

THIS IS THE STORY OF

2017



# RESTORED

## KISSIMMEE UTILITY AUTHORITY REPORT TO THE COMMUNITY

### HURRICANE POWER RESTORATION HIGHLIGHTS COLLABORATION & INGENUITY

Damage assessment, support and technological advancements expedite restoration efforts

Electricity is part of the basic fabric of America. It's essential to modern life. And it's often taken for granted. Each time a light switch is flipped, a cell phone is charged, a dishwasher runs or a ceiling fan turns, power is being used. It's generated far away, carried by miles of lines and carefully engineered to enter a home or business safely.

When the normal flow of electricity is interrupted, it's an inconvenience. But when a hurricane threatens Central Florida, it could mean lengthy outages and major grid restoration. On Sept. 10, 2017, when Hurricane Irma blew through Central Florida, Kissimmee Utility Authority employees used every tool at their disposal to keep the lights on: experience, preparation, determination, innovativeness, compassion and grit. And they would do just that. Together.

Preparing for and responding to Hurricane Irma would be quite different than KUA's response to Hurricanes Charley, Francis and Jeanne in 2004. Brian Horton, vice president of KUA's Engineering and Operations department, reflected on how KUA's response to Hurricane Irma differed from its response to Hurricane Charley. He thought for a moment, then said, "We were more proactive for Irma. For Charley, we waited until after the storm hit before requesting mutual aid from other utilities. But for Irma, we started requesting and staging mutual aid workers before the storm hit."

"Electricity is an essential service," he continued. "Our customers expect us to do everything possible

to restore power as safely and quickly as we can following major storms."

Horton manages 92 employees who are responsible for delivering electricity from the power plant to the customer. They build, maintain and repair the electric system. During power restoration efforts last September, his group swelled by 128 workers from 41 other out-of-state utilities as well as contractors who traveled to Kissimmee to help KUA get the lights back on and the air conditioners humming.

Like others featured in this annual report, Horton had high praise for KUA employees as well as the out-of-state mutual aid workers. "We all worked safely and efficiently to restore power after Irma. No one was injured during restoration, and within 75 hours we had restored power to all customers who were able to receive power."

Aaron Haderle, manager of Transmission and Distribution Operations, noted this was the first year KUA utilized an electronic application to assess damage and integrate that information into the current outage mapping system. "By utilizing these two tools together, we were able to shorten restoration times because we had the damage locations populated with the outage areas on the map. This helped us be better prepared to restore our customers' services because we had all the information we needed in one active map and could see the progress in real time."

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# HURRICANE POWER RESTORATION HIGHLIGHTS

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A week before Hurricane Irma hit, members of Horton's team were lining up tree trimming firms to help clear trees so line workers could remove broken poles, set new ones and reattach electric lines after Irma passed through.

As the storm was bearing down on Central Florida, all employees in Engineering and Operations received a call at home to report for work, recalled Haderle. "If an employee didn't report in or we had not heard from them, we sent someone to their home to make sure they were OK. We tell our employees to make sure their families are safe before reporting for duty."

After power was restored to all 38,000 KUA customers who had lost it, more than a dozen KUA line workers went to other Florida cities, including Orlando and Lakeland, which needed help restoring electric service in their communities. After that, six linemen went to Puerto Rico, some staying as long as 36 straight days to help restore power.

"Every department across KUA came together to restore power to our customers," Haderle said. "And then we helped other utilities restore power. That's what we do."

## First step to restoring power: Assessing damage

In emergency rooms, they're called triage specialists. In the political world, they're called advance squads. And in the power industry, they're called damage-assessment teams.

Whatever their industry and whatever they're called, all perform the same essential function. They're the first step in the long process of determining the severity of a situation and recommending a course of action.

During power restoration after Hurricane Irma, Felix Escobar, KUA's manager of Distribution Engineering, was responsible for getting about 15 two-person teams into the field to assess damage to KUA's electric system. Their onsite assessments helped dispatchers at KUA's Emergency Operations Center send the right number of crews with the right equipment to fix specific problems.

How many poles were down? What transformers were under water? Which substations sustained the most damage? The teams' assessments influenced how many crews and what equipment was needed to restore power in each affected neighborhood.

The damage-assessment teams consisted of support services personnel from the Customer Service department who drove the KUA vehicles, and engineering personnel who performed the damage assessment.

"Customers who lost power were really glad to see the damage-assessment teams show up," recalled Escobar, a 28-year KUA veteran. "But it was difficult for the teams to answer questions about when the power would be back on as they were in the process of assessing the system."

"In some neighborhoods, severe flooding hampered restoration efforts," he pointed out. "You can't perform electrical work when you're standing in water. In other areas, utility lines had been torn down by trees, which had to be removed before lines could be reattached and energized."

"For all the different situations, restoring power to customers started with damage assessment," Escobar said.

While the public may see the damage-assessment teams or the crews in the bucket trucks, Escobar said a lot of other KUA employees provided essential behind-the-scenes support to those customer-facing employees.

"Restoring power is physically exhausting work," he said. "Crews worked 16-18 hours a day. They needed to be fed and supplied with water and Gatorade. Mutual aid crews needed to be put up in hotels. Their clothes needed to be cleaned. All of this was arranged by employees in Finance and Administration, who did a great job. This was just one example of essential behind-the-scenes support."

Like Horton, Escobar is proud to report there were no on-the-job injuries during the power-restoration efforts, which lasted about three days. "This shows the importance of working safely, working efficiently and working quickly. By doing that, we not only shorten outage times but we also protect our employees, which saves customers money."

"People sometimes ask us why we don't do power restoration work in the dark after hurricanes. The answer is we do, but the restoration moves slower."

"Our employees really care about KUA's customers and their communities," Escobar said. "They're passionate and compassionate. You won't hear anyone say, 'That's not my job' during power restoration."

## Doing whatever is needed to support the restoration effort

There is a saying, "No job is complete until the paperwork is done." Terri Biller knows all about it. Nine months after Hurricane Irma hit Kissimmee, her team is still assisting the Finance and Administration department with filling out paperwork for the federal government to reimburse KUA for the expenditures it incurred recovering from the storm.

Biller, an assistant to the vice president of the Engineering and Operations department, found her team having to perform tasks to support the recovery efforts that they wouldn't ordinarily do. Her team took customer calls about power restoration under their purview and did whatever else needed to get done to support the power-restoration effort.

Her main tasks during and after the restoration were tracking timesheets, paying invoices and assisting Finance and Administration with filing for reimbursement from the federal government. With 128 out-of-state mutual aid workers from 41 utilities, as well as contractors helping KUA recover from Hurricane Irma, that was — and still is — a lot of paperwork.

Some moments from last September really stand out for Biller. Like the warm reception KUA line crews got when they showed up to restore power at a YMCA.

"People at the Y were clapping and cheering when our orange bucket trucks rolled up," she recalled. "It made you feel good that our customers and the community recognized we were giving it our all."

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## HURRICANE IRMA AND THE STATE OF FLORIDA

**\$50 billion** in damage statewide – the costliest storm in state history

**142 mph** was the highest observed wind gust

**7.7 million** Floridians were without power at the peak of the storm

**84** fatalities across 27 counties

**6.5 million** Florida residents evacuated, making it the largest evacuation in the state's history

**32** rivers and creeks overflowed, resulting in significant flooding

**21.6 inches** in precipitation was recorded at the storm peak



*“Our employees run toward a disaster,  
not away from it.”*

- Terri Biller, Assistant to Vice President, CAP



# THE ULTIMATE PAYOFF?

*“When our field workers were told by customers, ‘Wow, you guys did a really good job getting the power back on.’ That made it all worthwhile.”*

- Ken Beville, Manager of Geographic Information System



# HURRICANE POWER RESTORATION HIGHLIGHTS

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“Most customers know we will do whatever we can to get their power back on safely and quickly,” continued Biller, who has been with KUA for 23 years. “They saw it again after Irma. We all jumped in and did our part.”

“I love working here,” she said. “Any time we have a storm or an emergency, everyone bands together and we do what it takes. Our employees run toward a disaster, not away from it.”

## Ingenuity on home-grown app speeds power restoration

Anything printed on paper can quickly become outdated. And outdated paper maps of an electric distribution system can pose special dangers for electrical line workers. “Paper maps of the distribution system can become obsolete as soon as they are printed, because the electric system is continuously changing,” said Ken Beville, manager of KUA’s Geographic Information Systems team.

What’s so dangerous about paper maps? Paper maps are static but the electric system is dynamic. Changes to the electric distribution system are being made all the time, and those changes could affect the safety of crews in the field.

For example, a circuit change made by a work crew on a Tuesday would not be reflected in a map printed the day before. If a second crew works on the system on Wednesday, they might not know about the change to the electric system that was done the day before, which could expose them to potential hazards. A paper-based map might show a particular area being fed from a different source. But if it was energized differently, that could delay workers or, worse yet, cause potentially serious injuries.

This is why KUA’s GIS group strives to make current, accurate data available to the people in the organization who need it.

As Hurricane Irma was bearing down on Central Florida, Beville kicked into high gear. He had previously ordered 25 iPads, designed to replace older laptops for field workers. They were quickly repurposed for the task of damage assessment. Then Beville and his team spent a day configuring

an application for those iPads that KUA’s damage-assessment teams could use to report damage to the system.

“Our field workers have been using laptops for 25 years,” he recalled. “They’re quite accustomed to working digitally. But for the task of damage assessment, we were still using paper until Irma.”

On the Monday after Irma hit, KUA crews used paper maps. The next day, they used iPads with the GIS damage-assessment app. The difference was instantaneous and dramatic.

The app allowed damage-assessment teams to instantly convey the scope of damage at a particular site to decision-makers back in the office. A Damage Assessment Dashboard application was created so at a glance anyone could determine the number of poles and transformers that sustained damage, as well as the number of spans of wire that were directly impacted.

The final piece was Beville taking the damage assessment data and overlaying it on the outage data that comes from KUA’s Outage Management System to present a comprehensive view of the outage situation. This gave decision makers in the office a clear vision of the current electric system, the specific damage found in the field, and the location and magnitude of the resulting outages. It helped prioritize power-restoration work and minimize safety risks.

“Data came in immediately once we started using the app,” Beville continued. “Having that real-time information helped us understand the extent of what we were facing, allowed us to move crews and equipment to the right areas, and coordinate the sequence of restoration work. Some people experienced a real ‘aha’ moment when they were able to send and receive information instantly, and our maps would be updated dynamically.”

The ultimate payoff? “When our field workers were told by customers, ‘Wow, you guys did a really good job getting the power back on.’ That made it all worthwhile.”



## KUA LINEMAN

## VOLUNTEERS TO RESTORE

## COMMUNITIES

“When you’re restoring electric service, you have to be on your ‘A’ game,” said Shane Paras, a lead lineman who’s been with KUA for 11 years. “The intensity is much higher than on a normal day. Your mindset is focused on safety and the urgency of what you’re doing.”

“Water was everywhere, electric lines were down and people were out in the street walking around. We needed to make sure people stayed away from downed electric lines and that the downed lines were not live before we started working in an area.”

Paras praised the teamwork of his fellow KUA employees. “We had accountants bringing us bag lunches in the field. People in Finance and Administration made arrangements with caterers, hotels and laundry services so that out-of-state workers had food to eat, beds to sleep in and clean clothes to work in. I’ve never experienced that kind of team challenge before, and it made me feel good to work for KUA.”

After working 16-18 hours a day for three days getting power back to KUA customers, Paras traveled to Orlando and then Lakeland, where he spent three days each helping those communities restore power. From there, he went to Puerto Rico where he worked 36 days straight to help restore power to the island after it was devastated by Hurricane Maria.

As he did in Kissimmee, Paras worked 16-18 hours a day during those three mutual aid stints.

“Orlando and Lakeland were pretty much the same story as Kissimmee,” he recalled, “but Puerto Rico was 100 percent different. The destruction there was 100 times worse than in Kissimmee, Orlando or Lakeland. Everything, and I mean everything, was destroyed.”

Paras worked into November helping restore power to Puerto Rico. “The heat and humidity were brutal, but it was awesome when it rained because that cooled us down a bit,” he said.

“As a lineman, you have a sense of duty,” Paras continued. “You work safe, you work hard and you work quickly to get the power back on.”

Puerto Rico was not Paras’ first time providing mutual aid to other utilities — he went to Tallahassee a few times previously to help that community after hurricanes hit. “Mutual aid is part of a lineman’s DNA,” he explained. “I’d go again right now if I was needed. Mutual aid is all about helping others.”





## CUSTOMER SERVICE REPS ANSWER THE CALL

Calls, texts, chats and emails answered around the clock to keep customers informed

When Hurricane Irma, a Category 4 hurricane with wind speeds of up to 130 miles per hour, slammed into Central Florida Sept. 10, 2017, KUA customers started calling their utility. And texting. And chatting. And emailing. Across platforms, in a large and cascading crush of communication, customers all wanted to know when their power would be restored.

Fortunately, KUA's three dozen customer service representatives, plus qualified representatives who typically work in billing and collections, along with their supervisors, were ready. Technology investments made years earlier enabled customer service team members to even handle calls from their homes if they had power.

Phones and laptops were fully charged. Vacations were canceled. All hands reported for duty. Minutes after a storm emergency was declared, nearly all customer service employees had logged into KUA's systems and were ready to take customer calls from their homes.

If power went out at their homes, customer service employees made sure their families were safe and then headed into KUA's Carroll Street headquarters, where they worked rotating shifts to make sure customer calls were answered 24 hours a day until the last customers had their power back.

Approximately 38,000 customers, about 53 percent of KUA's territory, lost power during Hurricane Irma. Power was restored to the last customer within 75 hours, just over three days.

During the outage, phone calls to KUA surged 28 percent, to an average of 1,711 per day. Customers had to spend more time waiting on the phone, but the customer service employees answered nearly every call. Few went to the computer voice-response system. That was not necessarily the case for Florida's other utilities, some having been hit harder than KUA. For those other utilities, restoration times were longer. And if customers tried to call, text or chat, there was a

good chance they were unable to communicate with a person.

"We thought it was important that our customers speak to a person during the outage, if that was possible," said Patricia LaMarche, a customer service supervisor. "We wanted to provide a human touch, particularly during times of uncertainty."

"Our customer service employees listened compassionately to customers, provided information on the power-restoration efforts and shared that many of them also were out of power," added Marilyn Grande, another customer service supervisor. Grande worked the 11 p.m. to 7 a.m. shift during the power restoration. "We wanted to give customers the space to vent, and that tended to calm them down. Then, we could tell them what we knew about the restoration efforts."

Since she had no power at home, Christine Infante brought her 15-year-old daughter to the office. She joined other employees' children in KUA's on-site emergency day care center staffed by volunteers from KUA's Information Technology department.

"We are emergency personnel who are needed to serve the community," said Infante. "We all know our roles during an emergency. We know we're here to serve customers. KUA really went above and beyond in supporting us. The day care center that was set up gave us peace of mind that our children were safe and supervised. People brought us meals so we could devote our full energies to helping customers. We all took care of one another."

Across KUA, everyone pitched in. In addition to the IT department employees who ran the day care center, employees from other departments spent hours entering customer outage information into KUA's outage management system, which helped prioritize power-restoration efforts. Meter readers didn't have a lot of meters to read during a power outage, so they joined damage assessment teams driving

through KUA's service area evaluating storm damage and relaying information back to the Emergency Operations Center, all to expedite power restoration efforts.

In addition, KUA CSRs held 3,124 chats with customers during September 2017, three to four times the average number of chats with customers in prior months. Again, a customer-centered investment in technology, made the year before, paid off handsomely. KUA wanted customers to have the ability to contact the utility using whatever means the customer preferred.

Understandably, customers who called to report outages were eager to know when their power would get restored. It was a typically hot and humid Central Florida September, conditions made even more miserable by the additional humidity put into the air by Irma's rain and flooding.

"Some people called us 10 times a day for updates," said Grande. "We understood their concerns. Because the Corporate Communications department did a great job supplying us and the news media with information on the storm and the progress of the restoration, we were able to provide customers with current information."

"After customers got their power back, we got a lot of compliments via chat and on social media," added Infante. "Some people even called back to thank us for restoring their power."

LaMarche added: "KUA has a great reputation, and our employees are proud to work here. My friends are always asking me if we're hiring. If you're wearing a KUA badge off campus, it's not uncommon for people to stop you and ask if KUA is hiring. Hiring customer-centered employees really paid off during an emergency, when everyone is focused on helping customers or supporting those front-line employees who are taking care of customers."

# EMERGENCY DAY CARE SPEEDS POWER RESTORATION

KUA employs a number of single parents as well as couples with children. Years ago, those employees faced a terrible dilemma during a power emergency: go to work and worry about their children or stay home to watch their children when schools and day care centers were closed. Staying home meant missing work during power restorations, thus slowing the pace at which power could be restored.

That dilemma ended in 2003 when Jef Gray, vice president of Information Technology, proposed a solution that benefitted employees with children as well as customers. He set up an emergency day care center at KUA that year so employees could come to work and focus on restoring power without worrying about their children. Employees can count on the emergency day care any time extreme conditions prevent normal child care services from being available during restoration efforts.

"The day care center provided a solution for single parents and working couples with children," said Yeidee Escobar, Gray's executive assistant. "When the power goes out, services for children are the first to close. Schools, day care centers and even other family members are disrupted from normal routines. As a result, a parent is forced to choose between going to work or tending to their children. For employees of KUA, this meant fewer staff members would be able to respond to the outage."

And that would have meant customers waiting longer to get their lights back on and their air conditioners humming.

Escobar and an IT associate, Zoraida Velez, set up and staffed the emergency day care during Hurricane Irma power-restoration efforts last September. On any given day, they cared for more than a dozen children.

The IT department's administration staff modified their conference room to accommodate employees' children and provided them with movies, snacks and games. When parents had a break, they could drop in to visit.

The children loved it. And the parents were relieved.

"My wife and I work for the public, and we both needed to report to work after Irma," recalled Steve D'Auria, an

engineering technician in KUA's Engineering and Operations department. "Our 12-year-old daughter and 10-year-old son were too young to stay alone, and we had no family members to watch over them."

"KUA offered to have a safe place for employees to bring their children to work and have them watched over, fed and engaged while allowing us to be able to help with restoration efforts," D'Auria continued. "Yeidee and Zoraida were there for us from the opening of business to later in the evening, willing to provide a much-needed service."

"KUA saw a need for their employees and addressed it, which enabled us to better serve our customers in such a critical time," he added.

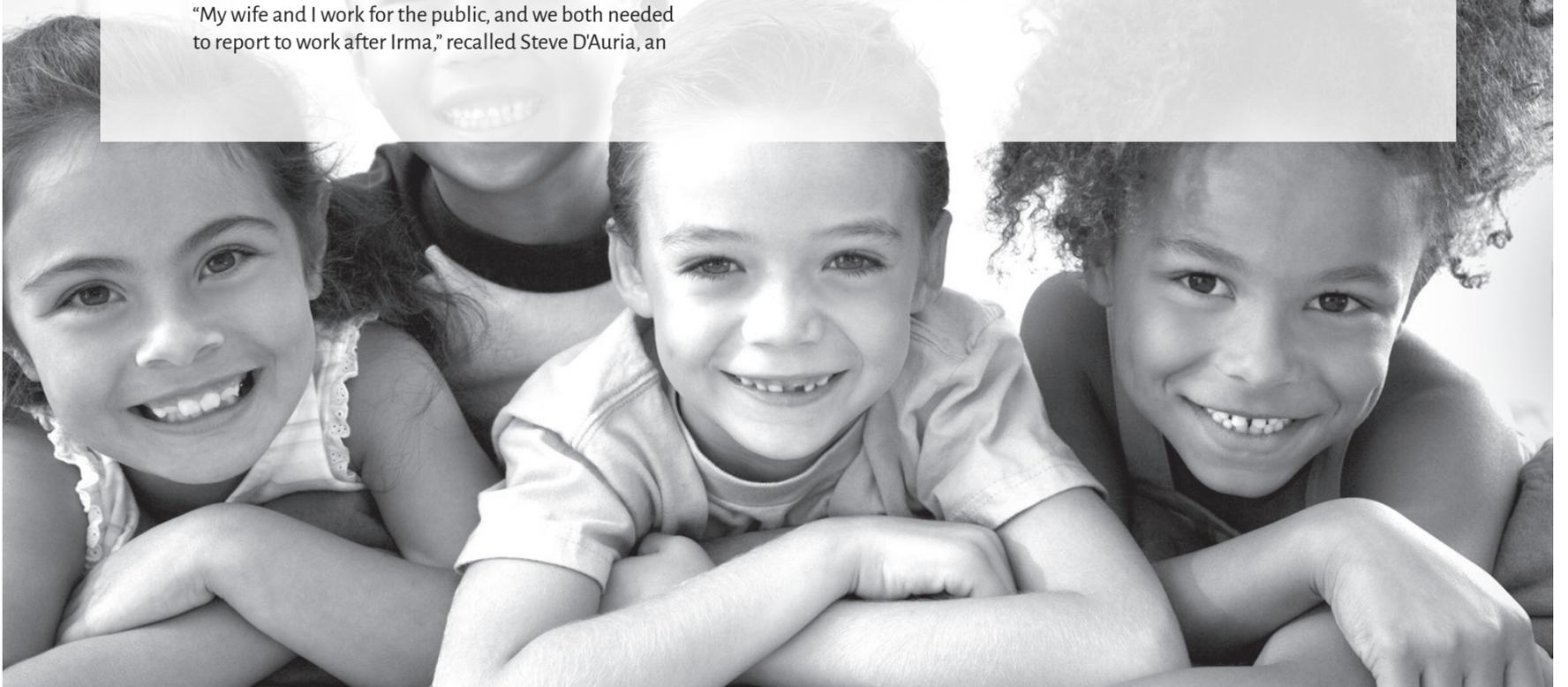
Jennifer Grieves, an administrative assistant in the Finance and Administration department, echoed D'Auria's sentiments. "Both my husband and I work for KUA, and we wondered where our 7-year-old daughter would go when we were performing storm-related duties."

"We were less stressed after Irma when we heard the IT department would provide a day care at the Carroll Street headquarters," she continued. "It was a blessing knowing that either my husband or I could go check on her during the day. This was her first hurricane and she was scared. But knowing we were close by and could visit any time made her feel a lot better."

Grieves' daughter even drew a picture of KUA's power-restoration efforts.

When people ask Grieves' daughter what she wants to be when she grows up, she said either an astronaut or a KUA employee. Her daughter even wrote thank-you notes to Escobar, Velez and others who took care of her.

"I really hope that when we have another storm, KUA will have its emergency day care center again," Grieves said. "I know it allowed both my husband and me to focus on our jobs and help with the power-restoration process."





*“We’re here to take care of our customers. Electricity is a necessity of life, and when it goes out, we work to restore it as safely and quickly as possible.”*

*- Jorge Carrero, Manager of Materials Management*



# EMPLOYEES COLLABORATE TO SUPPLY, FEED, TRANSPORT AND HOUSE FRONT-LINE WORKERS

## Preparation is key in KUA's quick response and restoration

Whatever their branch of service, aspiring military officers are taught the importance of having a plan before going into battle. The battle may not unfold exactly as expected, and some improvisation may be required. But without a plan, disaster awaits.

Though Central Florida has had mostly quiet hurricane seasons for over a decade since 2004, when hurricanes Charley, Francis and Jeanne leveled the area, each spring KUA employees vigilantly plan for the upcoming hurricane season, which runs from June 1 through November 30.

Three months before the start of hurricane season, employees from KUA's Finance and Administration department check on the availability of local hotels and laundry services. They review their inventory of chain saws and chain saw chains. They contact equipment vendors about spare parts. They even check on the level of fuel in storage.

By doing these tasks before the hurricane season begins, these employees did their part to ensure that if a hurricane hit, everyone's energies could be fully devoted to restoring power to customers. No one would be running around looking for saw chains or scrounging for diesel fuel.

"Our department had a lot of jobs leading up to a hurricane, but among the most important was to make arrangements with caterers and hotels so that workers would be fed and housed during power restoration," said Kevin Crawford, vice president of Finance and Administration.

During the three-day power-restoration process after Hurricane Irma last September, those caterers ultimately provided 7,599 meals to workers, including 128 who came from other utilities. Breakfast was served at 6 a.m., lunch was brought to crews in the field around noon and dinner was served at 8 p.m.

"The caterers and KUA provided numerous cases of water and Gatorade so that the workers were properly hydrated," Crawford recalled. "To keep all of those fluids cool, we brought an ice truck on site to keep ice around the clock. September in Central Florida is extremely hot and humid. What we learned from the hurricanes of 2004 was we needed more ice than you can possibly imagine."

### Preparation pays off for supplying front-line troops in Saudi Arabia, Iraq and Central Florida

"In the Army, you learn quickly that without bullets and food, troops on the front line can't succeed," said Jorge Carrero, the materials manager in KUA's Materials Management department. Carrero should know: he spent 21 years in the Army, rising to the rank of sergeant first class in logistics. As a member of the 101st Airborne, Carrero had tours of duty in Saudi Arabia and Iraq, among other places, supplying helicopters before they went into battle.

"When you're in logistics, you get used to turning on a dime," he continued. "My job then, and my job now, is

to supply and support the troops on the front line. For KUA, it's those front-line troops, the line workers, who make our customers happy."

Though improvising is second nature to Carrero, he also did his share of planning in the run-up to Hurricane Irma last September. Weeks before Irma hit, he stockpiled wooden and concrete utility poles and miles of electric line so field crews could work uninterrupted.

Roughly 200 wood utility poles had to be brought in from Georgia. Carrero's planning paid off, as transportation between Georgia and Florida became very difficult during and after Irma. Fortunately, the 200 wooden utility poles he procured were resting, safe and sound, in KUA's warehouses for weeks before they were needed.

"The camaraderie, leadership, planning, training and communication made all of us more prepared to respond," he recalled. "KUA is a quality outfit. The employees really have initiative. They are driven."

"There wasn't a lot of need to tell employees what to do during power restoration because everyone had been through our Disaster Drill Day," said Carrero. "They knew what they needed to do to support the field workers whose lives are literally on the line during power restoration."

Carrero echoed what other KUA employees said. "We're here to take care of our customers. Electricity is a necessity of life, and when it goes out, we work to restore it as safely and quickly as possible. Customers understand that, and they thank us."

### Traveling to Puerto Rico to ensure safe, efficient bucket truck repair

It's been said that transportation is like running water. When it goes well, it goes unnoticed. When it goes wrong, it negatively impacts most all aspects of life. That's a true statement for nearly all Americans, and it's true for KUA employees.

Neil Beville is the manager of fleet operations at KUA, which makes him and his team of expert mechanics responsible for maintaining and repairing about 205 utility bucket trucks, fork lifts, pickup trucks, heavy equipment and other vehicles. Without Beville's team, KUA line workers are going nowhere fast.

When a KUA vehicle breaks down, Beville and his team respond at a moment's notice to get the vehicles rolling again.

Last September, one of the bucket trucks KUA sent to Puerto Rico broke down during power-restoration efforts after Hurricane Maria. The hydraulic cylinder had failed, which prevented the bucket from rising.

The estimated cost to repair the cylinder: \$10,000. The truck would be out of commission for two weeks, he recalled. Beville was concerned and aggravated.

## HURRICANE IRMA AND POWER RESTORATION

**\$100 million** in overall damages in Osceola County

**3,934** businesses and dwellings suffered minor damage, 95 reported severe damage, and 23 others were destroyed in Osceola County

**53%** of KUA's 72,000 customers were left without power

**128** mutual aid workers from other utilities

**7,599** meals prepared for workers from other utilities

**6,912** bottles of water and 1,512 bottles of Gatorade were consumed by lineworkers during the restoration

**75** hours was the total restoration time for KUA customers

# EMPLOYEES COLLABORATE TO SUPPLY, FEED, TRANSPORT AND HOUSE

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"That was an outrageous cost, and we needed that truck back in the field as soon as possible," Beville said. "A two-week outage was unacceptable."

"Plus, if someone else repaired the cylinder, I could never be sure it was done properly. If the repair wasn't done correctly, the bucket could fail and people's lives could be in danger."

So Beville packed 105 pounds of equipment, including a replacement hydraulic cylinder, and got on a plane for Puerto Rico, whose airport miraculously was still open after the island had been devastated by Hurricane Maria.

"I had to take five pounds of tools out of my checked luggage and carry them on the plane," he recalled. "Then, the Transportation Safety Administration agents at the security station stopped me because some of the tools were sharp and longer than 7 inches, which was against the rules. Eventually, we sorted it out and I was able to board the plane."

Within a matter of hours, the work was done and the bucket was functional once again. Beville also made some fuel line repairs to a second KUA truck while he was there. Then he was back on a plane for the return flight to Orlando.

Replacing the hydraulic cylinder cost about \$1,500, including the round-trip plane ticket, and the repairs were completed in one day.

"Every year, we inspect the lineworkers' bucket trucks and tighten every bolt on the booms for safety," Beville

said. "We have to be sure the equipment is properly maintained because if it's not, people could be injured or killed. We also install heavy-duty tires on our trucks to make them less vulnerable to punctures from nails."

"We don't just do oil changes," he said with a laugh.

## Feeding, hydrating and housing 128 mutual aid workers

Floridians know how brutally hot and humid the Sunshine State's summers can be. So it would come as no surprise that one of the biggest challenges in major grid repair for a utility following a hurricane would be keeping employees and mutual aid workers fed, hydrated and housed comfortably during the restoration.

"Some of the mutual aid line workers who came to Kissimmee after Hurricane Irma probably didn't know what to expect when they got here," said Charles Lee, KUA's manager of financial analysis. "Some of their trucks didn't even have air conditioning!"

"And when working in the field, they had to wear about 20 pounds of personal protective gear — rubber gloves, long pants, long-sleeved shirts, safety goggles, hard hats, the whole nine yards. People who don't live in Florida don't understand how hot and humid it can be during the summer." Workers in the field were downing two waters and two Gatorades in one sitting.

It fell to Lee and his colleagues to make arrangements for feeding, hydrating and housing 128 mutual aid workers who traveled from other states to help KUA

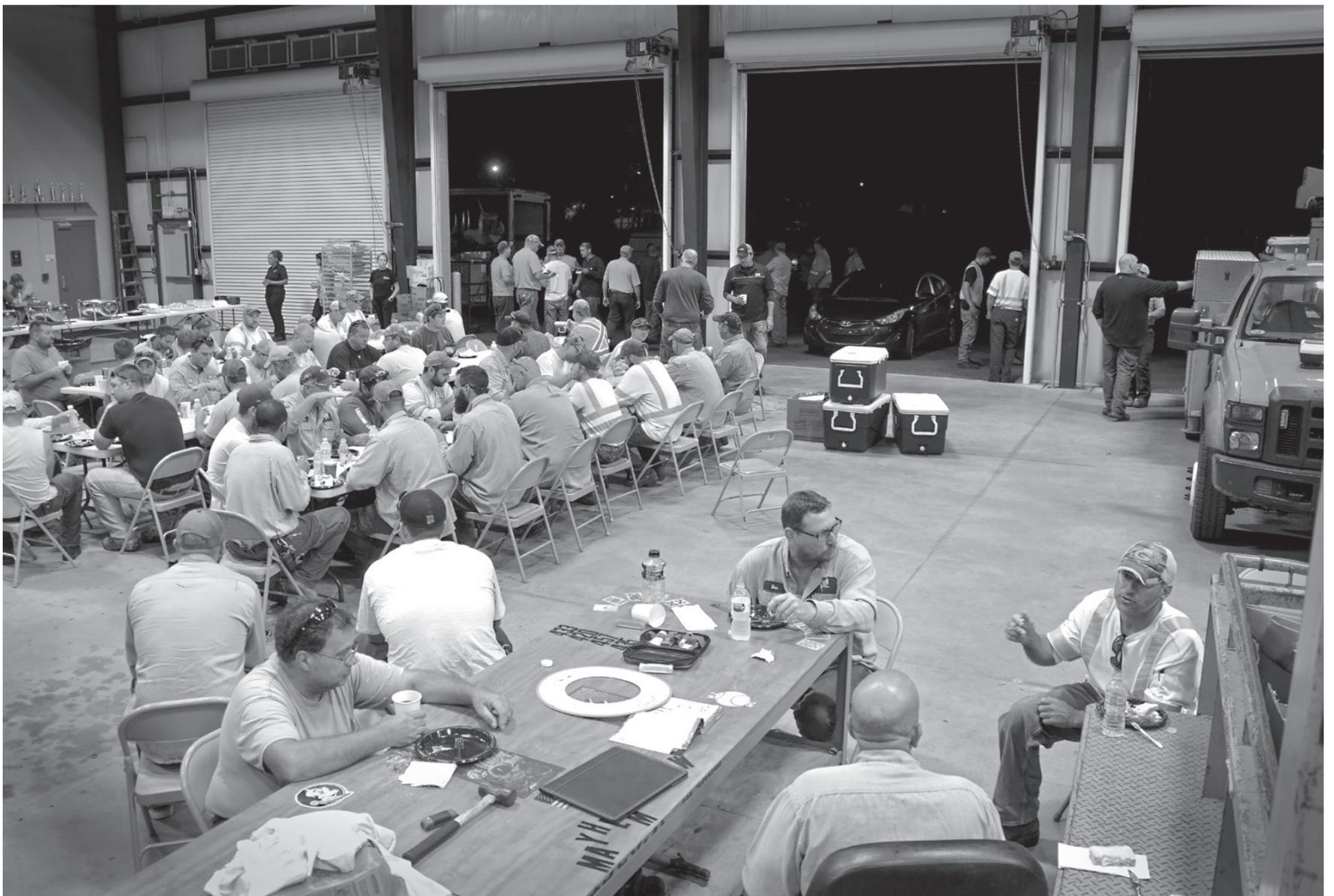
restore power. His team located caterers, hotels and suppliers of beverages and fuel so workers could devote their full attention to getting power back on. In addition, his team made daily runs to the local big box stores to get additional snacks for the crews.

Workers ended up drinking 6,912 bottles of water and 1,512 bottles of Gatorade. They ate hundreds of eggs, thousands of pieces of bacon, a veritable ton of fresh fruit, gallons of yogurt, thousands of energy bars, and at least a ton of shredded beef and pork.

Lee, a 26-year veteran of KUA, assisted with these arrangements despite his house sustaining about \$35,000 of damage from Hurricane Irma. Once power was restored to KUA's customers, he, like many of his co-workers, had to make arrangements to replace the roof on his own home, replace some windows and fix water damage. Living outside the KUA service territory, he was not a KUA customer and it took seven days for his power company to restore power to his home.

"When a hurricane hits, the admin staff knows you have to drop what you're doing and support those in the field," Lee said. "Sometimes that meant negotiating with a local hotel at midnight to secure beds for bone-tired lineworkers who were told no rooms were available."

"When you're part of a service organization, that's what you do," he added.



# POWER PROFESSIONALS BAND TOGETHER TO SPEED RECOVERY

“Hurricanes really remind you of the things you take for granted,” recalled Pat Holt, a senior mechanic/operator at KUA’s Cane Island Power Plant. “Like water, food and gasoline.”

“And shade,” he continued. “Do you think you could have found us some shade?” Holt jokingly asked of his colleague Doug Peterson, a supervising utility worker at the power plant.

“You don’t think about shade until you’ve had to go through life without it. Hurricane Irma ripped all the leaves off the trees,” said Peterson. “It was brutally hot and humid and there was not a speck of shade anywhere.”

When Irma hit Florida on Sept. 10, 2017, it was a Category 4 hurricane, with winds of up to 140 miles per hour. By the time Irma got to Central Florida, it had weakened considerably: sustained winds of about 80 miles per hour, with gusts up to roughly 100 miles per hour. “Upgrades to the plant after Hurricane Charley in 2004 made Cane Island capable of withstanding sustained winds of up to 140 miles per hour,” said Larry Mattern, KUA’s vice president of Power Supply.

Irma did a lot of damage to KUA customers’ homes and businesses, to the KUA electric distribution system, and to other utilities’ power plants. But KUA’s Cane Island Power Plant came through Irma relatively unscathed. None of its four units went offline due to the hurricane. That’s a contrast to several other power plants across the state, which were not sufficiently hardened to withstand Irma’s winds.

“Cane Island was one of the few power plants in the state that didn’t have to shut down,” said Mattern. “We really hardened our system after Hurricane Charley,” he continued. “Most of the work was done to the electric transmission and distribution system. However, some great improvements were made to generating equipment, such as the cooling towers at Cane Island. And it paid off.”

After Hurricane Irma hit Central Florida, a lot of focus and energy was devoted to restoring service to the estimated 38,000 KUA customers who lost power. Trees had to be cleared and broken poles had to be removed and replaced.

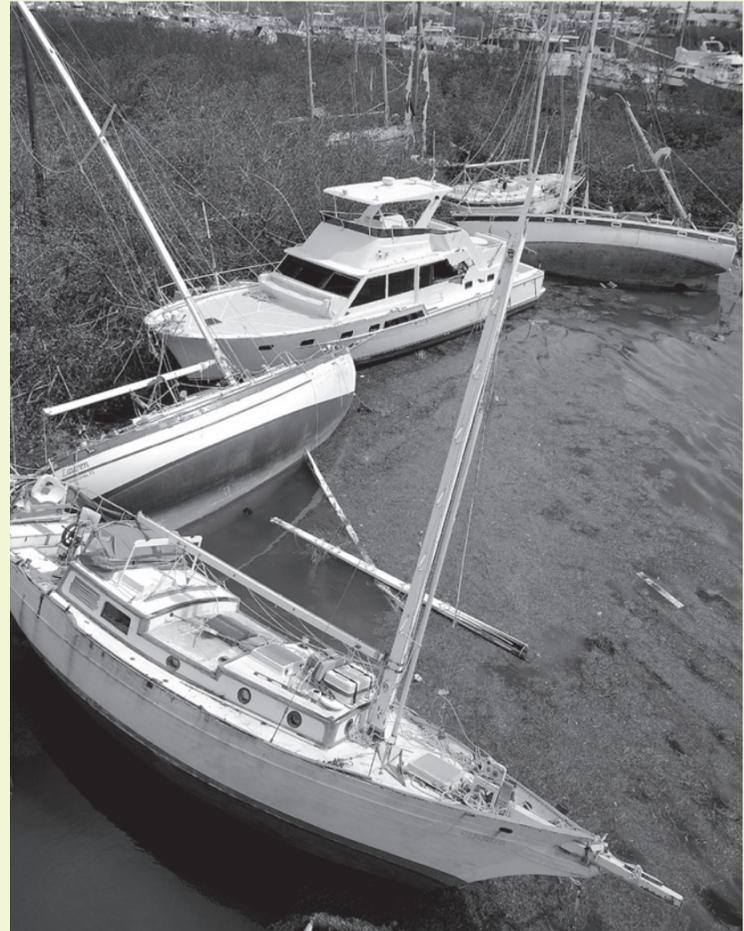
For the 34,000 customers who didn’t lose power due to the storm, Cane Island remaining fully operational meant they had all the electricity they needed.

KUA restored electric service to all customers in about three days. But not all utilities had the manpower for such an expedient restoration effort. Keys Energy Services, which served the Florida Keys, had been completely devastated by Hurricane Irma. All of its customers lost power.

After KUA completed its own power-restoration work, Holt, Peterson and six other KUA employees volunteered to travel to the Florida Keys to help with that utility’s efforts. They were participating in a proud utility tradition called “mutual aid,” where workers from one utility help other utilities after a disaster hits.

Holt recalled, “The employees at Keys Energy Services went for several weeks without power. Yet there they were, day in and day out, working 18 hours a day trying to restore power to customers. Those employees were terrific.”

In Key West, Holt and Peterson used forklifts to offload trucks and position equipment like transformers, pallets of water and wheels of electric cable so other workers could easily access them. They unloaded as many as 200 transformers a day off semi-trailers.



“Since we operate forklifts, doing that for Keys Energy Services freed their own employees to help with restoring power,” said Holt, who has been a KUA employee for 17 years. “We worked from before daylight until darkness alongside utility crews from Texas, Oklahoma, Wisconsin, Minnesota, New York and Ohio. Everyone worked tirelessly.”

What will they remember most about their mutual aid in Key West? “We saw sand in the second story of homes on stilts on the Keys,” said Holt.

Peterson remembered the emaciated deer who lost their food supply in the hurricane. “Also, a parking lot the size of a Home Depot parking lot had been cleared to make way for debris piles. And we saw a quarter-mile long line of refrigerators that were damaged or destroyed by Irma. You remember stuff like that.”

Employees volunteer for mutual aid — KUA did not order them to go to Key West. So why did they go?

Peterson, who’s been with KUA for seven years and was on his first mutual aid trip, said, “I went for the adventure and stayed to help people.”

Holt, who had participated in mutual aid efforts before, said he went out of a sense of civic duty. “When others are suffering far worse than you, you empathize with them. You want to help them. Everything we do at KUA is collaborative and first class. I’m proud to be part of a team that makes a difference.”

He continued, “I got into the power industry a long time ago after my uncle told me, ‘Don’t just chase money in your career. Do what you love and the money will follow.’ Seeing how Key West and Keys Energy Services were destroyed by Irma, I felt very blessed to have what I have. I love what I do, and the money has followed.”

# CORPORATE COMMUNICATIONS KEEPS STAFF AND CUSTOMERS INFORMED

Staying connected to customers and staff keeps everyone safe during power restoration

*“The whole KUA team was doing whatever they could to get power back safely and quickly. When customers recognized our efforts and thanked us, that felt good.”*

Chris Gent,  
VP of KUA's Corporate  
Communications department

Nine months after the fact, Chris Gent's thumbs are just now getting back to normal. KUA's vice president of Corporate Communications and the utility's communications specialist participated in about 45,000 social media interactions before, during and after Hurricane Irma last September. That includes email updates, tweets and posts on Facebook.

“The first day after Irma, I only slept for about two hours,” he said. “There was always another update I needed to give to the media, one more Facebook question from our customers that I wanted to answer.”

During any kind of emergency, but especially during a power emergency, timely, accurate information is critical. As the keeper of information on outage restoration efforts, Gent played a vital role getting up-to-date information to KUA's customer service team, so they could answer customers' questions. He also communicated indirectly with customers through interviews with the news media, which ran numerous power-restoration stories.

Every three hours, the utility also provided updated restoration information to KUA's Emergency Operations Center, which was coordinating restoration efforts with an emergency task force assembled by the governor.

“We pushed out a lot of power updates to the local radio and TV stations,” he recalled.

Gent continued, “Numerous older customers also reached out to us on social media. Many were scared and alone. Some of their homes had flood damage. Most had lost their power. We answered their questions then directed them to local resources.”

“In addition to power-restoration estimates, a lot of our messaging during the restoration related to safety,” Gent recalled. “For example, ‘never go near a downed power line’ and ‘what to do if you're in a car and a power line falls on you.’”

The safety messaging appears to have paid off. No employee, mutual aid worker, contractor or customer suffered electricity-related injuries during the 75 hours that power was out in and around Kissimmee after Hurricane Irma.

Customers appreciated the timely, comprehensive communication. They sent a barrage of emails and posted frequently on social media thanking KUA for its work restoring power and keeping them informed. Several noted how quickly KUA restored power compared to other nearby electric utilities.

“It was wonderful to get those customer kudos,” Gent said. “The whole KUA team was doing whatever they could to get power back safely and quickly. When customers recognized our efforts and thanked us, that felt good.”

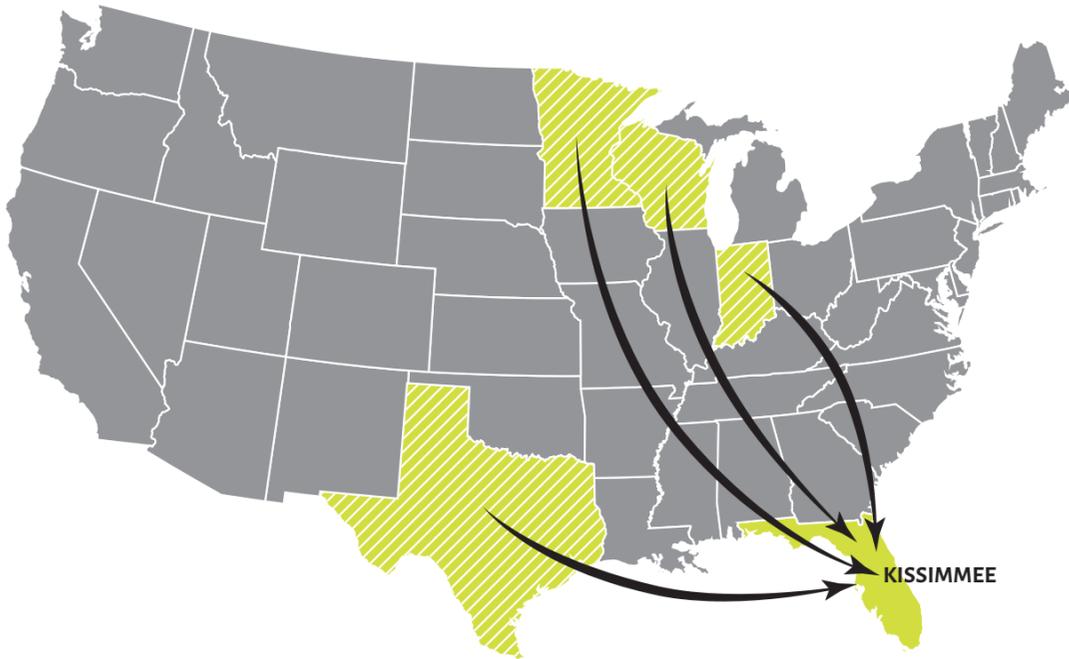
“That kind of appreciation leads to a redoubling of our commitment to customers.”



## RECOVERY

Rescue personnel continue cleanup efforts while power crews work on restoring power after Hurricane Irma hit the Florida Keys.

# SECURING MUTUAL AID AGREEMENTS PAVES THE WAY FOR QUICK RESTORATION



## UTILITIES FROM OUTSIDE FLORIDA THAT PARTICIPATED IN KUA POWER RESTORATION

**41**

Utilities

**4**

States

## LOCATIONS WHERE KUA EMPLOYEES TRAVELED TO ASSIST IN POWER RESTORATION

**Orlando, Lakeland  
Key West, and  
Puerto Rico**

After Hurricane Irma last September, utility workers from Wisconsin, Minnesota, Texas, Indiana and elsewhere didn't just magically appear in Kissimmee. Those workers were participating in a long-standing utility practice known as "mutual aid." And like a lot of utility practices, there are important legal aspects that must be managed.

Enter Grant Lacerte, KUA's vice president and general counsel. In the days before Irma hit, he oversaw the execution of contracts with four of Florida's shareholder-owned utilities: Gulf Power, Florida Power & Light, Duke and TECO. With these agreements in place plus existing mutual aid agreements with the Florida Municipal Electric Association and the American Public Power Association, crews from roughly three dozen locally owned utilities, some as far away as Texas, Ohio and New York, could help KUA personnel restore power.

"It's critical to spend time on the front end getting the agreements in place," said Lacerte, who joined KUA in 2002. "Otherwise, you'll spend a lot more time at the last minute and after a storm's immediate aftermath fact chasing details and trying to get agreements signed in a very difficult bargaining position."

Before, during and after Irma hit Central Florida, Lacerte also participated in numerous conference calls organized by Florida's governor to coordinate recovery efforts.

After everyone got power back in Kissimmee, those mutual aid agreements paved the way for

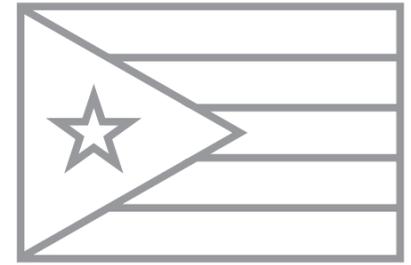
KUA lineworkers to travel to other Florida cities, like Orlando, Lakeland and Key West, to help those utilities restore power.

Lacerte also worked with KUA's Engineering and Operations department to coordinate mutual aid to Puerto Rico after it was devastated by Hurricane Maria. Lacerte contacted other utilities and companies involved in the restoration, secured logistics for providing aid, and reviewed agreements between agencies to be sure the work was properly authorized.

"KUA was just the second locally owned utility to send crews to Puerto Rico after Hurricane Maria," he said. "I'm proud to say KUA employees and their sister utility team members helped restore power to about one million people on the island."

Lacerte is one of many KUA employees with a deep personal connection to Puerto Rico. "My daughter's grandparents, aunts, uncles and cousins live in Ponce, a major city on Puerto Rico's southern coast. It took us nine days to learn they were OK after Maria. They were relatively spared, though they suffered some significant property damage. Fortunately, they had their power back in about a month, which was better than many hard-hit communities."

"As KUA employees, our first concern is getting power restored safely and quickly to our customers. But for me, as for many other KUA employees, power restoration to Puerto Rico was also a very personal issue."



## LITTLE ISLAND, BIG HEART

On Sept. 20, 2017, Puerto Rico endured one of the most destructive hurricanes in its history - Maria. The Category 4 hurricane brought flooding, wind damage and storm surge. The island's power grid was destroyed, leaving all 3.4 million residents without electricity.

KUA stepped in to help, signing a work contract with Whitefish Energy Holdings, the contractor hired by the Puerto Rico Electric Power Authority to rebuild its infrastructure. Six lineworkers volunteered and a small convoy of KUA service trucks were sent to Puerto Rico to help replace more than 50,000 utility poles and restring 6,500 miles of electric cable, enough to reach from Kissimmee to Cairo, Egypt.

"This mutual aid mission was unlike any we have participated in before," said KUA President and General Manager Jim Welsh. "Our community can take pride in knowing that our crews once again stepped in to help those in need."

Leaving on Oct. 17 and returning on Nov. 22, 2017, the linemen spent 36 days in Puerto Rico working with other utilities and restoring power to an estimated one million residents across the island.

In a season already packed with local restoration efforts, KUA workers volunteered aid in Orlando, Lakeland, Key West and Puerto Rico.

**6**  
lineworkers

**36**  
days

**1 million**  
residents restored

# IT: HOW PLANNING AND PRACTICE GETS POWER RESTORED FASTER

## Securing KUA's critical tech infrastructure

Talent plus training leads to success. It's true in most fields, but especially so in professional sports.

Training builds muscle memory. Professional baseball players develop an instinctive ability to hit baseballs after spending untold hours practicing in the batting cages. When the game is on the line and a baseball is headed their way at 90 miles per hour, spinning like a top, they don't have time to consciously think about their grip, their stance, the ball's trajectory or their swing. Relying on instinct, they swing. And if they're talented enough and spent enough time in batting practice, they may get a hit.

Jef Gray, KUA's vice president of Information Technology, was not a professional baseball player before coming to Central Florida. But Gray and his team understand the power of muscle memory, particularly mental muscle memory, especially when it comes to emergency planning. Each year, Gray and his IT team design and oversee a Disaster Drill Day at KUA where employees are presented with an emergency scenario that threatens to disrupt KUA's electric service.

For security reasons, he won't divulge the exact elements of each year's scenarios. It could involve any number of realistic threats: cyber breaches, terrorism, active shooters and weather emergencies.

"Each year, our Disaster Drill Day is a worst-case scenario that requires employees from across KUA to quickly assume different roles so we can continue to provide electric service to customers or restore it as safely and quickly as possible," said Gray.

In today's highly digitized world, Gray's 18 IT employees form the front line in protecting, operating, maintaining and restoring all of KUA's network systems, computer hardware, software, telecom systems, information and data security for the utility.

"KUA has made significant technology investments to enable customer service representatives to work from home, and that really paid off during Hurricane Irma and the subsequent power-restoration efforts." Gray continued, "On any given day, we have about 22 CSRs working from home and another dozen or so at the office. During Hurricane Irma, some of the home-based CSRs had to come to the office because they lost power at their homes. Wherever employees work, their job is the same: Take care of our customers."

Of course, "coming to the office" is harder when the area surrounding the office can have a foot of standing water in the access roads or parking lot. Water and electronics don't mix well, which is why Lee Gonzalez, KUA's telecom and data administrator, spent about 10 days before Hurricane Irma preparing and protecting KUA's electronic networks. During that stretch, 15-hour days were the norm.

"The day Irma hit, I had to park my car about 10 minutes from our Carroll Street office and walk through knee-high water in the parking lot to get into the building," Gonzalez recalled. "That's why I spent the previous 10 days moving fiber connections and changing lines in flood-prone zones."

On a typical day, he continued, KUA's networks can support up to 75 employees working remotely. Prior to Irma, Gonzalez scaled that up so that as many as 300 people could work from home.

"I don't have a direct role in power restoration," Gonzalez said. "But the engineers, line workers and system operators who do have a central role in restoring power depend on a secure infrastructure to access internal systems."

"When restoring power," Gonzalez continued, "We need to have reliable communication throughout the service territory and our access points for workers in the field, CSRs and managers in the Emergency Operations Center. It's a minute-by-minute process where having up-to-date information is critical. For that to happen, you need secure, instantaneous communication."

Customers and CSRs also depend on the network that Gonzalez and his team maintain. When the lights go out, everyone grabs their mobile device to call the power company. Call volumes at local cell towers shoot up. Those towers can become overloaded, denying a signal to mobile devices.

Despite the best efforts of Gonzalez and his team, some of the phone company's circuits overloaded and customers got busy signals when they called KUA. Or their calls were dropped due to saturated lines. The problem was particularly acute between noon and 2 p.m., as customers tried to call KUA during their lunch hours.

Learning from previous storms, KUA is in the process of deploying a digital, self-scaling phone system that can instantly expand to handle a surge in customer calls. Once installed, this new digital phone system could prevent busy signals and dropped calls during power emergencies.

If Gonzalez's team maintains KUA's digital "road," Javier Sierra, information technology systems administrator and his colleagues are responsible for the "vehicles" that drive on it. That includes operating, maintaining and restoring all the systems that rely on KUA's networks, including a fleet of servers and applications like the Customer Information System, Geographic Information System, inventory, finance, email and more.

KUA has about 146 servers, and roughly 87 of them are deemed critical to maintaining operations, said Sierra. "We had a warning that our primary generator might have an issue after the storm. To prepare for the worst-case scenario, I created a digital replica image of the structure and data on those 87 critical servers and set them up to run from our hot-site rather than our headquarters."

All in all, Sierra and his team digitally transferred, or replicated, about 56 terabytes of critical data, enough to fill over 238 million pages of text. If those pages were laid end-to-end, they would stretch for 3,776 miles — about 400 miles longer than the distance between Miami and Seattle.



Customers got their power back faster because Sierra and his team replicated systems containing data about customer accounts, the digital maps of KUA's service area, the number of work crews available, equipment inventory, email and more. Because of those systems, a worker could determine in a few seconds if there were any transformers in inventory or where work crews were most urgently needed.

If the data and applications had not been digitally transferred to another location, customer and system data would have been at risk of being unavailable, delaying power restoration efforts. Fortunately, everything worked as designed and the systems were returned to the primary location after the storm had passed.

"Our linemen have wireless laptops and tablets in their trucks so they can receive work orders and communicate instantly with the Emergency Operations Center about conditions on the ground," said Sierra, who has been with KUA for 11 years.

"During the restoration," he continued, "the EOC was communicating with restoration crews on a continual basis. Crews were sent to the locations where they were most urgently needed. If we lost those servers, we would have lost the ability of the EOC to communicate with restoration crews. Everyone would have had to wait longer for their power to be restored. People's lives could have been endangered."

As he was preparing KUA's servers to be replicated at the hot-site, one server went offline — it had the so-called "blue screen of death." But Sierra didn't let that faze him. He removed some old drivers from another server that was in "safe" mode and was able to resuscitate the blue-screened server. "I'm the type of person who has to find a way. When that server blue-screened, I found a way to get it back online."

Sierra and the KUA IT team are always learning and looking for ways to improve their systems before the next emergency strikes. "Every storm is different, and each one teaches you something new," Sierra recalled. "When a disaster like Irma hits, it's all hands on deck. The Disaster Drill Day exercise we held earlier in 2017 was very helpful because we were able to practice the roles we could play during a crisis. And we always end the drills by conducting an assessment: what worked, what didn't and how could we have done better?"

# BEHIND THE SCENES: HUMAN RESOURCES PERFORMS ‘OTHER DUTIES AS THEY ARISE’ DURING POWER RESTORATION

Combine an airport air traffic controller with an athletic coach and that's a pretty good description of what KUA's Human Resources department did during power-restoration efforts after Hurricane Irma last September.

Employees who normally perform certain utility jobs not directly involved in power restoration were temporarily reassigned to other areas to help support restoration efforts.

Meet the KUA Employee Pool, managed by Vanessa Lugo, assistant to the vice president of Human Resources. "Each day, the administrative assistants across KUA reported whether they had workers who could be reassigned to other tasks, and we matched unassigned employees with tasks that needed to get done."

On a typical day during the power-restoration efforts, 10-15 employees would be reassigned to other duties.

Employees from different departments assisted Corporate Communications to serve as photographer and videographer escorts, while employees from Customer Service and Engineering & Operations did light building maintenance and debris removal around the perimeter of KUA's Carroll Street headquarters. All that was coordinated by Lugo.

"Everyone was willing to pitch in and lend a hand," Lugo continued. "Employees really care about the customers and one another. I think that's part of the reason our customers view KUA so favorably."

One of Lugo's colleagues, Cindy Herrera, also found herself in unfamiliar territory during the aftermath of

Irma. Herrera, the assistant vice president of Human Resources, arranged for Hepatitis C tests for seven employees who worked in waist-high water restoring power in the Good Samaritan Village after Shingle Creek overflowed its banks. There were media reports that the water may have been contaminated, and KUA wanted to make sure it addressed any exposure concerns by testing any employee who wanted to be tested.

"Fortunately, no employee tested positive," Herrera said.

Herrera also contacted a clinic to arrange for tetanus shots for employees who went to Puerto Rico, to help with power restoration efforts there after Hurricane Maria leveled the island. In addition, employees were provided care packages prior to their departure containing first aid kits, sunscreen and bug spray.

She also learned some of the finer points of insurance policies when she tried to confirm liability coverage for mutual aid utility workers who traveled to Kissimmee to help with power restoration. Those workers came from as far away as Minnesota. KUA wanted to be sure they were covered in case anyone was injured helping KUA restore power. Fortunately, no one was.

In her efforts to try to confirm KUA's insurance coverage, Herrera would discover, as luck would have it, that KUA's insurance carrier was based in Houston, which had just been devastated by Hurricane Harvey.

Undaunted, Herrera persisted. She finally was able to track down a representative of KUA's insurance broker in Houston, who confirmed the mutual aid workers were covered.

"There was a lot of 'other duties as they arise,'" Herrera said in recalling that challenge. "But that's part of everyone stepping up to play a part in taking care of the customers. There's a lot of behind-the-scenes work that goes into restoring power after an emergency like Irma."

Images of people boating down the streets of the Good Samaritan Village were particularly hard for Herrera. "When you personally escape suffering but you see others are not as fortunate, your heart goes out to them, and you want to do whatever you can to ease their suffering."

Dr. Wilbur Hill, KUA's vice president of Human Resources, said his team wanted to do everything it could to fully support employees during the power restoration.

"It was important that employees knew they had our full support during and after the weather event," Hill said. "The support objectives were staged to give each employee peace of mind about any matters pertaining to their safety, employment and the well-being of their families." Resources such as counseling were available to employees and their families during the restoration efforts, he added.

The willingness of KUA employees to step outside their job descriptions and lend a hand wherever it was needed during restoration efforts is testament to the team mentality at KUA. That's something Herrera has come to expect in her 10 years with the utility. "We're a family and families pull together in an emergency."

## KUA AT A GLANCE

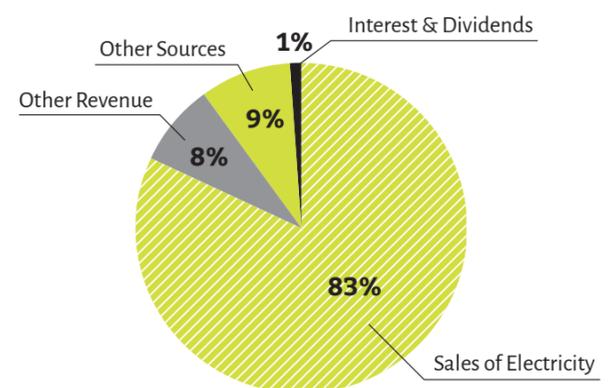
Kissimmee Utility Authority is Florida's sixth largest municipally-owned utility providing electric services to 74,000 residential, commercial and industrial customers in Central Florida. KUA operates and jointly owns the Cane Island Power Park and has ownership interests in other generating stations, including coal, natural gas and nuclear.

KUA also provides billing services for refuse and storm water services for the City of Kissimmee.

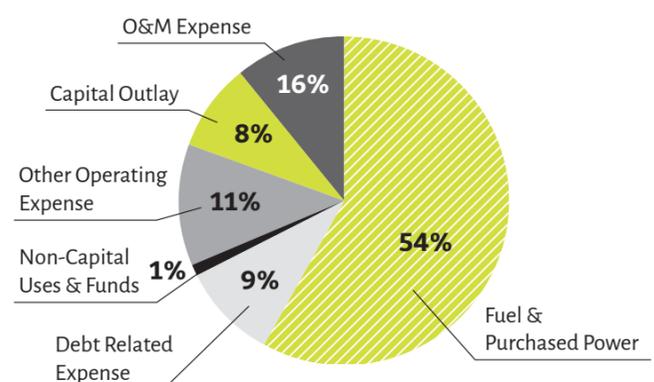
OPERATING HIGHLIGHTS	FY2017	FY2016	% CHANGE
Operating Revenues	\$188,160,762	\$183,752,177	2.4%
Total Operating Expenses	\$170,149,946	\$164,894,461	3.2%
Other	(\$1,470,144)	(\$1,343,686)	9.4%
Net Position - End of Year	\$238,120,369	\$221,579,697	7.5%
Debt Service Coverage	2.4	2.6	(6.6)%

SYSTEM HIGHLIGHTS	FY2017	FY2016	% CHANGE
Customers (12 month average)	73,542	71,687	2.6%
Electricity Sales (megawatt hours)	1,509,749	1,515,615	(0.4)%
Peak Demand (megawatts)	353	354	(0.3)%
Change in Net Position	\$16,540,672	\$17,514,030	(5.6)%
Employees	292	292	0.0%

WHERE THE MONEY COMES FROM - FY 2017



WHERE THE MONEY GOES - FY 2017



# KUA CEO LOOKS BACK FEELING PRIVILEGED, PLEASED AND HUMBLLED

KUA President, James C. Welsh, talks about how far the organization has come since 2004

It's been my honor to lead KUA for many years. Our employees are energetic, creative and committed — the best of the best. Each day I come to work, proud and humbled to be their leader. But I can't remember a time when I was prouder of our employees than during their power-restoration work after Hurricane Irma in September 2017.

Irma was not the most destructive hurricane to hit Central Florida. That award probably goes to Hurricane Charley, which disrupted life in and around Kissimmee and destroyed our distribution network in September 2004. But think of how our lives have changed since then:

- Smart phones are ubiquitous now whereas they weren't even invented in 2004.
- Wireless communication networks govern our lives today, but in 2004 they were still a far-off blip on the horizon.
- Facebook was born in early 2004, seven months before Charley hit Kissimmee.
- In September 2004, Twitter was still 18 months away from being born.
- YouTube would not be unveiled until February 2005, five months after Hurricane Charley.

*“Hundreds of years ago, John Donne wrote, ‘No man is an island.’ He wanted to show that each of us is connected to others, and that all of us are part of something larger than ourselves.”*

KUA's residential customers have come to expect and rely on the ability to communicate with virtually anyone, anywhere, at any time using a variety of applications and platforms. Our business customers have experienced equally profound changes since Charley. Global supply chains, power-sensitive equipment, new entrants and cloud computing have transformed businesses.

The need for highly reliable electric service, and the reality that Central Florida will always be vulnerable to hurricanes, is why KUA made significant changes to our operations since Hurricane Charley:

- We replaced most wooden utility poles with concrete poles, which can withstand hurricane-force winds.

- We've hardened our power plant, Cane Island, so hurricanes no longer force it to shut down with upgrades such as increasing the wind rating of the roof systems, modifying our structures to fiberglass reinforced plastic, which provides a stronger structure and adding anti rotation and brake locking systems on the cooling tower fans to keep them from spinning if the unit it offline.

- And we've introduced and refined our Disaster Drill Day, held each April, to ensure that when severe weather inevitably hits Central Florida, our people, our processes and our equipment are geared to restoring power as safely and quickly as possible.

Those investments were a big reason why nearly half of our customers did not suffer a power interruption during Hurricane Irma.

This annual report is dedicated to KUA's nearly 300 employees. All of our employees — electrical line workers and power plant operators as well as staff in finance, customer service, information technology, corporate communications, fleet, engineering and human resources — did what was needed so power could be restored safely and quickly. I'm proud to say we had 300 local heroes working for our community.

Watching our employees then and visiting with them after they restored power made me appreciate even more the work they do and the manner in which they get it done. Judging from the letters, Facebook posts and Twitter tweets we received, you, our customers, also greatly appreciated employees' power-restoration efforts.

Hundreds of years ago, John Donne wrote, “No man is an island.” He wanted to show that each of us is connected to others, and that all of us are part of something larger than ourselves.

That's never more true than during and after an emergency like a hurricane. People depend on others to help bring life back to normal. We benefited from the selfless acts of other utility workers who came to our aid after Irma, and I'm proud that we did the same for others who were in need.

To all KUA employees, and those who helped us when we needed it, thank you.



James C. Welsh  
President & General Manager  
KUA



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