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®

CASINO RESORT DOESN'T GAMBLE WHEN IT COMES TO POWER

ICE BREAKER

Houston beverage distributor weathers storm with Cat[®] power

COMPLETE COVERAGE

School district backs up data center with Cat power and full dealer support

Have a Plan

No matter where you live, at some point, the odds are you will encounter severe weather.

2020 smashed the previous record for billion-dollar weather and climate disasters, as 22 separate events swept across the U.S., costing the nation a combined \$95 billion in damages.

Climate researchers at Colorado State University are predicting another above average hurricane season this year, with 17 named tropical storms, eight hurricanes, and four major hurricanes during the 2021 Atlantic season.

Whether you live in a region where hurricanes and tropical storms are more likely to cause business interruption, or inland, you never know when severe weather may strike—so it's important to be prepared.

Three businesses featured in this issue illustrate the importance of having standby power at the ready.

A casino in Louisiana weathered back-to-back hurricanes last fall with a fleet of Cat[®] generator sets, while a beverage distributor in Houston kept operating in the midst of a severe winter storm that caused widespread power outages across Texas. And in Kansas—a region that has its share of severe weather—a high school is prepared for power outages with a gas standby genset.

We hope you enjoy these real-life success stories.

DDYOU KNOW?



Caterpillar Diesels won Olympic gold in 1952

Before the NBA became what it is today, the Caterpillar Diesels—later called the Peoria Cats—were one of basketball's most dominant teams in the National Industrial Basketball League (NIBL).

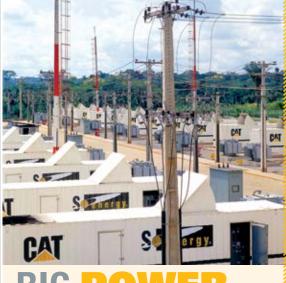
In the 1950s, Peoria was on top of the basketball world. And these men, who built Cat yellow iron by day, were some of the world's greatest basketball players by night.

After winning the Amateur Athletic Union championship, the Diesels went on to compete in the Olympic basketball team playoffs at Madison Square Garden in New York City, where they defeated the University of Kansas.

Five members of the Diesels, along with head coach Warren Womble, were selected to represent the United States in basketball at the 1952 Helsinki Olympics.

In Helsinki, the U.S. basketball team was the only undefeated team after the first six games. The U.S. was matched in the finals against the Russian team. This was a monumental occasion as it was at the height of the Cold War and was also the first Olympics that Russia fielded a basketball team. The U.S. defeated the Russians 36-25, winning the gold medal.

- Courtesy of the Caterpillar Visitors Center



BIG POWER

In the early 2000s, countries around the world started experiencing power shortages, which resulted in rolling blackouts and total interruptions. This energy crisis resulted in hospitals and police departments using Cat[®] generators for emergency power, as well as manufacturers and large corporations installing on-site backup power.

Brazil was a country that experienced a significant issue with power interruptions. In 2001, the country depended on hydroelectric power for 90 percent of its electricity, but rainfall was sparse. Reservoirs that ideally should have been half full were at 34 percent capacity, resulting in a significant decrease in the country's ability to supply power.

The lack of energy contributed to decreased factory output and families spending their evenings by candlelight. To resolve the issue and improve the longterm power infrastructure, Brazil turned to Caterpillar for the installation of an additional power source.

It resulted in the largest electric power project ever undertaken by Caterpillar anywhere in the world. In 2001, Caterpillar shipped 760 megawatts of electrical generating capacity to Brazil as part of a massive one-gigawatt distributed-generation project to relieve shortages resulting from drought-stricken hydroelectric plants.

"It's probably the worst power crisis in Brazil's recent history." Jim Parker, former director of Caterpillar Electric Power, said at the time. "Between our Electric Power Group and the Cat Americas group, we are shipping generators to Brazil as fast as possible."

One of the Caterpillar solutions was the installation of 31 Cat 3516 power modules at a power plant in Rio Branco, Acre, Brazil. The power plant enabled Acre to have surplus power—a rarity at the time.

Although the drought in Brazil represented a unique challenge, it demonstrates the impact and importance of a consistent power supply on day-to-day life.

IN THE SPOTLIGHT:

Safe Haven

Last fall, Louisiana experienced the most active hurricane season in state history, as five tropical systems, including three hurricanes and one major hurricane, made landfall. Southwestern Louisiana and, specifically, the Lake Charles area, saw two direct hurricane landfalls within a six-week period. Thanks to its varied fleet of 11 Cat[®] standby generators, Coushatta Casino Resort has developed a reputation for being a safe haven when it comes to having reliable power.

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Kansas school district has complete maintenance and repair protection with ESC and CVA coverages

Hassle-free ownership

A Customer Value Agreement (CVA) offers resources for maintenance planning, repairs, rebuilds, and upgrades, with diagnostic and troubleshooting support as well as expert dealer advice and training options. Contact our dealership to learn more about maximizing the value of your asset.



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OUSHATTA GA

CASINO RESORT DOESN'T GAMBLE WHEN IT COMES TO POWER



ncompassing 880 total acres, the Coushatta Casino Resort is one of the 10 largest private employers in the state of Louisiana with 2,200 associates.

Located 35 miles northeast of Lake Charles, the resort operated by the Coushatta Tribe of Louisiana offers a 115,000 square-foot gaming floor, six restaurants, two hotels with more than 700 guest rooms, and an RV camping area. Koasati Pines at Coushatta is the toprated golf course in Louisiana, and is ranked number 18 in the country by *Golf Advisor*. Other options for entertainment and recreation include a 4,400-seat arena for concerts, bull riding and pow-wows, off-track betting, several large swimming pools, and a new 20,000-sq.-ft. conference center that is currently under construction.

Given the resort's remote location five miles north of the town of Kinder, it sits at the end of the transmission line from



its electric power utility. This results in voltage fluctuations, which can have a detrimental effect on casino operations, as well as other areas of the resort.

In order to safeguard the casino and resort properties from full-scale power outages and voltage sags, the casino relies on backup power supplied by a fleet of 11 Cat[®] generator sets, including five 3516 diesel gensets and a 3512 diesel generator. Altogether, the entire Cat fleet is capable of producing 13.5 megawatts of power.

Maintaining continuous power is critical for casino operations. This

includes safeguarding the older reel-type slot machines, which many patrons favor.

"Once they go down, there's a chance they may not come back up," says Bobby Thornton, director of marketing for the casino. "The electronics in many of those slot machines are pretty dated, and they've seen a lot of use. So first and foremost, the objective is to keep those up. Secondly, we need to keep the lights, cameras and all aspects of the casino floor functioning so we can maintain the data from our player tracking system and have continuous gaming protection.

"If we don't have backup power from our generators, we wouldn't be able to run the casino the way the state compact requires us to," Thornton adds. "It also allows us to continue our restaurant operations."

Two 500 kW uninterruptible power systems (UPS) positioned at each end of the casino ride through any power anomalies and ensure that all slot machines stay online. Due to the frequent fluctuations in voltage, the Cat 3516 diesel generator sets are called upon based on the duration of the anomalies to ensure the UPS systems remain available during additional power fluctuations, even when there is not a full-scale utility outage.

Storm protection

Last fall, Louisiana experienced the most active hurricane season in state history, as five tropical systems, including three hurricanes and one major hurricane, made landfall. Southwestern Louisiana and, specifically, the Lake Charles area, saw two direct hurricane landfalls within a six week period. That included Category 4 Hurricane Laura, the strongest storm to make landfall in the state in over 100 years.

After Hurricane Laura roared inland on Aug. 29 carrying sustained winds of 149 mph and leaving devastation and floods in its wake, Coushatta Casino Resort lost power from the utility grid for two weeks. The fleet of Cat gensets ran for two straight weeks, burning 15,000 gallons of diesel fuel per day. The resort became an oasis of stability as resort staff, tribal members, hotel guests and utility workers sheltered there during storm recovery efforts.

"Those generators are our lifeblood," says Rusty Curtis, executive director for facilities at Coushatta Casino Resort.

"During Hurricane Laura, we had first responders staying here along with tribal members that we put up in our hotels. We were sheltering a lot of people who could not get to their homes. And we had associates who were living here so that we could operate the essential functions of the casino to help maintain food service, facility operations, and security and emergency response capabilities for all the people who were staying here."

In the wake of Hurricane Laura, the surrounding area was without power for up to a month. As the only restaurant that stayed open following the hurricane, the resort's Lagniappe Market food hall provided sustenance for guests, casino staff and tribal members.

"We had utility line crews with 70 to 80 bucket trucks that stayed here," Curtis said. "Some of them stayed in our pavilion or in chalets. Some of them brought RVs and stayed in our 100-slip RV park as well. So we were able to support them so they could deploy from our property out to the different parishes.

Continued on page 6

CUSTOMER PROFILE

Coushatta Casino Resort

Location: Kinder, La.

Application: Standby power,

Cat® Equipment: 3516 diesel gensets (5); 3512 diesel generator; C32, C15 (2), C9, C4.4, D80-4 diesel gensets; Paralleling Switchgear, Remote Asset Monitoring



"Power was definitely in short supply, and the fact that we had it actually allowed us to open up faster than we would have been able to otherwise," Curtis said. "The casino is the lifeblood of the tribe, so the sooner we were able to get the casino back up and running, the better off the tribe was."

Coushatta has developed a reputation for being a safe haven when it comes to having reliable power.

"When we had the hurricanes last fall, people chose to come to us as opposed to staying at home in certain cases because they felt that it was safer," Thornton says. "And by the time an ice storm hit Texas in February, there were quite a few guests from Houston who knew they were going to be out of power, but they knew the casino would have it. The reputation we have is that we'll have power when other places do not."

During hurricane season, having power also enabled dryers and fans to run, which helped deter the potential for mold growth. In the hot, humid climate, this could have resulted in structural damage that would have cost millions of dollars to repair, Curtis said.

Remote monitoring solution

Given the complexity of operating and maintaining so many generators on-site not all of them are called on to run at the same time—facilities staff asked their Cat dealer to provide a remote solution.

Cat Remote Asset Monitoring enables generators to be monitored remotely, and significantly exceeds the capability of a supervisory control and data acquisition (SCADA) system. Today, SCADA is being eclipsed by remote monitoring and control via internet and wireless communications.

Among the many benefits of remote monitoring, operators receive continuous data on engine and electrical performance parameters, receive real-time alerts and alarms, detect engine or generator faults that could threaten a shutdown or failure to start, and generally optimize performance.

"Right now, when we have a voltage bump or we see our lights flicker and we get a notification that the UPS is activated, we have to send people to the generators to see if they're running," Curtis says. "With Cat Connect, you're able to be notified when they're running and you can see it



Cat Switchgear

remotely. You can see it from your house, or wherever you have a phone.

"And there are so many other things you can monitor as far as the characteristics of the generator operation," he says. "So, the advantage for us is we don't have to be there to know what's going on."



Adds Curtis: "I think the biggest thing we benefit from is not only knowing when the generators come online, but also having the ability to look at each unit remotely and check fuel levels. So in the middle of a two-week storm, our facilities guys don't have to keep riding around and verifying how much fuel is left. They're able to remotely access all the generators and look at fuel levels, and more efficiently schedule fuel deliveries. That saves on personnel riding around and physically doing this stuff."

A remote monitoring deployment starts with a site assessment that takes an inventory of the gensets, their controls, and the data those controls collect. Once engineered, deployed, and tested, a remote monitoring application such as Cat Connect can monitor a genset fleet of essentially unlimited size with units of different ages and from a diverse mix of manufacturers.

For the switchgear upgrade and integration of Cat Connect, Coushatta's Louisiana Cat account rep, Corey Dupuis, brought in a team of engineers to conduct a walk-through of the existing equipment.

"They go through any specific requirements or options that we want, and they are very hands-on and guide us through the entire design process," Curtis says. "Then they touch base during installation to determine if any changes are needed or anything else is required. So they make the process much easier. We tell them what we need, and then that's what they make happen."

Critical backup

The multitude of generators at Coushatta is necessary to back up various parts of the resort. In addition to four 3516 diesel generator sets that back up the casino, another 3516 backs up the 1,500-ton casino chiller plant.

Elsewhere, two Cat generator sets—a C9 and a 3512—provide standby power to the 401-room 7 Clans Hotel and 208-room Grand Hotel. (This summer, a 1 MW Cat C32 will replace the C9 at 7 Clans and provide 100 percent backup to the hotel.)

A Cat C15 500 kW genset ensures Coushatta's wastewater treatment plant





"Cat[®] equipment—whether it's switchgear, generators, or automatic transfer switches—has always been a quality product. Louisiana Cat has always provided excellent service."

> **RUSTY CURTIS**, Executive Director for Facilities, Coushatta Casino Resort

never loses power, while a new Cat C15 generator will back up power to the resort's hotel laundry operation. Also a Cat C4.4 genset provides backup to the Central Services building, while a D80-4 genset backs up operations at the maintenance building.

"I'm probably a 10th-generation facility manager out here, and the Cat equipment—whether it's switchgear, generators, or automatic transfer switches—has always been a quality product," Curtis says. "It's reliable and it runs when we need it. And Louisiana Cat has always provided excellent service. So, it's not only the quality of the products, it's the quality of the people."

On a Sunday before an ice storm in February, Curtis received a text from the Coushatta tribal chairman asking if the 7 Clans Hotel had backup power. He contacted his Louisiana Cat representative, who helped expedite timely delivery of a 1 MW rental power generator.

"Actually, the next day we did lose power for a short time and needed it," he says. "The fact that they were able to get a generator and a technician out here on short notice was incredible. Everything was connected and ready to go by 6:30 the night before the storm hit."

Curtis relies on technicians from Louisiana Cat to keep his large fleet of gensets up and running.

"We've had some technicians from elsewhere who turn out to be parts changers, meaning they don't really know how to fix the problem," he says.

"Whereas, when the Louisiana Cat technicians come out here, they come with the right equipment and the right training. When they walk away, it's fixed. Cat technicians will come out and fix it when nobody else can figure it out."

G3512H GENERATOR SET MAXIUM RETURN

erfected after thousands of hours of testing, the Cat[®] H Series has accumulated more than 1.9 million run hours and is built on the legacy of the proven G3500 generator set platform.

The 12-cylinder G3512H gas generator set delivers improved return on investment for combined heat and power (CHP) and continuous electric power applications.

Field proven in a wide range of applications worldwide, the G3512H genset can be used in industrial and commercial facilities such as hospitals, data centers, manufacturing plants, and greenhouses, as well as distributed generation power plants by electric utilities.

"This product was developed based on customer demands for improved return on investment for combined heat and power (CHP) and continuous electric power applications," says Mike Yohe, a Caterpillar product definition manager. "It will provide exceptional value in countless applications, while helping reduce energy costs and providing high reliability."

Key features

- The G3512H provides a robust power source that is also easy to install and commission.
- For applications isolated from a primary electric utility, the G3512H offers industry-leading load acceptance capability.
- The G3512H leads the industry with the lowest owning and operating costs in its class through improved electrical efficiency of up to 44.6% /60Hz and 44.9% /50Hz (ISO, 1.0 p.f.).
- Lower maintenance costs: Cuffed cylinder liners, updated valve stem sealing, and increased valve train lubrication minimize the

number of maintenance events and reduce oil consumption over previous levels.

- An open combustion chamber design enables use of a lowpressure fuel system (1.5 to 5 psi/ 10.2 to 34.5 kPa) that facilitates maximum performance on pipeline natural gas.
- The major overhaul period of the G3512H is 80,000 hours with an in-frame maintenance interval at 40,000 hours.
- Performance is not compromised at higher altitudes and ambient conditions.

The G3512H is easily tailored to specific applications with a wide selection of Cat SR5 generators and attachments, premium controls, exhaust options, remote annunciator modules and battery chargers.

The genset also features easy integration with building management systems, using a non-proprietary communication infrastructure from Caterpillar's EMCP4.3 generator set controller. An expanded set of features from Caterpillar also includes a complete gas train, package-mounted air cleaners and simplified wiring connections.

The G3512H comes standard with Cat Connect capabilities. Cat Connect is a suite of services to collect and analyze data to help customers reduce owning and operating costs and increase profits. R

To learn more about the G3512H gas generator set, contact the power systems specialists at our dealership.



ICE BREAKER HOUSTON BEVERAGE DISTRIBUTOR WEATHERS STORM WITH CAT® POWER

HOOPION REVERAGE DIPIKIROIOK MEALHERP PIOKINI MILH CAL ADAM

eginning Feb. 13, Winter Storm Uri overwhelmed the state of Texas with its fury and collateral damage. The winter storm caused power grids to fail across the U.S., causing blackouts for over 5.2 million homes and businesses, the vast majority of which were in Texas—making it one of the largest blackout events in modern U.S. history and the costliest natural disaster in the recorded history of the Lone Star State.

As a result of the winter storm and a concurrent cold wave, power grids—unable to sustain the higher-than-normal energy and heating demand from residential and business customers—failed across Texas. At the peak of the outages, at least 4.5 million Texas residents were left without electricity. The blackout durations extended from hours to days in subfreezing temperatures.

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One business affected by the storm was Houston Distributing Company.

Established in 1963, Houston Distributing Company is located on a 27-acre campus in the northwest perimeter of Houston. With 400 employees, the beverage distributor operates a large fleet of local delivery and long haul trucks. Local deliveries are made to convenience stores, grocery stores, as well as bars and restaurants. The distributor also makes long haul trips to Ft. Worth, Austin and Shiner.

With a territory encompassing a large portion of Harris and Fort Bend counties, the company distributes more than 10 million cases of beer annually.

"The way the roads were iced over we couldn't get our product out for two days," recalls Kenneth McGaughey, production manager for Houston Distributing. "A couple of us were able to get to work to make sure things were secure and that our beer that was stored in ambient conditions didn't freeze."

Continuous power is necessary to keep the malt beverage products at a consistent temperature and keep it from freezing. Freeze protection heaters require power to operate. This was especially important, as before the storm, Houston Distributing had acquired plenty of inventory to get ahead of the impending spring and early summer selling season. "The price was right where we needed it to be, so we snagged it and we've been happy with it ever since. I haven't needed much support from Mustang Cat, but every time I contact them, they're right on top of things and they give me all the help that I need."



KENNETH McGAUGHEY, Production Manager, Houston Distributing

Critical backup

An automated loading process is critical to the distributor's operation. Salesmen in the field enter orders from iPads that are downloaded to a server. Once received, the orders are dispatched to an automated machine that processes the data and builds a pallet specifically made for that order. Once the pallets are built, they are automatically stretch wrapped and presented to forklift operators in the exact order that the pallets should be loaded onto each truck for delivery.

The automated palletizing system known as a Vertique System—has shortterm battery backup, but requires power at all times. Keeping the IT servers up is also critical, as they enable salesmen to enter orders, which are then dispatched, automatically palletized for shipment to their final destinations.

"So if we can keep those servers from shutting down, it's a major plus," McGaughey says. "Our salesmen out in the field rely on their handhelds to punch in orders."

A Cat[®] G3512 diesel generator set provides backup power to the palletizing system, ensuring it never goes down if utility power is lost. The 1.5 MW genset also backs up power to the heaters and the majority of the HVAC system in the distributor's climate-controlled area.

Additionally, an automatic transfer switch occasionally transfers power to the Cat genset that rides through short power brownouts on the utility grid.

Houston Distributing acquired the diesel generator from Mustang Cat in 2016 with only 56 hours on it.

"We needed a generator and a lady at our Cat dealer found us one," McGaughey says. "The price was right where we needed it to be, so we snagged it and we've been happy with it ever since. I haven't needed much support



Packaged orders



Palletizing system



from Mustang Cat, but every time I contact them, they're right on top of things, and they give me all the help that I need."

The winter storm exposed another vulnerability at the distributor's corporate offices, which had no heat during the outage. Pending a load analysis, Houston Distributing plans to acquire another Cat generator set to provide backup power to that building.

"During the storm, the building was freezing up there," McGaughey says. "If we had brought in the majority of our staff to work, it would've been uncomfortable for everybody. So we're working with Mustang Cat right now to acquire another generator. We just need that load analysis to find out what size we need."

Helping out

Clean drinking water was scarce during the crisis. Almost half the population of Texas lost access to running water as a result of the winter storm—the average Texan lost running



water for 52 hours. During this same timeframe, the average Texan with running water could not drink it for an average of 40 hours. Bottled water was in short supply.

In response to the shortage, Houston Distributing loaded up 12 pallets of bottled water and delivered them to a local law enforcement agency for public distribution. President and CEO Bo Huggins rode along to present the delivery to the local constable's office.

CUSTOMER PROFILE

Houston Distributing Company

Location: Houston, Tex.

Application: Standby power

Cat[®] Equipment: 3512 diesel genset



"We had just brought in a new supplier, Zen Water, and we loaded up whatever we could fit in a truck—10 to 12 pallets— and took them over to one of the local law enforcement agencies that was handing out water to the public," McGaughey says.

"We were just glad to be able to help out during what was a hard time for everybody. And having been through that experience, we plan to be prepared with more standby power if this ever happens again."



COMPLETE COVERAGE

SCHOOL DISTRICT BACKS UP DATA CENTER WITH CAT® POWER AND FULL DEALER SUPPORT

hawnee Heights USD 450 is a unified suburban school district located in southeastern Shawnee County, Kansas. Headquartered in Tecumseh, the public school district encompasses the communities on the southeast edge of Topeka, including Tecumseh, Berryton and nearby rural areas.

The district has a combined total of 3,600 students from pre-kindergarten to 12th Grade, and includes four elementary schools, a middle school and a high school. The high school has three computer rooms and an award-winning media center. According to *U.S. News & World Report,* the graduation rate at Shawnee Heights High is 97 percent—well above the state average.

The district is served by a centralized data center that hosts academic programs for both classroom and remote learning, as well as supporting HVAC, door access and VoIP systems and fire alarms.

In 2010, the data center was expanded in order to support additional academic programs for students and staff. For the next decade, an uninterruptible power supply (UPS) unit powered by 48 batteries served as the primary backup source to ride through power outages.

But after 10 years, it was determined that the school district needed to have a more robust source of backup power, according to Blair Anderson, director of information technology for the Shawnee Heights School District.

"We were experiencing outages from storms and grid failures," Anderson said. "We needed something reliable that would keep the power on during an extended outage without overly taxing our battery backup system, and not requiring IT personnel to shut down systems to conserve battery usage."

Backup plan

Following a bidding process that evaluated various brands, the district opted to install a Cat[®] DG150-2 generator set fueled by natural gas. With help from its Cat dealer, Foley Equipment, the genset was installed in December 2019.

"We evaluated different generators as part of the bidding process, but we had heard really good things about Caterpillar," Anderson said. "So, we ultimately decided upon the Cat brand. And we also wanted to do business with Foley Power Solutions. They're located just a couple of miles from our district office, and that was important to us."

In the past, if the Shawnee Heights School District experienced an outage, typically the UPS battery backup system would run for two hours or longer, Anderson said.

"With the 150 kW Cat generator that we have in place now, the battery backup system only runs about 15 to 30 seconds before the generator kicks on. So, beyond the added reliability that having a dedicated standby generator provides, it saves us money by not having to replace the batteries on the UPS nearly as often."

Shawnee Heights chose a natural gas generator set over a diesel version primarily for no-hassle maintenance. The main advantage is that diesel fuel does not have to be delivered and stored onsite—not to mention the added burden of maintaining the quality of diesel fuel.

"We wanted something that was easy to maintain because we have a small IT and maintenance department," Anderson said. "So, it was important that it didn't require a lot of maintenance and fuel monitoring on a regular basis. And we already had natural gas in the area, so it was easy to run the gas line over to the pad behind the school where the generator was placed."

Dedicated support

Because school districts don't always have trained personnel who can operate and maintain generator sets, this role is left to highly trained technicians and product support representatives from the Cat dealer.

Not only does Foley Power Solutions play an essential role in maintaining the generator at Shawnee Heights, but the Cat dealer was there from the beginning, providing guidance with generator selection, installation and commissioning.

Continued on page 14

CUSTOMER PROFILE

Shawnee Heights USD 450

Location: Tecumseh, Kan.

Application: Standby power

Cat® Equipment:

DG150-2 gas generator set, Remote Asset Monitoring



"Foley helped us select the generator that matched our needs," Anderson said. "They worked with our maintenance department to make sure that the concrete pad it rests on was poured correctly. And they worked with the natural gas company to make sure the gas line was there and that we had the volume of gas that was required to support it.

"And when it came to installation and commissioning, they were here the entire time to make sure that everything went successfully."

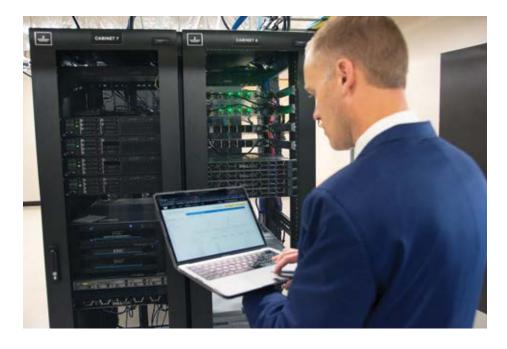
To lock in long-term dealer support, Shawnee Heights opted for a five-year Customer Value Agreement (CVA). Technicians from the Cat dealer perform all scheduled and unscheduled maintenance on the genset. Routine services include semi-annual and annual inspections, as well as annual load bank testing.

A CVA offers resources for maintenance planning, repairs, rebuilds, and upgrades. It also provides diagnostic and troubleshooting support, as well as expert dealer advice and training options.

"They're always available to answer our questions, provide training and just make sure that our generator is operating efficiently," Anderson says.

Additionally, a CVA provides $S \cdot O \cdot S^{SM}$ fluid sampling, genuine Cat parts delivered on time, as well as flexible service options to best suit a customer's unique application.

To ensure complete coverage without interruption, the district also purchased 10-year Extended Service Coverage (ESC), which offers the following benefits:



- Coverage for parts and labor expense on covered components.
- Avoids unexpected repair costs caused by unscheduled repairs.
- Ensures repairs are done right the first time, with factory-trained technicians using genuine Cat parts.
- Returns electric power systems to their original operating specifications, meeting all requirements for safe use and environmental compliance. By combining Extended Service

Coverage with a Customer Value Agreement, Shawnee Heights receives complete maintenance and repair protection.

"Combining ESC coverage with a CVA is a good practice for all school districts," says Charles Moffet, a product support sales representative for Foley Power Solutions. "This not only gives them the peace of mind that they won't have any unexpected bills, but it also helps ensure their generator set is covered by the Caterpillar Extended Service Coverage."

Not only does pairing a CVA and ESC guarantee performance and uptime, but it also provides cost certainty in the school district's budgeting process.

"When they are putting together a budget, it lays it all out for them over the next five or 10 years," Moffet says. "That way they know they won't have any unexpected costs."

Remote monitoring

When it's needed, the 150 kW Cat generator activates and starts providing power to the data center within several seconds. It enables the information technology and maintenance staff to remotely monitor the operation of the generator from a laptop or cell phone.

"The service that we receive from Foley is top-notch, they are available 24/7 to answer any questions or concerns that we have. The technicians that come on site really care about the customer and our needs. They want to make sure we are satisfied, and all of our issues are addressed before they leave."

BLAIR ANDERSON, Director of Information Technology, Shawnee Heights Unified School District 450

Shawnee Heights chose to add Cat Connect Remote Asset Monitoring because it gives staff the ability to monitor the generator from any type of device, from any location.

Remote monitoring gives the customer and the Cat dealer the ability to prevent generator failure by sending immediate notification of alarms when they occur.

"When a problem occurs with the generator, it will send a notification to your e-mail and/or a text message," Moffet says. "So, if it is a low coolant temperature alert, that tells us right away that you probably have a block heater issue. And if it's a low voltage alert, then you could either have a battery charger failure or maybe even a faulty battery."

With remote monitoring, Shawnee Heights staff can make sure their generator is running on its scheduled weekly run time, even if they are not watching live because all run time is logged.

"We want to know when that generator has an issue or if it is running, especially during severe storms that occur at night," Anderson says. "We want to make sure that it kicks on. Having the ability to do remote monitoring is something that influenced our decision to go with Caterpillar."

The archived log also tracks when annual, semi-annual or quarterly scheduled maintenance is performed. The bottom line is to ensure that the generator runs at peak performance.

For good measure, Shawnee Heights purchased a temporary connection box from Foley Equipment. Also

known as a tap plate, the connection box is permanently mounted on the exterior of a building and electrically connected to an automatic transfer switch or manual transfer switch. The tap plate makes it easy for the Foley technicians to hook up when they conduct an annual load bank test with the generator. "One of our goals as a district is to make it easy for the Foley technicians, because it's a partnership and we wanted them to have the resources that they need when they're on site," Anderson says.



The partnership between the school district and its Cat dealer is highly valued by Anderson and Shawnee Heights staff.

"The service that we receive from Foley is top-notch," Anderson says. "They are available 24/7 to answer any questions or concerns that we have. The

technicians that come on site really care about the customer and our needs. They want to make sure we are satisfied, and all of our issues are addressed before they leave.

"We see them as a partner, because without them we would not have the ability to provide power to our data center that supports instructional learning." 🛪



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