Kylan Hennessy, Adam Durst (CMCO), Rob Fennell (CMCO), Marty Hopkins (Peterson Power Systems), Steve Stoyanac (CMCO) and Joe Gaylord (HOTSTART Mfg.).



EGSA's Power Party... the perfect location to connect with colleagues during the busy week of PGI. **l to r:** Dean Smith (OmniMetrix) and Andy Briggs (Power Telematics, Inc.).



The reception was a great opportunity to enjoy connecting with friends and catch up with one another! **l to r:** Gary Wenzel (Marathon Electric) and Randy Weimer (AMPS).



EGSA Members marketed EGSA at our booth during the event. It was a great turnout and we provided more than 200 people with vital info on EGSA membership, products and services.



Our sponsors were all smiles in helping to generate a successful event! **l to r:** Brandon Locklear (Leroy Somer), Justin McMahon (Leroy Somer) and Corey Hansen (Kato Engineering)



Some of our new EGSA Members from the Carolinas were in attendance! **l to r:** Vince Visconti (Pioneer Power Solutions) and Brian Boezi (BC3 Fuel Solutions).



Some of our members from the west coast and their clients enjoy the power networking at the 2015 EGSA Power Party. **l to r:** Jeffrey Miller (Laeverco Products), Eddie Valentin (Collicutt Energy Services) and Babak Mohajerani (Thomson Power Systems).



EGSA Time Capsule Video Series now on EGSA's YouTube Channel

As most of our members know, 2015 was our 50th year. EGSA celebrated in several ways, from enhancing your EGSA conference experience both in Spring and Fall to inviting our Past Presidents to come and share in the celebrations.

In *Powerline*, we started as early as the November/December 2014 issue, with an article series that we named our EGSA Time Capsule series. This series of articles, 36 in all, honored some of the people in our recent history that hold a place in the EGSA timeline. We also took time during our Conference in Jacksonville to try and accomplish a similar historical recording on video. Those videos are now ready for our member's viewing pleasure! We will release 5 of them per month via a singular email and a notification on LinkedIn until we have posted them all.

One final note, please subscribe to the EGSA YouTube Channel. It is as easy as visiting this link (<https://www.youtube.com/user/EGSAVideo>) and pushing the red subscribe button on the right. (You will need to be logged into YouTube or to your own Google account). ■

2016 EGSA Membership Renewal

2016 EGSA Membership Renewals are currently underway.
Make sure that your company does not miss out on our great member benefits. Renew today! ■

Membership Benefits at a Glance

Discounted fees for:

- EGSA Technician Certification Program
- Rowley Schools offering Continuing Education Units (CEUs)
- EGSA Conferences
- *Powerline* Magazine advertising
- *EGSA On-Site Power Generation: A Comprehensive Guide to On-Site Power*

Free job postings in our Job Bank, located on our Website and in *Powerline* Magazine.

Use of the EGSA logo on your company advertisements, website, stationery, etc.

Priority booking of your booth in the EGSA Pavilion at POWER-GEN International

Listing in EGSA's Annual Buying Guide (distributed to Diesel Progress recipients, currently more than 34,000 readers!)

Web Links:

Your company information will appear on EGSA's website within the month that you join, and we will link to your website if the address is provided.

Networking Opportunities:

Make contacts with the "Who's Who" of the On-Site Power industry at EGSA events, including conferences, conventions, trade shows and receptions, as well as online at EGSA's LinkedIn groups.

EGSA Bucks Program:

You can participate in EGSA's member-referral program: If a new member lists your name as a sponsor on their membership application, you will receive \$100 in "EGSA Bucks" to apply towards any EGSA product including: registrations, reference books, membership renewal dues, etc. ■





Application for Membership

ELECTRICAL GENERATING SYSTEMS ASSOCIATION

1650 South Dixie Highway, Suite 400, Boca Raton, FL 33432 • 561-750-5575 • FAX 561-395-8557
 E-Mail: e-mail@EGSA.org • Website: www.EGSA.org

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.

EGSA MEMBER CLASSIFICATION & DUES SCHEDULE (Choose appropriate membership below and enter amount in box #3 on reverse)						
FULL MEMBERSHIP			Annual Dues	Initiation Fee	TOTAL DUE	
<input type="checkbox"/>	MF Manufacturer Membership Any individual, sole proprietor, partnership or corporation seeking membership must apply for a Full Membership as a manufacturer if they meet one or more of the following criteria: 1. They manufacture prime movers for power generation. 2. They manufacture generators or other power conversion devices producing electricity. 3. They manufacture switchgear or electrical control devices. 4. They manufacture or assemble generator sets, UPS systems, solar power, hydropower, geothermal, or any other power production or conversion system including related components or accessories for national or regional distribution. 5. They are a wholly owned subsidiary of a firm that qualifies under rules one through four.		\$870	\$200	\$1,070	
<input type="checkbox"/>	DD Distributor/Dealer Membership Any individual, sole proprietor, partnership or corporation actively engaged as a distributor or dealer for products listed under Manufacturer Membership may apply for Full Membership as a Distributor/Dealer. If an organization qualifies under Manufacturer Membership, it is not qualified under this section.					
<input type="checkbox"/>	CI Contractor/Integrator Membership Any individual, sole proprietor, partnership or corporation actively engaged as a Contractor or Equipment Integrator of products listed under Manufacturer Membership, not bound by brand, geographic territory or contractually obligated as a Distributor/Dealer of a specific product. These firms typically purchase products from a Distributor/Dealer, Manufacturer or Retailer, adding value through installation, product knowledge, relationships, unique services, etc., and then re-sell the resulting product to an end-user.		\$310	\$100	\$410	
<input type="checkbox"/>	MR Manufacturer's Representative Membership Any individual, sole proprietor, partnership or corporation actively engaged in the representation of products listed under Manufacturer Membership may apply for Full Membership as a Manufacturer's Representative. If an organization qualifies under Manufacturer Membership, it is not qualified under this section.					
<input type="checkbox"/>	EM Energy Management Company Membership Any individual, sole proprietor, partnership or corporation engaged in energy management, including Energy Service Companies (ESCOs), Independent Power Producers (IPPs), Integrators, Aggregators, and other similar enterprises may apply for Full Membership as an Energy Management Company.		\$210	\$100	\$310	
ASSOCIATE MEMBERSHIP			Annual Dues	Initiation Fee	TOTAL DUE	
<input type="checkbox"/>	Associate Regular Membership (Select Appropriate Category Below)		\$210	\$100	\$310	
<input type="checkbox"/>	Associate Full Membership Any individual, sole proprietor, academic institution, student, partnership or corporation meeting the requirements of Associate Regular Membership may apply for Full Membership at their option to enjoy the privileges of Full Membership, including the rights to vote and to serve on EGSA's Board of Directors. Initiation fees and annual dues will be assessed at the existing non-manufacturer Full Member rates. (Select Appropriate Category Below)		\$310	\$100	\$410	
PLEASE SELECT ASSOCIATE MEMBERSHIP CATEGORY	Associate Membership Categories - Select One					
	<input type="checkbox"/>	AA Trade Publication Membership Any trade publication dealing with the electrical generating systems industry or its suppliers may apply for Associate Membership—Trade Publications.				
	<input type="checkbox"/>	AB Trade Association Membership Any trade association made up of individual or company members sharing a common interest in the electrical generating systems industry may apply for Associate Membership.				
	<input type="checkbox"/>	AC Engineer Membership Any consulting or specifying engineer may apply for Associate Membership—Engineer. Membership may either be held in the employer's name or individual's name under this classification. Individuals whose employer qualify as a Full Member, as described in the Full Membership section, do not qualify for this category.				
	<input type="checkbox"/>	AD End-User Membership Any individual employee of a company who owns or operates electrical generating equipment and/or related switchgear or components, whose responsibility to his employer includes planning, design, installation, supervision, or service of such equipment may apply for Associate Membership—User. Membership may either be held in the employer's name or individual's name under this classification. Individuals whose employer qualify as a Full Member, as described in the Full Membership section, do not qualify for this category.				
	<input type="checkbox"/>	AE Service Membership Any individual, organization or academic institution that offers services such as research, testing or repair to the electrical generating systems industry may apply for Associate Membership—Services. Membership may either be held in the individual's name or the organization's name under this classification. Individual companies whose employer or parent organization qualifies as a Full Member, as described in the Full Membership section, do not qualify for this category.				
	<input type="checkbox"/>	AG Educational Institution Membership Any postsecondary vocational-technical school or college offering on-site power generation-related instruction may apply for Associate Membership—Education Institution.				
	<input type="checkbox"/>	AM Military Membership Any individual who is currently enlisted, or who has been discharged, or has retired from the US or Canadian Military may apply for membership within this category. Proof of military engagement is required by either current Military ID card or honorable discharge documents.		\$50	N/A	\$50
	<input type="checkbox"/>	AR Retiree Membership Any individual who retires from a member company may apply for Associate Membership—Retired. This classification does not apply to any individual who is employed more than 20 hours per week.		Complimentary		\$0
	<input type="checkbox"/>	AF Student Membership Any individual currently enrolled at an academic institution may apply for Associate Membership—Student.		Complimentary		\$0

1. Contact Information

Company _____
 Address _____
 City _____ State/Province _____
 Zip/Postal Code _____ Country _____
 Phone _____ FAX _____
 Official Representative _____ Title _____
 Representative's E-Mail _____ Company's Web Address _____
 How did you hear about EGSA? Web site Powerline magazine Colleague POWER-GEN Other _____
 Why are you joining EGSA? Certification Program CEU Program Power Schools Buying Guide Listing Other _____

2. Member Classification

Please use the worksheet on page one of this application to determine your membership type.

Full Memberships

- Manufacturer (MF)
- Distributor/Dealer (DD)
- Contractor/Integrator (CI)
- Manufacturer's Representative (MR)
- Energy Management Company (EM)

Associate Memberships

- Regular Associate Membership →
- Full Associate Membership →

(Select Appropriate Category)

- Trade Publication (AA)
- Trade Association (AB)
- Engineer (AC)
- End User (AD)
- Service (AE)
- Educational Institution (AG)
- Military (AM)
- Retiree (AR)
- Student (AF)

3. Membership Dues

(Please fill in the appropriate TOTAL amount from the dues schedule on page one.)

Membership Dues	\$ _____
Membership Plaque (optional)**	\$ 55.00**
On-Site Power Reference Book (optional)**	\$ 140.00 **

Florida Residents: Add 6% Sales Tax to ** items \$ _____

** Shipping and handling is included for Continental US Residents.
 Non-Continental US Residents should call EGSA \$ _____
 Headquarters for shipping charges for **items. **TOTAL** \$ _____

4. Payment Method

(Payable in US\$ drawn on U.S. bank, U.S. Money Order, or American Express)

- Check # _____ Amount Due \$ _____
- Mastercard Visa American Express

Card # _____ Exp. Date _____

Signature: _____

Print Name: _____

5. Products/Services

Please describe the nature of your business (50 words or less, NOT ALL CAPS). If you are a Manufacturer's Representative or Distributor/Dealer, please indicate which manufacturers you represent and/or distribute for; if you are a student, please provide the name and location of your school, your major and your anticipated graduation date:

Do you buy AND sell equipment? Yes No Do you manufacture packaged equipment? Yes No

Available Codes:

- | | | | | |
|-----------------------------------|--|--|---|--------------------------------------|
| 01 ---Batteries/Battery Chargers | 07 ---Engine Starters/Starting Aids | 12 ---Governors | 18 ---Relays, Protective or Synchronizing | 22 ---Trailers, Generator Set |
| 02 ---Control/Annunciator Systems | 08 ---Filters, Lube Oil, Fuel or Air | 13 ---Heat Recovery Systems | 19 Silencers/Exhaust Systems/Noise Abatement | 23 ---Transformers |
| 29 ---Education | 28 ---Fuel Cells | 14 Instruments and controls, including meters, gauges, relays, contactors, or switches | 20 ---Solenoids | 24 ---Uninterruptible Power Supplies |
| 30 ---Emission Control Equipment | 03 Fuel Tanks and Fuel Storage Systems | 15 ---Load Banks | 21 ---Switchgear and Transfer Switches (Automatic or Manual), Bypass Isolation Switches, and/or Switchgear Panels | 25 ---Vibration Isolators |
| 04 ---Enclosures, Generator Set | 09 ---Generator Laminations | 16 ---Motor Generator Sets | | 26 ---Voltage Regulators |
| 05 ---Engines, Diesel or Gas | 10 ---Generator Sets | 17 ---Radiator/Heat Exchangers | | 27 ---Wiring Devices or Receptacles |
| 06 ---Engines, Gas Turbine | 11 ---Generators/Alternators | | | |

Enter codes here: (Limit 10 codes per category)

Products sold: _____

Products rented: _____

Products serviced: _____

6. Sponsor(s):

A "Sponsor" is an EGSA Member who interested you in filling out this application. It is not mandatory that you have a sponsor for the Board to act favorably on this application; however, if a Member recommended that you consider membership, we request that individual's name and company name for our records.

Sponsor Name _____ Company Name _____

7. Official Representative's Authorization

Signature _____ Date _____

NEW EGSA MEMBERS

MF=Manufacturer DD=Distributor/Dealer CI=Contractor/Integrator MR=Manufacturers Rep
EM=Energy Management Co. AA=Trade Publication AB=Trade Association AC=Engineer
AD=End-User AE=Service AG=Educational Institution AM=Military AR=Retiree AF=Student

East Coast Associates Inc. DD
Roseland, NJ
Mark Sisco, President
Sales and service of fuel supply systems

Generator Rental Services LTD EM
Auckland, New Zealand
Gary Lewis, Customer Services Manager
We rent generators, fuel tanks, load banks, transformers, transfer switches (automatic and manual), fuel cells to life line organizations, and utilities.

GNC Power Systems Inc. DD
Nevada, TX
Gary Chafin, General Manager
Dealer of AKSA Power generators. We buy and sell good used generators diesel and natural gas. We do preventative maintenance services for generators. Full service shop, repairs, paint, load bank and electrical problems.

Keith Herrling AM
Beale AFB, CA

Thomas Lain AM
APO, AE

Jeff Maguire AM
Omaha, NE

Jose Mena AM
Tooele, UT

MANN+HUMMEL Purolator Filters LLC. . MF
Fayetteville, NC
Nikesh Bakshi Ph.D., Business Development Manager
The MANN+HUMMEL Group is a leading global expert for filtration solutions and development partner and original equipment supplier to the international automotive and mechanical engineering industries. The group's product portfolio includes air filter systems, liquid filter systems, cabin filters as well as filter elements for machinery servicing and repair.

Mona Electric Group Inc. CI
Clinton, MD
Bill Lowd, Generator Coordinator
Electrical service provider including large scale construction, electrical service, fire alarm, security, voice data, generator installation, maintenance and repair, sprinkler system repair and testing, fire pump controller and diesel fire pump installation, repair and maintenance.

Douglas Nix AM
Pittsburgh, PA

Propace Ingenieria S.A. DD
San Jose, Costa Rica
Esteban Alvarez Quevedo, Electrical Engineer
Sales, service and electromechanical installation of gensets and distribution and central equipment. Distributor of ComAp.

Ron Rannals AE
Anchorage, AK
Individual joining EGSA to attend schools.

Testek Load Banks MF
Wixom, MI
John Bertram, Vice President
Established in 1969, Testek has been a supplier of custom test equipment for the aerospace, airline, aircraft MRO, military, industrial, agricultural, automotive and marine industries. As the world leader in load banks for the aerospace industry, we now offer a complete line of load banks for the commercial market, including power generation.

Arnoldo Velasquez AF
Seattle, WA

Global Coverage Of The Power Generation Markets Industry News . . . From Kilowatts To Megawatts



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SUNBELT TRANSFORMER LTD.

Another in Our Series of EGSA Member Company Profiles



SUNBELT TRANSFORMER LTD. www.sunbeltusa.com

Sunbelt Transformer is one of the world's largest providers of new and reconditioned transformers and electrical equipment for commercial and industrial markets worldwide.

We offer a complete line of transformers, components, switchgear and power products. Whether for sale or rent, we offer the ability to package equipment, provide complete turnkey solutions and offer technical support.

With nationwide and international coverage, we pride ourselves on offering our customers the highest level of customer satisfaction and technical knowledge possible with 24/7 emergency sales and service support 365 days a year via our toll-free number 1-800-433-3128.

Founded in 1981 in Temple, TX, Sunbelt Transformer began operation at a single location, focused on the petrochemical business in the Texas and Gulf Coast region. Buying, selling, repairing and rewinding transformers was Sunbelt's core focus. This EGSA Member firm was aggressive in pursuing surplus equipment to supply customers in need of short deliveries, as well as performing repairs on customer-owned equipment.

In 1987, *INC. Magazine* named Sunbelt Transformer among its "INC. 500" fastest growing companies in America. As they continued to expand their footprint across the United States, they also focused their attention on serving the international markets by adding a depot in Miami, FL.

Today, Sunbelt Transformer has grown into a full-service provider of power solutions. Whether for sale or rent, they offer the ability to package equipment with vast inventory, complete turnkey solutions and technical support with a dedicated team worldwide!

The Divisions of Sunbelt

The Sales Division of Sunbelt Transformer attributes their success to 3 categories: Products, Position and People.

Products: Sunbelt is one of the largest providers of new and reconditioned transformers and related electrical equipment. With over 10,000 units across the U.S. and Canada, they offer a variety of voltages, quality equipment and specialty products.

A sample of their products include:

- New & Reconditioned Transformers up to 100 MVA base. (Padmount, Substation, Dry Type, Polemount)
- New & Reconditioned Switchgear (Padmounted, Load Interrupter, HV & LV Circuit Breakers, Disconnects & much more)
- Transformer Components (bushings, arresters, fuses and transformer fluid)

Position: Sunbelt Transformer has strategically positioned themselves within each market segment, by having the right product at the right place. With 8 locations throughout the U.S., they are always available 24/7-365 days a year.

People: Sunbelt Transformer is proud of the talent and diversity of their sales force. Over the past few months, they have also added professional sales people (strategically located across the country) to better serve the needs of their markets.

The Sunbelt Transformer Service Division... focused on taking care of customers.

Their expertise includes transformer and switchgear repair, field service and testing, allowing them to both diagnose and ensure a successful repair. The goals are simple; Speed, Safety and

Knowledge. Their staff of experienced electrical professionals include seasoned technicians and engineers. Listed below is a sample of their offerings:

- Fluid Analysis & Processing
- Full Electrical Testing
- Leak Repair and Gasket Replacement on Distribution and Power Class Units
- Custom Buss Modification and close coupling of gear
- Components (tap changers, bushings, gauges, fans, bay-o-net, inserts, etc.)
- Retrofilling of Envirotemp™ FR3™ dielectric fluid
- Turnkey solutions including: Rigging, Testing, Replace with Assembly and Disposal of Old Unit

Sunbelt Transformer's Rental Division caters primarily to the Generator Dealer/Distributors, Equipment Rental Companies and Contractors.

Providing products that are designed to compliment generators, chillers and loadbanks, Sunbelt Transformer strives to be a complete power solutions provider and a one-stop shop for the rental of anything electrical. From low and medium voltage cable, to common bus/paralleling cabinets, low and medium voltage distribution, disconnects, breakers, automatic transfer switches and everything in between, they have their customers covered. The firm offers the most comprehensive selection of electrical rental equipment in the industry. They also offer technical assistance with the engineering of complete power packages and as they continue to grow, they are expanding their inventory to enable customers to supplement their rental equipment. This allows customers to be the single-supplier option that many end users seek.

What Makes Sunbelt Transformer Different?

Here are the three components of their value proposition that differentiate them from their competition, and continue their supercharged growth.

Speed

Sunbelt Transformer has quick lead times on product delivery. To help reduce a customer's waiting time, they have realized the importance of a quick turnaround on quotes. The drive for speed will reach every facet of the business and their future

growth and success hinges on the ability to continue to provide products and services as expeditiously as possible.

Customization

They are focused on building the perfect solution for each customer. Previously, what may have been merely a liquid-filled transformer, now can include turn-key installations, special on-load tap changing transformers, dry type transformer retrofits and other specialty type transformers. Put simply; discovering the numerous ways to get from point A to point B.

Ease of Doing Business

At Sunbelt, they strive to make doing business easy for customers. They offer financing; superior customer service; they stand behind their warranties; handle trucking and, most importantly, they do what they say they will do and are there for their customers when they need it most.

What's in Store for Sunbelt's Future Plans?

Sunbelt Transformer's growth strategy of "Doing more in more places" will take their value proposition of Speed, Customization and Ease of Doing Business to new markets; expanding their rental fleet, re-entering the coil-winding business and franchising their testing and service arm, Delta Testing Services Inc.

Continued...



Top: Sunbelt locations across the US.
Bottom: Sunbelt Transformer crew Field Dressing a 20 MVA Unit.



MEMBER PROFILE: SUNBELT TRANSFORMER LTD.

Dan Sweeney, CEO, states "It's with great excitement and optimism that we move off 2015's launch pad with so much excitement for 2016 and beyond. When we look to the future, we continue to build our company one customer and one location at a time, offering quality products and superior customer service."

For more information regarding Sunbelt Transformer and how they can be of service to you, please visit their website at www.sunbeltusa.com or call via their toll-free number 1 (800) 433-3128.

The EGSA Connection

Sunbelt Transformer joined EGSA in 2011 and has been an active member ever since, from participating in each of our Spring and Fall Conferences, to strong representation at a committee level, to exhibiting in the EGSA Power Pavilion at POWER-GEN International since joining. They also support EGSA through advertising and prize giveaways for the spring and fall.

In addition to support, employees of the Sunbelt Transformer team are active at a committee level. Tricia Schweiss, Vice President of Marketing, has been an active member of our Conferences Planning Committee since 2011 and has also participated in the Distributer Dealer Committee (DD) by being a member of the Rental 911 Panel Discussion last year.

Chad Youkers, Vice President of Rentals for SunBelt Transformer, has been an active member of the DD Committee since 2011 and is currently an officer for the Committee since 2015. Chad is also the current Chair of the Technician Apprenticeship Program Working Group and has been one of our Technician of the Year (TOYA) judges since 2014.

EGSA appreciates the fine work that Sunbelt Transformer has contributed these last 5 years and look forward to a long history with this active member of our Association! ■



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USA Mid-Atlantic

Service Manager- EPG

Alban CAT

Location: Elkridge, MD

Alban CAT, the Caterpillar dealer for the mid-Atlantic region is accepting applications for a Service Manager in our Elkridge branch.

To apply: Apply at albanhiring.com

Power Systems Dispatcher

Alban CAT

Location: Elkridge, MD

Alban CAT, the Caterpillar dealer for the mid-Atlantic region is accepting applications for a dispatcher in our Elkridge branch.

To apply: Apply at albanhiring.com

Application Engineer-Power Systems I

Alban CAT

Location: Elkridge, MD

Alban CAT, the Caterpillar dealer for the mid-Atlantic region is accepting applications for an Application Engineer Power Systems I in our Elkridge branch.

To apply: Apply at albanhiring.com

Product Support Sales Representative- Electric Power

Alban CAT

Location: Elkridge, MD

Alban CAT, the Caterpillar dealer for the mid-Atlantic region is accepting applications for a Product Support Sales Representative in our Elkridge branch.

To apply: Apply at albanhiring.com

Field Technician Level I Systems Solutions Group - EPG

Alban CAT

Location: Manassas, VA

Alban CAT, the Caterpillar dealer for the mid-Atlantic region is accepting applications for a Field Technician Level 1- Systems Solutions Group- EPG in our Manassas branch.

To apply: Apply at albanhiring.com

Generator Technician

Engines Inc

Location: Eastern PA, NJ

We are seeking experienced generator and transfer switch field service technicians. To diagnose, troubleshoot, repair and service diesel and gas power systems and related accessories. Prefer applicant to be certified by Kohler or Cummins/Onan with a minimum of 3 yrs field service experience. Offering competitive pay scale and benefits.

To apply: john@enginesinc.com

USA Midwest

Doosan/Rental Sales Rep

Central Power Systems and Services, Inc.

Location: Liberty, MO

CPS&S has a long-standing commitment to employee development and providing the best customer service possible. Product specific sales training will be provided at all relevant opportunities. Learn More and Apply: www.cpower.com/careers

To apply: <http://jobs.ourcareerpages.com/job/144707?source=ccp&jobFeedCode=CentralPowerSystemsServices&returnURL=http://cpower.com>

Application Deadline: 2016-02-29

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.

Generator Technician (Field and Shop)

Central Power Systems and Services, Inc.

Location: Liberty, MO - United States

NOW HIRING Generator Technicians at our various locations: Wichita, KS; Great Bend, KS; Colby, KS; Liberal, KS; Salina, KS; Woodward, OK; Kansas City, MO; Springfield, MO; Dodge City, KS

EGSA Certified Technicians Preferred.

To apply: <http://cpower.com/job-opportunities>

Application Deadline: 2016-02-29

EPG Field Technician

Ohio CAT

Location: Toledo, OH

Field Technicians troubleshoot and repair various equipment such as CAT engines, fluid-ends, air compressors, transmissions, chillers, switch-gear, and generator ends from 5kW-2MW. 5 years' experience desired. Ohio CAT offers a competitive benefits package. We Are Ohio CAT. Grow With Us. EEO, Veterans & Disabled Employer and VEVRAA/503 Federal Contractor.

To apply: Visit <https://candidate.ohiocat.com>

EPG Field Technician

Ohio CAT

Location: Cleveland, OH

Field Technicians troubleshoot and repair various equipment such as CAT engines, fluid-ends, air compressors, transmissions, chillers, switch-gear, and generator ends from 5kW-2MW. 5 years' experience desired. Ohio CAT offers a competitive benefits package. We Are Ohio CAT. Grow With Us. EEO, Veterans & Disabled Employer and VEVRAA/503 Federal Contractor.

To apply: Visit <https://candidate.ohiocat.com>

USA Northeast

District Sales Manager

Doosan Infracore Portable Power

*Location: Boston, MA/
Philadelphia, PA/New York,
NY*

The District Sales Manager is accountable for managing and growing sales to the Portable Power dealers in the territory and developing and growing sales to the independent rental industry and national rental accounts. A Bachelor's Degree and a proven track record in sales are required.

To apply: www.doosanportablepower.com

[doosanportablepower.com](http://www.doosanportablepower.com)

Power Generation Technician

Emergency Systems Service Company

Location: Quakertown, PA.

Seeking an experienced service technician with 5 plus years who can repair all makes of generator sets. Perform computer diagnostics with laptop. Troubleshoot electrical, mechanical, controllers, starting systems, fuel and cooling systems. Inspect, repair, Automatic Transfer Switches. Apply engine technical skills in inspection, disassembly, and failure analysis. Required to be On call, willing to relocate.

EGSA Certified Technicians Preferred.

To apply: apply_to_jobs@emergencysystems-inc.com

Power Generator Field Service Technician

Engines Inc

Location: Eastern PA

Seeking experienced generator and transfer switch service technician. Diagnose, troubleshoot, repair and service diesel and gaspower systems and related accessories. Prefer applicant to be certified by Kohler or Cummins/Onan, with a minimum of 3 yrs field service experience

To apply: john@enginesinc.com

Firmware Engineer

Governors America Corp

Location: Agawam, MA 01001

Firmware Engineer is responsible for embedded software/firmware/controls for developing motor controls, engine controls, stepper motor and brushless DC motor controls. The candidate is expected to be very hands-on, controlling all aspects of software from developing requirements to design, test and documentation. EE or CS required, 3-5 years experience.

EGSA Certified Technicians Preferred.

To apply: Send resume to jhall@governors-america.com

Field Service Technicians (Diesel & Gas)- USA North East

Kinsley Power Systems

Location: CT, NY, MA, NH, VT, ME, NJ, PA, RI

Kinsley Power Systems is seeking experienced generator technicians throughout the Northeast. This position is responsible for completing preventive maintenance, repairs and service on standby power generation equipment. Due to the nature of the service business Field Service Technicians must reside within 25 miles of the available territory and have a clean driving record.

To apply: Lbarnes@kinsley-group.com

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)

Aftermarket Sales, Boston, MA – USA North East

Kinsley Power Systems
Location: East Granby

Kinsley Power Systems is seeking an Aftermarket Sales Manager. The position is responsible for developing, growing and managing the Company's emergency power generator service sales business throughout a given geographic territory. He/she will serve as an ambassador to the Company's service department by selling service agreements, extended warranties and other service products to new customers while maintaining and expanding relationships with existing customers. The sales process includes, but is not limited to prospecting, cold calling, probing, qualifying, presentation & proposal generation and closing Accounts. The position is a hybrid of outside sales, technical sales, account management and customer service.

To apply: Lbarnes@kinsley-group.com

Director of Industrial Sales – USA North East

Kinsley Power Systems
Location: East Granby

The Director of Industrial Sales is a key contributor to the continued growth of Kinsley Power Systems. This position requires the successful candidate to create & implement a sales plan to exceed budgeted revenue goals, and manage some select key/strategic accounts directly, and actively manage a staff of outside sales engineers to maximize revenue/earnings while embracing the Company's core values and driving sales force effectiveness along with utilizing a solid analytic competency and CRM expertise.

To apply: Lbarnes@kinsley-group.com

Director of Industrial Sales – USA North East

Kinsley Power Systems
Location: Hartford, CT

The Director of Industrial Sales is a key contributor to the continued growth of Kinsley Power Systems. This position requires the successful candidate to create & implement a sales plan to exceed budgeted revenue goals, and manage some select key/strategic accounts directly, and actively manage a staff of outside sales engineers to maximize revenue/earnings while embracing the Company's core values and driving sales force effectiveness along with utilizing a solid analytic competency and CRM expertise.

To apply: Lbarnes@kinsley-group.com

Field Service Technicians (Diesel & Gas)– USA North East

Kinsley Power Systems
Location: CT, NY, MA, NH, VT, ME, NJ, PA, RI

Kinsley Power Systems is seeking experienced generator technicians throughout the Northeast. This position is responsible for completing preventive maintenance, repairs and service on standby power generation equipment. Due to the nature of the service business Field Service Technicians must reside within 25 miles of the available territory and have a clean driving record.

To apply: Lbarnes@kinsley-group.com

Field Service Technician

Powers Guaranteed Generators
Location: Norwood, MA

Powers Guaranteed Generators is currently seeking experienced industrial/commercial generator technicians for the Boston, Metro West area. Candidates must have a minimum of three years experience performing preventative maintenance, troubleshooting, and repairs on multiple brand generators and switchgear. Must be organized, well spoken, computer/technology literate, and solutions minded. Competitive wage and benefits package.

EGSA Certified Technicians Preferred.

To apply: resume@powersgenerator.com

Field Service Tech

Weld Power Generators
Location: Millbury, MA

Field Service Tech needed for the North East. Diesel/Nat Gas engines, Controls, ATS and Load bank testing. Health Insurance, 401K, Company Van, iPad and many other benefits included.

To apply: Please send your resume to jchianese@weldpower.com

Application Deadline: 2016-03-01

USA Northwest

Generator Field Technician

TW Enterprises

Location: Billings, Montana

Billings Montana based company has 2-Generator field technician positions available. Positions are in Fargo, ND and Sidney MT. We are looking for Individuals with 3 or more years of experience working on Generac commercial and industrial products. Technician must be experienced with performing pm& repairs, startups and warranty on power generation equipment. Needs be a self-starter with the ability to safely work alone. Must possess excellent electrical and mechanical troubleshooting aptitude as well as having solid computer and customer relation skills.

EGSA Certified Technicians Preferred.

To apply: Send resume to mikeg@twegen.com

USA Southeast

Advanced Electrical Field Service Engineers

Carolina CAT

Location: Charlotte, NC, USA

Carolina CAT services and supports many different industries by performing inspections, modifications and repairs on low and medium voltage electrical systems. Carolina Cat's, Advanced Electrical Services (AES) team is growing and we are seeking experienced Field Service Engineers to help serve our customers!

EGSA Certified Technicians Preferred.

To apply: Email Resume to Travis McIntosh at tmcintosh@carolinacat.com

Application Deadline: 2016-05-30

Generator Technician - Montgomery Area!

ESSE

Location: Montgomery, Alabama

Birmingham Industrial Dealer has an immediate opening for a Generator Technician for the Montgomery area to work from home with company truck. Candidate must have 5 years of service experience. Position will have some overnight travel. Competitive compensation and benefit packages. Pre-employment background & drug screening required.

To apply: Send resume and sales requirements to HR@essellc.com

MTU Onsite Energy CEO, Todd Riemann, Appointed to Minnesota Governor's Workforce Development Board

State taps local manufacturing CEO to help strengthen Minnesota's workforce



Minnesota Governor Mark Dayton and Todd Riemann

Governor Mark Dayton has appointed Todd Riemann, MTU Onsite Energy CEO and COO, to serve as a business representative on the Minnesota Workforce Development Board (GWDB), effective January 19. Riemann's three-year term is set to expire at the end of 2018.

"Todd's appointment to the Governor's Workforce Development Board is fantastic news for the Greater Mankato marketplace," said Jonathan Zierdt, president and CEO of Greater Mankato Growth, Inc., a regionally-focused Chamber of Commerce and Economic Development organization. "His manufacturing industry expertise coupled with the passion and initiative he has demonstrated for developing our future workforce will make him an articulate voice in the service of our state."

Riemann, a Minnesota native, started his career with MTU Onsite Energy (formerly Katolight) in 1983 as an assembly lead. His more than 30-year tenure has included roles of increased responsibility with positions in operations, sales and management. In 2009, he was appointed as chief operating officer and was appointed chief executive officer in 2011.

"Minnesota's workforce is one of the state's greatest assets and I am honored and humbled to be appointed to a council of leaders whose mission is to develop a skilled and talented workforce," said Riemann.

The GWDB was established as Minnesota's Workforce Investment Board to assist the Governor in implementing the provisions of the Workforce Investment Act of 1998. Comprised of 41 voting members and 14 non-voting members from private, public and community entities, the board's mission is to analyze and recommend workforce development policies that strengthen talent development, resource alignment and system effectiveness to ensure a globally competitive workforce for Minnesota.

MTU Onsite Energy has been operating in the Mankato, MN community for over 60 years. As one of the core brands

of Rolls-Royce Power Systems, MTU Onsite Energy provides diesel and gas-based power system solutions: from mission-critical to standby power to continuous power, heating and cooling. MTU Onsite Energy power systems are based on diesel engines with up to 3,400 kilowatts (kW) power output, gas engines up to 2,150 kW and gas turbines up to 50,000 kW. First opening in 1952 as Katolight, the company has remained a staple in the Greater Mankato community since its inception.

For more information please visit www.mtuonsiteenergy.com. ■

EGSA Industry News Guidelines

We welcome you to submit press releases for consideration for inclusion in the Industry News section of *Powerline* Magazine. However, due to the fact that *Powerline* is the voice of an organization consisting of more than 800 Member companies, we maintain a strict editorial policy that prohibits any endorsement of a particular company or product. As a result, **we do not accept product-specific or service-specific releases for publication.**

Please email your press releases to PR@EGSA.org.

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No company in the world can match the depth and breadth of our portfolio. From simple 10 kW portable load banks to multiple MVA, we can provide a solution for virtually any application. We revolve around your needs, with the expertise and technical knowhow to assemble custom solutions that provide leading power test solutions.

Technology

Innovation is at our core, complemented by our commitment to build load banks to the highest standards – ISO9001, UL/CUL, CSA, CE, IEC, NFPA. Technical leadership includes Sigma control which is sector leading in simplicity, ease of use, and accuracy.

Sigma brings cost effective solutions to today's power testing requirements which can require high level instrumentation, data capture and verification with the ability to link multiple load banks of differing capacities or combination and controlled from one hand-held terminal or PC.



Experience

Ninety years combined experience in load banks is only matched by the 125 years ASCO has been providing power solutions. Our team of experts has provided countless standard and custom load banks to the industry over the years.

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