

Provider of mission-critical power generation equipment, parts, and service for the Mid-Atlantic region.



Fall 2019

Power Generation *PULSE*

Safety News: **Do You Know?**



Emergency vs. Standby Systems: What is the Difference?

The term “Emergency Generator” is often used incorrectly to describe the generator used to provide backup power to a facility. Officially, as defined by *NFPA 70, National Electrical Code (NEC)*, there are four types of backup or standby power systems: Emergency Systems, Legally Required Standby Systems, Optional Standby Systems and Critical Operations Power Systems (COPS). Understanding the differences among these system classifications is important for determining which **codes and standards** apply and for what the design, installation, inspection, maintenance and testing requirements are for the backup power system.

- **Emergency Systems** (NEC Article 700), which are legally required for some facilities, are systems whose operations are essential for safety to human life. These are also known as Level 1, or critical to life safety.
- **Legally Required Standby Systems** (NEC Article 701) are required by codes to illuminate or to power equipment that is not categorized as requiring emergency power, but whose failure could create hazards, hinder rescue or hamper firefighting operations. These systems are known as Level 2, or less critical systems.

[Read More About Emergency vs. Standby Systems](#)

Beyond 75: Priming for the Future

As Curtis Engine’s 75th anniversary year begins to wind down, it’s time to look to the future. What is the outlook for Curtis Engine during the next five to 10 years? What market factors and opportunities will drive the company’s growth? What strengths will the company be able to draw on? What challenges will need to be overcome?

With these preliminary questions as “thought provokers,” we invited company leaders and key



Curtis Throwback

employees to answer the following question:

How is Curtis Engine priming for the future?

Following is a sampling of “quotable quotes.”

Trip Harrison President and Chief Executive Officer

“Curtis Engine will continue to thrive, not only as a Baltimore-based business serving the local market, but also on a larger scale serving some of the world’s biggest and best-known companies. We will draw on our two of our greatest strengths – our people and our ability to recognize and react to changes in the marketplace. The power generation equipment market will probably look much different in 10 years, with new products such as microgrids and CHP systems playing a larger role and integrated with diesel backup generator sets, battery storage, and solar. Regardless of the products and competitors, our customers will always need knowledgeable and professional engineers and technicians to integrate and service their systems. This is what we have done for 75 years, it is what defines us today, and what will continue to be our focus in 10 years.”



[Read More 'Quotable Quotes'](#)

Stroll Down Memory Lane... and Holabird Avenue!

Dial back to 1963 through 1993 to the stark enclave of factories, taverns and warehouses of Southeast Baltimore. The setting is the former Curtis Engine facility located on Holabird Avenue. Sitting on an incline on more than two acres in this gritty slice near Dundalk was the service department building. Down the hill was the main building that housed parts and people.

This is where Curtis Engine built the foundation for its position today, as one of the leaders in power generation. In the early years, Curtis Engine supported Baltimore's shipyards and steel mills with engine overhauls and had almost 40 product lines of engines, air compressors, and power generators.

During its 30-year tenure on Holabird Avenue, the company condensed its service and product line. Curtis Engine became one of the largest distributors of Onan engine generators and segued into the standby engine market, where it had a corner on providing standby units for all of the Baltimore-area Giant and Safeway supermarkets. By the late 80s and early 90s, Curtis Engine also had an on-site power generator rental fleet of more than 100 units, ready to support customers when the need arose.

[Stroll Further Down Memory Lane](#)

Top Trends

Why is Everyone Talking

About CHP Systems?

Co-generation, also known as Combined Heat and Power (CHP), is the on-site production of multiple types of energy — usually electricity, heat and/or cooling — from a single source of fuel. While co-generation is not a new concept, we are seeing renewed interest in CHP systems as a viable way to make facilities more resilient while reducing energy costs and helping to meet sustainability and emissions reduction goals.

Once primarily used by large, complex manufacturing facilities, modern **CHP systems** have become more compact, efficient, environmentally friendly, and affordable. Facilities that have round-the-clock electricity demand, require high levels of power reliability, and can use the waste heat generated as a byproduct of electricity production are



prime candidates for a CHP system. We are fielding more inquiries from hospitals, government facilities, universities, and large commercial building owners who are interested in exploring the benefits of on-site CHP systems.

[Learn More About CHP Benefits and Financial Incentives](#)

Eye on Engineers

Curtis Engine Contingent Puts a Charge into MTU Engineering Symposium



Curtis Engine took 49 people, our largest contingent ever, to the 11th annual MTU Engineering Symposium in Mankato, MN. Here the group enjoys the Oktoberfest celebration.

On October 16-18, 2019, MTU Onsite Energy hosted its 11th annual Engineering Symposium at the factory in Mankato, MN. Curtis Engine took 49 people to the Symposium—the largest single group in attendance and also the largest group



**A Rolls-Royce
solution**

Power (CHP) generator education was also a hot topic. Sessions on generator set sizing and installation considerations

Curtis has ever brought. Approximately 500 people from North and South America were in attendance. Attendees were mostly electrical engineers, but there were also end users, suppliers and energy service companies present.

MTU Onsite Energy offered 15 class options for the registrants to choose to attend. Additionally, the factory was open for a tour which the majority of attendees included in their busy day. The most popular classes this year focused on Microgrids, including basic, intermediate and high-level class options. Combined Heat and

continued to be well attended. Engineers were able to earn Continuing Education credits for all classes.

MTU, which is part of Rolls Royce Power Systems, also unveiled its new graphic branding, which will be introduced later this year. The new brand is **MTU, a Rolls-Royce Solution**. The updated logo is shown above.

Find Out More about the MTU Symposium

Curtis in the Community

Third Annual Toy Drive Brightens the Holidays for Hospitalized Kids

Curtis Engine, throughout our 75-year history, has been a family-focused company with a charitable nature and strong desire to give back to the community. Our annual holiday toy drive, now in its third year, is underway.

Curtis Engine partners in this effort with the Baltimore-based Kamryn Lambert Foundation. The foundation's mission is to enrich the lives of children and young adults who are facing adversity, by providing educational and recreational opportunities that help them achieve their hopes and dreams. The organization's annual toy drive seemed like a natural charitable fit for the holiday season.

The toys and gift cards collected by Curtis Engine go to children who are in local hospitals. With festive, decorated boxes placed in several locations in the Curtis corporate office, donations are encouraged from our employees, customers and visitors to the company. It all started with one box, and with time, has become a much larger and heartfelt event embraced by Curtis Engine management, office staff and field service technicians.

Says Jen Bowers, Curtis Engine Accounting and HR Manager, "Anything we can do to lift the spirits of these kids, especially during the holidays, makes a difference."

Through December 13, collection boxes will be located inside the Curtis Engine office, located at 3915 Benson Ave, Baltimore, MD 21227.



How do we find disciplined and loyal service technicians who have prior leadership experience, who know how to follow protocols, and who are eager to learn new skills?



At Curtis Engine, we have discovered that **military veterans** embody these qualifications and represent the future of our company. We honor our veteran employees and acknowledge their service to our country and our customers.



Damascus Smith has been a dedicated and valued Curtis Engine employee for the past six years. He brings a wealth of knowledge and training from his time in the U.S. Marine Corps to his current position of Field Service Technician. He joined the Marine Corps in 1997, training at Camp Lejeune, NC and overseas and earning the rank of Lance Corporal. During his enlistment, he served as an Electrician with Headquarters Battery, 2nd Artillery Battalion, 10th Marine Division.

At Curtis Engine, Damascus utilizes skills and lessons learned as a Marine (such as team building and problem solving) in his everyday work. He commissions new generators and automatic transfer switches, and is one of two techs who service BWI Airport generators.

His tremendous work ethic can be summed up with a saying he learned in the Corps: "Do the right thing when no one is looking."

Project Spotlight

Montgomery County Fire Stations Generator Replacement Program *Montgomery County, MD*

In an initiative by the Montgomery County Fire and Rescue Service to replace emergency generators in 33 existing stations throughout the county, Curtis Engine partnered with Electric Advantage, Inc. (EAI) to design, specify and install the systems. The goal of the project is to provide stations with reliable standby power to keep operations running seamlessly with no downtime, regardless of utility power failure. The ongoing project, spanning almost 10 years, is scheduled to be complete in 2020.



CHALLENGES AND SOLUTIONS: There were multiple challenges facing the team, one of which is the different space constraints in each station. Each station site requires a different design. EAI analyzed and provided state and

local Homeland Security requirements, noise ordinances, and dimensions for the facilities. Based on this information, Curtis Engine worked with equipment manufacturers MTU Onsite Energy and Automatic Switch Company (ASCO) to develop customized solutions to specify the most effective and efficient generator equipment and fuel.

THE BOTTOM LINE: June K. Evans, FMP, Manager of the Capital Projects and Facilities Section of the Montgomery County Fire and Rescue Service, describes the client's satisfaction with the project saying, "Curtis Engine was the right partner for our generator replacement program. They understood that fire stations are a vital part of the public safety emergency response network which must operate



continuously, even during the installation. They carefully reviewed our needs, then recommended dependable generators with long life cycles that are capable of supporting the full station loads, and their customer service was extraordinary."



Curtis Engine & Equipment Co., Inc.

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