

2023 ANNUAL REPORT



ASSOCIATED ELECTRIC COOPERATIVE INC.

POWER WITH PURPOSE

MEMBER-LED • RELIABLE • AFFORDABLE

The energy industry landscape in America is changing. Power suppliers like Associated Electric Cooperative are at a critical crossroads. Should we choose what reliably generates power, or transition to emerging technologies that may be reliable someday? Do our best to ensure an affordable power supply, or have member-consumers foot the bill for politically driven agendas with costly price tags?

In a time of uncertainty, Associated's steadfast, members-first mindset is a differentiating advantage over many other power suppliers. Our duty to provide a reliable, affordable power supply is why we exist and what we work toward every day. While energy industry trends and external pressures point toward a less reliable and more expensive future, Associated and its 700 employees are unwavering in our member-led mission. Together, we call it **Power with Purpose**.

TABLE OF CONTENTS

From the president of the board and CEO and general manager	1
Associated Electric Cooperative board of directors	4
Associated Electric Cooperative executive team	5
Three-tiered system service map	6
Associated's transmission member-owners and their member distribution cooperatives	7
Member-led	8
Reliable	14
Affordable	20
2023 financial highlights	26
Independent Auditor's Report and Consolidated Financial Statements QR code	26
Five-year statistical summary	32

Front cover: Thomas Hill Energy Center employees Chad Seals (left), supervisor, mechanical maintenance, and Chad Clark, journeyman machinist/mechanic, plan and execute their assignments with a clear purpose: to keep power flowing for the cooperative system.

Associated's 2023 annual report was written, compiled and produced by the staff of Associated Electric Cooperative. **Editors:** Mark Viguet, Robin Harrison and Schuyler Easterling • **Designer:** Kristen Kelley

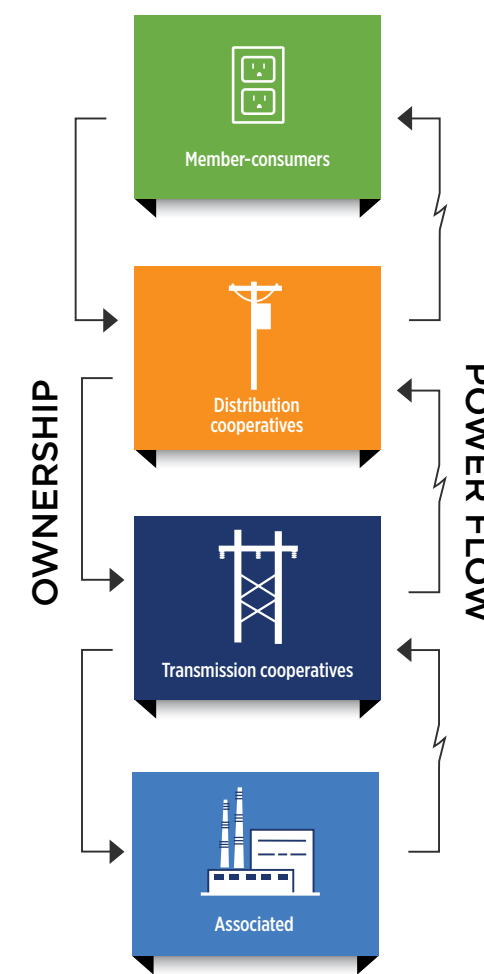
From the president of the board and CEO and general manager



The year 2023 will be remembered as one of Associated Electric Cooperative's most challenging, yet rewarding, in its 62-year history. While many other utilities continue to march down a path to retire their coal plants, Associated's experience with winter storms Uri and Elliott has proved the only way to avoid rolling blackouts is to continue to maintain a generation fleet that is dispatchable and, therefore, reliable.

During the past year, we continued to use our experience and data to explain to national audiences the risks of transitioning away from fossil fuel power plants without a viable, proven technology that is both reliable and affordable. We know that no such technology exists today, and those under development will not be ready in time to replace announced coal plant closure dates. Associated's risk increases with each coal plant retired by others in surrounding regions, because their region's reliability problems can affect those interconnected with them – including our system. During the year, the North American Electric Reliability Corporation (NERC), several regional transmission organizations

Above: Emery O. Geisendorfer, board president (left) and David J. Tudor, CEO and general manager



(RTOs), the National Rural Electric Cooperative Association (NRECA) and many utilities continued to publicly warn the current administration and federal and state legislators that national grid reliability is at high risk.

In June, Associated was asked to testify before the U.S. Senate Committee on Energy and Natural Resources about our experiences with winter storm reliability, supported by data, and to seek Senate influence to slow government agencies trying to force utilities to retire coal plants. With the help of NRECA, we were able to send a strong message to the committee concerning the need to slow down the energy transition.

Nevertheless, and despite the overwhelming data supporting the need to keep coal plants, the U.S. Environmental Protection Agency (EPA) issued new proposed greenhouse gas rules seeking to further restrict natural gas and coal power plant emissions, ignoring reliability and affordability. The EPA identified two technologies to meet compliance with the new rules that are unproven, not in operation anywhere at scale and outrageously expensive, counter to the agency's original intent to use the best available, proven technology. This blatant disregard of alarming NERC reliability forecasts, warnings from the industry and negative impacts on affordability is reckless and extremely disappointing.

Associated continued to deploy its strategic, balanced focus on reliability and affordability despite aggressive climate initiatives. During the spring and summer, Associated completed a maintenance project at New Madrid Power Plant on budget. This was the second project at New Madrid in five years and will allow the plant to maintain its ability to provide reliable baseload power to our member-owners, in full regulatory compliance, for years to come.

A key challenge during the year unfolded in May, when Thomas Hill Energy Center Unit 3 experienced a generator failure that was projected to result in a 40-month outage due to wait times to secure repair parts. However, replacements from another utility were quickly located in Louisiana, transported to and installed at Thomas Hill, all while experiencing a new summer peak load of 4,554 megawatts. Associated's commercial energy team utilized the cooperative's natural gas fleet and third-party suppliers to not just cover the summer peak, but also generate nonmember margins.

Efforts to repair Thomas Hill prior to the winter peaking season were nothing less than remarkable. We sincerely thank our employees and strategic partners Babcock & Wilcox, BNSF Railway, CLECO, General Electric, Peabody Energy and Siemens for their support and patience as we successfully battled through these challenges.

Following the completion of all project work, Thomas Hill Unit 3 regained its full capability of 715 MW and New Madrid Unit 2 set an all-time run record of 163 days, further proof of the value of a diversified and dispatchable fleet of power generation assets. The decisions the board and management made after the 2018 polar vortex to add incremental capacity to our natural gas fleet gave us the needed capacity and energy to maintain reliability throughout the year.

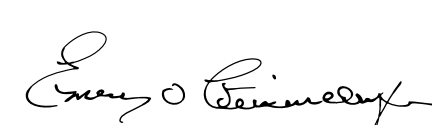
Another key decision to recommission the liquid fuel Unionville Power Plant provides more capacity for future peaks. In addition, Associated's team responsible for developing two new gas-fired generation peaking plants made considerable progress towards their goal of completion in 2026-27. Associated has not developed new generation since the early 2000s and building power plants in today's environment is much more challenging.


Associated realized another solid year of financial performance, generating \$81.3 million in net margins, surpassing our budget by about \$30 million. Those results were led by net marketing activity of \$66.6 million that offset member rates, a fuel hedging program and strong performance by the natural gas generating fleet while units at New Madrid and Thomas Hill were offline.

Finally during 2023, an Associated team working with our six transmission member-owners developed and submitted a \$1.52 billion request for grants and zero interest loans to the Rural Utilities Service (RUS) under their new Empowering Rural America program. The funding, if approved, will develop incremental renewable projects on our transmission system and more than 850 miles of transmission projects to facilitate the transmission of renewable power.

We continue to believe the combination of our diversified generation assets and our member-owned, resilient transmission system – operating independent of RTOs – continues to be the best strategy to maintain reliability and affordability for our six member-owners and their 51 distribution systems. Associated's research team will continue to consider new and emerging technologies that produce less or even zero carbon, but we will continue to place our priorities on power generation resources with a proven track record.

On behalf of the Associated board of directors and employees, as always, we appreciate your support as we navigate these challenging times in the energy industry.


Emery O. Geisendorfer, president
Associated Electric Cooperative
board of directors


David J. Tudor
CEO and
general manager

Board of directors leads Associated with member-focused strategies

Associated's board is comprised of chief executive officers from its six member-owner G&Ts, who bring utility and cooperative experience, complemented by six directors with experience ranging from farm and business owners to general managers of local electric cooperatives.



Front row, from left: Emery O. "Buster" Geisendorfer, board president, Northeast Missouri Electric Power Cooperative; Christopher M. Turner, Central Electric Power Cooperative; Thomas W. Howard, Central Electric Power Cooperative; Theodore J. Hilmes, KAMO Power; David L. McDowell, NW Electric Power Cooperative Inc.; and John T. Richards, Sho-Me Power Electric Cooperative. Richards retired Jan. 15, 2024, after more than 40 years of service to the three-tiered system and eight years on Associated's board.

Back row, from left: Larry E. Culwell, board secretary, KAMO Power; John B. Killgore, board vice president, NW Electric Power Cooperative Inc.; Daryl R. Sorrell, M&A Electric Power Cooperative; John R. Bledsoe, board treasurer, M&A Electric Power Cooperative; Douglas H. Aeilts, Northeast Missouri Electric Power Cooperative; and Dan A. Singletary, Sho-Me Power Electric Cooperative.

Executive leadership team delivers results for Associated's member-owned system

Management rooted in foundational rural electric cooperative principles and deep industry experience yields meaningful results for members year after year.

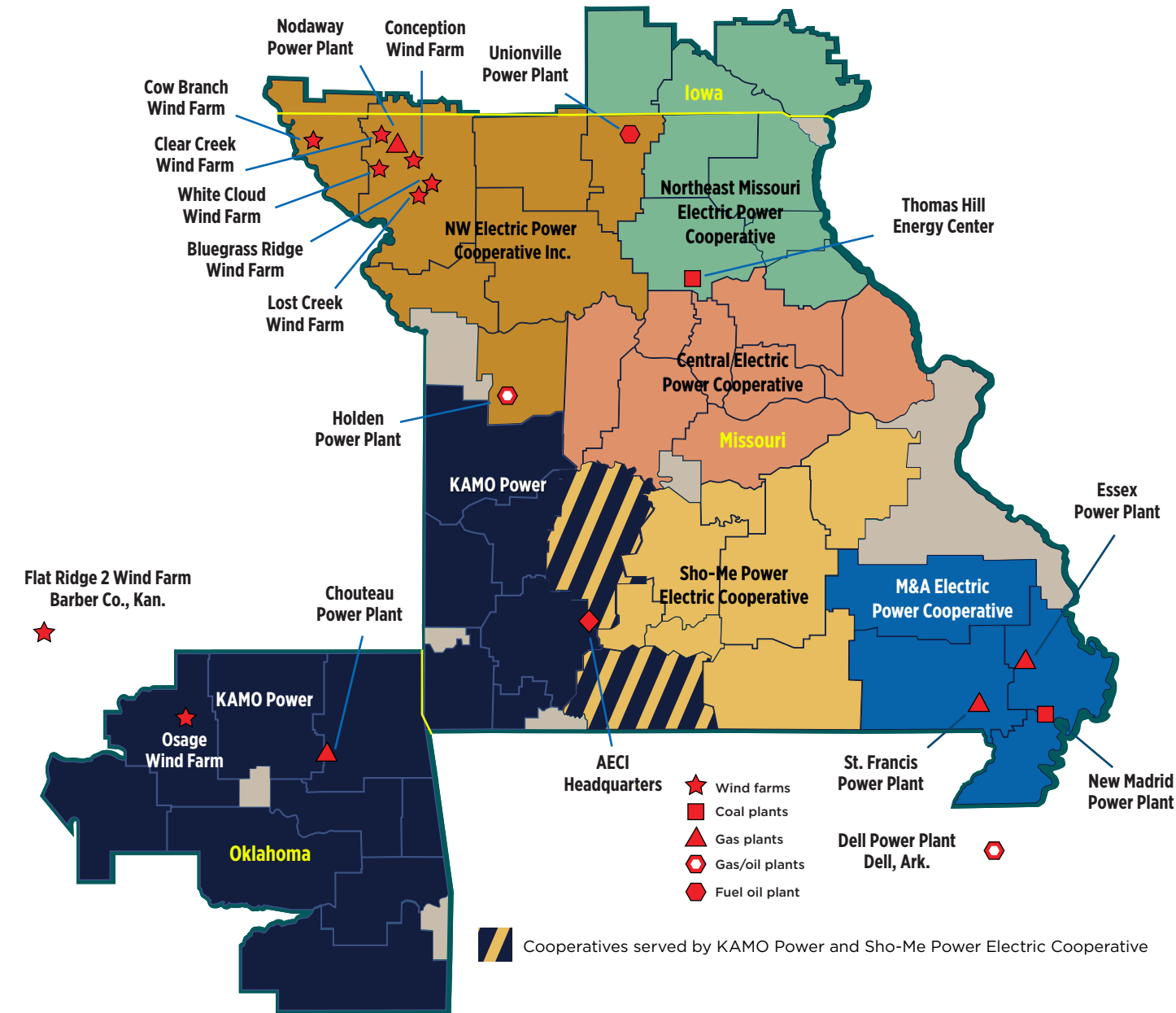


Front row, from left: David J. Tudor, CEO and general manager; and senior vice presidents Meredith T. Roberts, chief financial officer; Shawn P. Calhoun, chief human resources officer and Roger S. Clark, chief commercial officer.

Back row, from left: Senior vice presidents Kenneth S. Wilmot, special advisor to the CEO; Christopher D. Lazzaro, chief information officer; Brian A. Prestwood, general counsel and chief risk officer; Scott E. Thompson, chief operations officer and Joseph E. Wilkinson, chief member relations officer.

Ken Wilmot became special advisor to the CEO in October ahead of his Jan. 2, 2024, retirement. He dedicated 13 years to Associated and led Power Production since 2012.

Three-tiered system serves members' power supply needs



Associated serves six G&Ts that provide power to 51 distribution co-ops in three states

Central Electric Power Cooperative – Jefferson City, Mo.

Founded in 1949 • 34 counties served

- Boone Electric Cooperative – Columbia, Missouri
- Callaway Electric Cooperative – Fulton, Missouri
- Central Missouri Electric Cooperative Inc. – Sedalia, Missouri
- Co-Mo Electric Cooperative Inc. – Tipton, Missouri
- Consolidated Electric Cooperative Inc. – Mexico, Missouri
- Cuivre River Electric Cooperative Inc. – Troy, Missouri
- Howard Electric Cooperative – Fayette, Missouri
- Three Rivers Electric Cooperative – Linn, Missouri

Northeast Missouri Electric Power Cooperative – Palmyra, Mo.

Founded in 1948 • 33 counties served

- Access Energy Cooperative – Mt. Pleasant, Iowa
- Chariton Valley Electric Cooperative Inc. – Albia, Iowa
- Lewis County Rural Electric Cooperative – Lewistown, Missouri
- Macon Electric Cooperative – Macon, Missouri
- Missouri Rural Electric Cooperative – Palmyra, Missouri
- Ralls County Electric Cooperative – New London, Missouri
- Southern Iowa Electric Cooperative Inc. – Bloomfield, Iowa
- Tri-County Electric Cooperative Association – Lancaster, Missouri

KAMO Power – Vinita, Okla.

Founded in 1941 • 51 counties served

- Barry Electric Cooperative – Cassville, Missouri
- Barton County Electric Cooperative Inc. – Lamar, Missouri
- Central Electric Cooperative – Stillwater, Oklahoma
- Cookson Hills Electric Cooperative Inc. – Stigler, Oklahoma
- East Central Oklahoma Electric Cooperative Inc. – Okmulgee, Oklahoma
- Indian Electric Cooperative Inc. – Cleveland, Oklahoma
- Kiamichi Electric Cooperative Inc. – Wilburton, Oklahoma
- Lake Region Electric Cooperative Inc. – Hulbert, Oklahoma
- New-Mac Electric Cooperative Inc. – Neosho, Missouri
- Northeast Oklahoma Electric Cooperative Inc. – Vinita, Oklahoma
- Osage Valley Electric Cooperative Association – Butler, Missouri
- Ozark Electric Cooperative – Mt. Vernon, Missouri
- Ozarks Electric Cooperative Corp. – Fayetteville, Arkansas
- Sac Osage Electric Cooperative Inc. – El Dorado Springs, Missouri
- Southwest Electric Cooperative – Bolivar, Missouri
- Verdigris Valley Electric Cooperative Inc. – Collinsville, Oklahoma
- White River Valley Electric Cooperative Inc. – Branson, Missouri

NW Electric Power Cooperative Inc. – Cameron, Mo.

Founded in 1949 • 32 counties served

- Atchison-Holt Electric Cooperative – Rock Port, Missouri
- Farmers' Electric Cooperative Inc. – Chillicothe, Missouri
- Grundy Electric Cooperative Inc. – Trenton, Missouri
- North Central Missouri Electric Cooperative Inc. – Milan, Missouri
- Platte-Clay Electric Cooperative Inc. – Kearney, Missouri
- United Electric Cooperative Inc. – Savannah, Missouri
- West Central Electric Cooperative Inc. – Higginsville, Missouri

Sho-Me Power Electric Cooperative – Marshfield, Mo.

Founded in 1941 • 26 counties served

- Crawford Electric Cooperative Inc. – Bourbon, Missouri
- Gascosage Electric Cooperative – Dixon, Missouri
- Howell-Oregon Electric Cooperative Inc. – West Plains, Missouri
- Intercounty Electric Cooperative Association – Licking, Missouri
- Laclede Electric Cooperative – Lebanon, Missouri
- Se-Ma-No Electric Cooperative – Mansfield, Missouri
- Southwest Electric Cooperative – Bolivar, Missouri
- Webster Electric Cooperative – Marshfield, Missouri
- White River Valley Electric Cooperative Inc. – Branson, Missouri

M&A Electric Power Cooperative – Poplar Bluff, Mo.

Founded in 1948 • 18 counties served

- Black River Electric Cooperative – Fredericktown, Missouri
- Ozark Border Electric Cooperative – Poplar Bluff, Missouri
- Pemiscot-Dunklin Electric Cooperative – Hayti, Missouri
- SEMO Electric Cooperative – Sikeston, Missouri

POWER WITH PURPOSE

MEMBER-LED

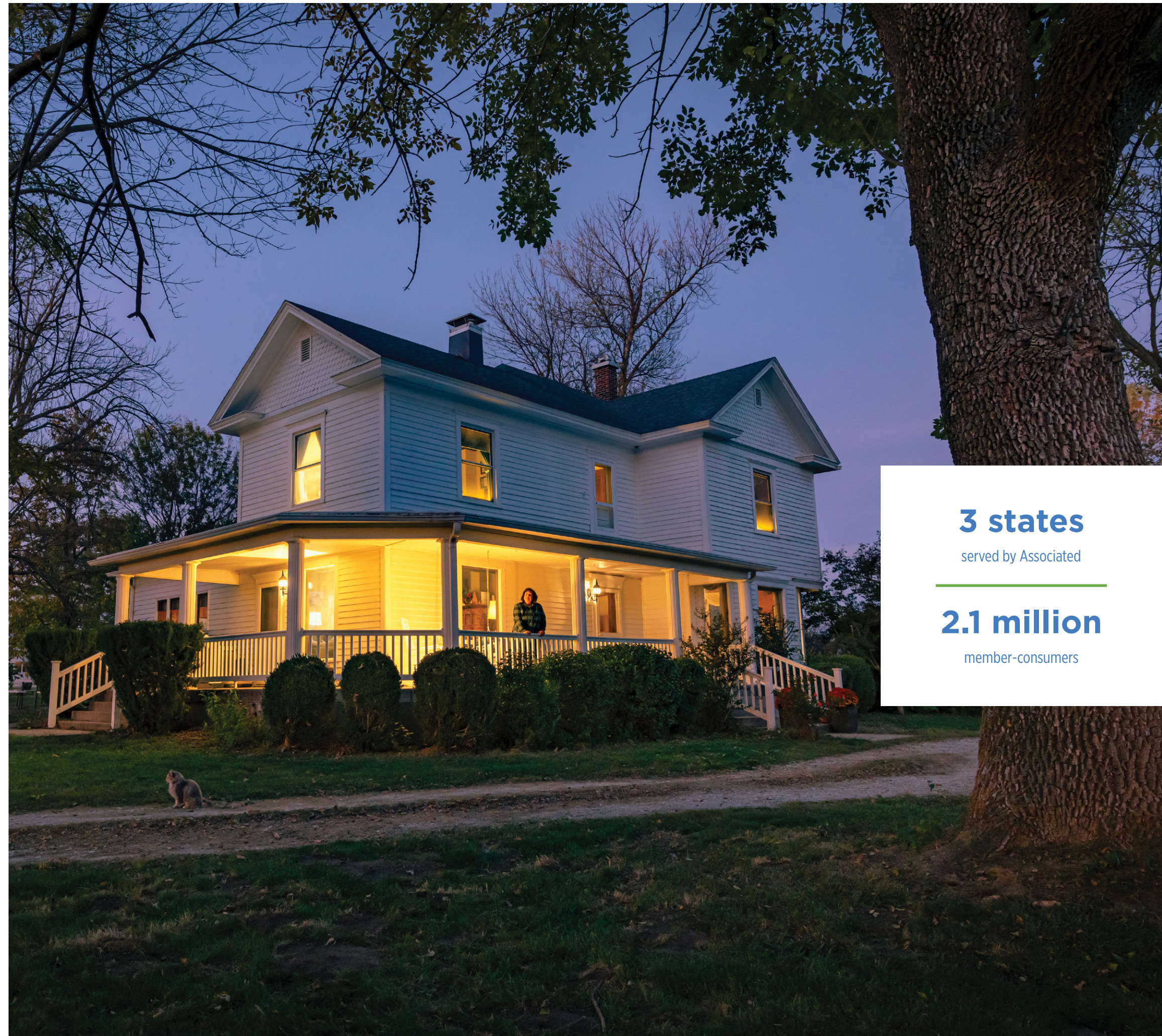
When businesses tout customer focus, they typically refer to efforts to analyze and understand the wants and needs of their most desirable customers and target markets. At Associated Electric Cooperative, we work just as diligently to serve our cooperative system, but with a distinct advantage: Our member-owners lead the company. Since 1961, this distinguishing governance model has enabled Associated to understand and deliver what member-owners value most: reliable, affordable and responsibly generated electricity.

Missouri, Oklahoma and Iowa are filled with people who understand heartland values are not just ideas, but a way of life. Because our three-tiered system is led by people who share those values, Associated is uniquely tied to the areas where our electricity powers modern life. When cooperatives paved the way for power supply to underserved rural areas starting in the 1930s, the imprint of member leadership was indelible and remains unfaded through time. That inherent, consistent member focus shapes who we are and, perhaps most importantly, what we do.

Vigilant to protect the interests of the cooperatives we serve, Associated continues to stand up for what is right for rural America. When agendas by special interest groups threaten the integrity of power supply, doing the right thing for the right reasons is the member-led way to manage. All industries evolve, but none have the potential for life-altering consequences like power generation. The adage “measure twice, cut once” to do a job right rings true as power production, the political world and reality intersect.

Similarly, Associated's accountability for safeguarding the environment and communities we serve has remained constant throughout a 62-year journey marked by evolving regulations, shifting political landscapes and changing member expectations. Given that clean air, water and land mean so much to the rural electric cooperative members we serve, our commitment to environmental stewardship is demonstrated not only in words but also by deeds. Significant investments to protect these natural resources continue to deliver meaningful results as we reliably generate electricity for 2.1 million people.

Right: This family farm in Callaway County, Missouri, built in 1914 prior to rural electrification, benefits from being part of a member-led cooperative generating reliable, affordable and responsible power.



3 states

served by Associated

2.1 million

member-consumers

Powering the heartland with purpose

6

G&T cooperative member-owners include Central Electric Power Cooperative, KAMO Power, M&A Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Inc. and Sho-Me Power Electric Cooperative

12

elected members sit on Associated's board and are informed and involved in setting the direction of the co-op. This grassroots, bottom-up governance ensures member-consumers are represented in all co-op decisions.

51

distribution cooperatives served in Missouri, southeast Iowa and northeast Oklahoma

24.6%

decrease in Associated's carbon dioxide emissions rate since 2005

Tudor stands for members, voices concerns to U.S. Senate

In Washington, D.C., decisions made by policymakers now will determine if reliable electricity remains a key advantage for America, or rolling blackouts become a new way of life. The members of Associated Electric Cooperative have been clear: A reliable power supply is the top priority. CEO and General Manager David Tudor made their voices heard when he was asked to testify in front of the U.S. Senate Committee on Energy & Natural Resources in June 2023.



Addressing the Senate panel, Tudor warned the push to rapidly replace always-available energy sources could spark rolling blackouts across America.

"Lawmakers must support policies that include all energy sources to maintain reliability and affordability. Rolling blackouts cannot become the new normal," Tudor told the Senate committee. "It is critical that policymakers recognize the need for adequate time, technology development and new transmission infrastructure before taking our nation down an energy path that prioritizes speed over successfully keeping the lights on."

Tudor also testified how Associated kept the lights on during severe winter storms the past two years that knocked out power to millions of Americans and led to the deaths of more than 700 people in Texas during Winter Storm Uri in February 2021.

"Associated relies on a balanced generation mix, with proven coal and natural gas generating plants as a valuable foundation for reliability, and dispatched its units to full capacity in advance of the cold temperatures," he said, describing the response to Winter Storm Uri. "Despite significant outside pressure in recent years to move to other options, these fossil-fuel generating stations were the major factor in keeping the lights on for the 2.1 million people we serve."

During Winter Storm Elliott in December 2022, nine states experienced rolling blackouts as the demand for electricity exceeded supply. Tudor reported the Associated system set a new all-time member peak demand but remained dependable thanks to its baseload generation.

Top right: David Tudor, CEO and general manager, outlines threats to electric reliability at a Senate Committee on Energy & Natural Resources hearing June 1, 2023, in Washington, D.C.



Scan to watch highlights from David Tudor's Senate testimony



Diverse generation, resilient transmission keeps the lights on

“Don’t put all your eggs in one basket” is more than a Midwestern idiom. For Associated Electric Cooperative, this common-sense philosophy sums up the co-op’s generation strategy. A diverse generation portfolio and resilient transmission system allows Associated and its member-owners to keep the lights on, at the most affordable price available, no matter the season.

Associated manages a diverse generation fleet consisting of coal, natural gas, fuel oil, wind and hydropower resources. This balanced generation mix allows for optionality that enables Associated to take advantage of weather and market conditions to benefit members.

Baseload generation, like coal and natural gas plants, serve as the foundation of Associated’s fleet and can generate power consistently, day and night, regardless of fluctuations in electricity demand. Intermediate generation, like quick-start natural gas plants, bridge the gap between constant baseload power and fluctuating demand. For sudden surges in demand, peaking natural gas and fuel oil plants can quickly meet member needs. Associated also uses renewable power generation, like wind and hydropower, to provide valuable energy when weather cooperates.

The added flexibility of diverse generation also benefits energy affordability for members. As the market shifts, Associated can select the lowest-cost generation to serve native member load, finding the optimum position to meet member energy needs. When member load is met and market conditions are favorable, Associated monetizes members’ generation and transmission assets, selling power to nonmembers, which subsidizes member rates.

However, the benefits of a diverse generation fleet are negated without a strong transmission system. Associated and its six G&T member-owners collaborate on long-range and regional transmission planning, compliance, resiliency studies, outage coordination, training and work with neighboring regional transmission organizations (RTOs) and utilities. With more than 230 interconnections and 10,200 miles of line, Associated’s members own one of the largest integrated transmission systems in the United States.

Top left: Dima Pushkin, senior engineer at Thomas Hill Energy Center, emigrated to the U.S. from Ukraine as a teenager, and is served by Associated’s power supply as a member-consumer of Boone Electric Cooperative. **Bottom left:** Derrick Priggel, engineer at New Madrid Power Plant, is a native of the Missouri Bootheel and takes pride in generating power for friends, family and neighbors.



Mission-driven culture receives national recognition

Associated Electric Cooperative strives for a strong working culture of mission-driven excellence and high performance. This culture sets the cooperative apart, creates a positive work environment and benefits the members for whom it works. If the strength of Associated is its membership, the backbone of that strength is trust.

In 2023, these member-led efforts were recognized when Associated was selected as one of America’s most trustworthy companies, according to a survey ranking from *Newsweek* and market research partner Statista. Associated was ranked No. 5 in [Newsweek’s Most Trustworthy Companies in America in 2023](#) in the Energy & Utilities category.

The second-annual survey reviewed a pool of 3,100 U.S. based companies, with just 700 voted upon for top honors across 23 industries. Notably, Associated was the highest-rated electric cooperative in the survey. The Energy & Utilities category had the second-most ranked companies of any industry in the survey, with 47 public and private utility companies making the list.

Newsweek’s rankings were determined by an independent survey sample of about 25,000 people comprising customers, employees and investors across the U.S. Surveys were targeted to a pool of 1,800 public and 1,300 private companies with revenues of more than \$500 million.

Top right: Member trust begins with committed employees like Michelle Hopkins, warehouseman at New Madrid Power Plant, who celebrated 30 years of service at Associated in 2023.



3,100
U.S. based companies surveyed

#5
in *Newsweek’s* Most Trustworthy Companies in America in 2023, Energy & Utilities sector

POWER WITH PURPOSE

RELIABLE

Security quickly rises to the top of anyone’s list of personal priorities. Whether it is a family, community, workplace, school or house of worship, being able to count on this bedrock principle sets a firm foundation for life. Likewise, being able to count on reliable power is the lifeblood of rural communities. As watchful guardians of a secure power supply, Associated Electric Cooperative and its generation and transmission member-owners prioritize reliable power supply first.

Frequently taken for granted, a reliable power supply is not often celebrated, but desperately missed if the electricity stops flowing. For Associated and its G&T member-owners, generating and transmitting power means managing a balanced generation fleet fueled by coal, natural gas, fuel oil, wind and hydropower and more than 10,200 miles of high-voltage transmission lines serving as a superhighway for the electricity. Operational excellence, comprised of employee safety, generation availability and unit efficiency, is the benchmark for the system.

As Associated maintains vigilance to ensure reliability, external forces are busy at work attempting to quickly transition the power generation in America from reliable and dispatchable sources to intermittent and non-dispatchable sources. This goal of a fast transition to a new energy paradigm threatens reliability, and affordability, for consumers of electricity.

At the forefront of raising awareness of this looming crisis, Associated created a reminder of the need for caution in any prospective energy transition: the **3Ts**. First, potential **technology** solutions may one day be reliable and affordable, but are not a reality today or near-term. Second, **transmission** roadblocks can only be addressed with expensive and extensive upgrades. Third, technology development and transmission system upgrades will take significant **time**.

Associated and its G&T member-owners continue to collaborate to deliver on our mission: supplying reliable, affordable electricity. That commitment to our member-owners remains, whether the winds of change calm into a pattern dictated by logic and reason, or blow quickly through the energy industry, creating turbulence that threatens the security of energy consumers across the nation.

Right: Dedicated employees across many disciplines, like Chemical Lab Technician Second Period Alex Leathers, shown collecting water samples at Thomas Hill Energy Center, make it their purpose to keep power flowing.



23.9 million

MWh of reliable net generation
(coal and natural gas, 2023)

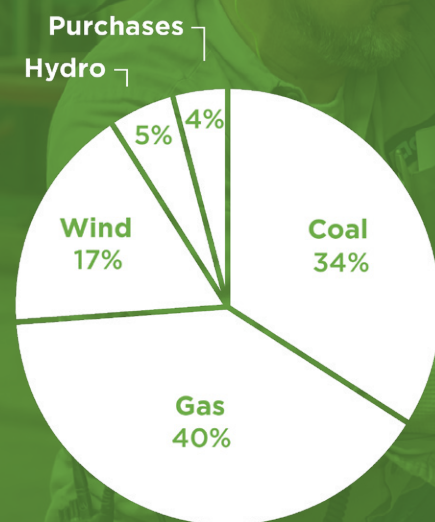
Zero

rolling blackouts interrupted
member service

1.68

recordable incident rate in 2023,
tied for sixth-lowest in history

2023 resources for member load



Associated's diversified resources ensure reliable service for member-owners

Gas fleet annual net generation, MWh (in millions)



Associated's natural gas fleet set an all-time net generation record in 2023

4,554

megawatts of member load on Aug. 20, 2023, set new summer peak

117,105

service hours for the coal and natural gas fleet in 2023

Safeguarding the future of reliability

Protecting a reliable, low-cost and responsible power supply for Associated Electric Cooperative's members is vital. As the cooperative looks to the future, reliability is under pressure. Associated's system continues to set records for peak energy use, while aggressive environmental regulations contribute to widespread retirements of coal-fired generation across the Midwest. To safeguard reliability, extensive analysis shows additional generation capacity is required to serve members during peak weather conditions.

To best meet member needs, Associated is constructing two new natural gas-fired, simple-cycle energy centers — one in Oklahoma and one in Missouri — that will each provide 420-445 MW of power when needed. Sites in Oklahoma and Missouri were prioritized due to their proximity to natural gas supply lines and cooperative high voltage transmission lines, allowing Associated to construct the energy centers at the lowest cost possible.

Ripley Energy Center, the first site under development near Ripley, Oklahoma, will be the most advanced commercially operated combustion turbine in the state when complete. The second site in Missouri will use the same advanced technology. Pending final regulatory approvals, Ripley Energy Center is on track to be online 2026-2027, with the Missouri site to follow.

Another step taken to ensure reliability was the recommissioning of Unionville Power Plant in northern Missouri. A 44-MW fuel oil-based peaking facility, Unionville had been in layup status since 2015 and required significant updates to bring the plant back to life. Global supply chain issues and a tight labor market from COVID-19 fallout proved to be challenges throughout the project.

With every twist and turn at Unionville, Associated employees problem-solved, found solutions and transformed a 1970s-era plant into a 21st century peaking facility members can be proud of. The successful recommissioning project improved fleet capacity and fuel diversity at a cost significantly less than building a new combustion turbine.

Top right: Associated's focus on reliability was underscored during the recommissioning of Unionville Power Plant, a year-long project that also required collaboration and transmission upgrades with G&T member-owner NW Electric Power Cooperative Inc.





Natural gas fleet sets performance records

Associated Electric Cooperative's natural gas fleet consists of three combined-cycle plants and four simple-cycle plants located in three states. This essential intermediate and peaking power generation ensures reliable electricity for members in the three-state service area. Low natural gas prices allowed this portion of the generation fleet to play a pivotal role in meeting member load, marking the first time this fuel exceeded coal as the primary generation resource.

Always dedicated to maintaining members' assets, gas plant operations employees completed several planned maintenance outage projects to ensure the gas fleet was available for member load when needed. In fact, every unit in the combined-cycle fleet set a record for continuous days online except Unit 1 at Chouteau Power Plant.

Notably, employees marked a year of solid performance, generating a record of more than 13 million MWh of power to member homes and businesses.

Other gas fleet records:

Overall fleet

#1 capacity factor: 51.5%
 #1 net generation: 13,262,947 MWh
 #3 heat rate: 7,229 Btu/kWh
 #3 generation hours: 85,765

Chouteau Power Plant

#1 capacity factor: 74.3%
 #1 net generation: 6,923,515 MWh
 #1 heat rate: 6,793 Btu/kWh

St. Francis Power Plant

#1 capacity factor: 46.1%
 #1 net generation: 1,968,210 MWh
 #2 heat rate: 7,339 Btu/kWh

Dell Power Plant

#1 capacity factor: 73.7%
 #1 net generation: 4,087,322 MWh
 #4 heat rate: 7,441 Btu/kWh

Holden Power Plant

#2 capacity factor: 6.4%
 #2 net generation: 197,249 MWh

Nodaway Power Plant

#1 starting reliability: 100%

Top left: Bruce Smith, instrument, control & technical technician, keeps Dell Power Plant running at its best for member-owners. **Bottom left:** Associated's simple-cycle gas team manages a small but mighty fleet consisting of Essex Power Plant, Holden Power Plant, Nodaway Power Plant and Unionville Power Plant, providing critical megawatts that deliver reliability and affordability for the system.



Record low river levels challenge power production

For two years in a row, widespread drought in the Upper Mississippi and Ohio River valleys have impacted operations at New Madrid Power Plant. As the lifeblood of New Madrid, a historically low Mississippi River provided a host of challenges in 2023, as river water could no longer reach the plant's intake system. Thanks to countless hours of hard work and years of preparation, New Madrid maintained reliability and kept the plant online.

Oct. 16, 2023, the river set an all-time record low of -6.58 feet after river pumps started running in September when levels dropped to -4.7 feet. Without essential cooling water from the river, New Madrid cannot generate power.

The cooperative tackled these challenges with 10 diesel-powered floating barge pumps. To provide sufficient water flow for the plant, four pumps ran at a time on each water intake (one for each unit). Two additional floating fuel barges provided the diesel to keep each set of pumps in operation.

Plant engineers explained the solution. "Even though we can't raise the whole river level, we can temporarily raise river levels in a small, localized area. These pumps essentially push a wall of water into the intake." This water allows the plant to run to meet members' electricity needs, with 99% returned to the Mississippi River after its use. All water is returned in as clean or better condition in full compliance with environmental regulations.

Staff continues to monitor and assess low water challenges that appear to be increasing in frequency the last few years. A team is working on researching other engineering solutions to identify a more reliable option.

Top right: Earnest Fobbs, control room operator with training, monitors load and real-time unit operations to protect members' generation assets and power supply at New Madrid Power Plant. When the Mississippi River reached record low levels during the fall of 2023, Associated employees sprang into action and managed a floating barge pump operation to keep cooling water flowing despite conditions.



-6.58 feet

set on Oct. 16, 2023, is the new all-time record low at the New Madrid river gauge

69 days

floating barge pumps kept New Madrid afloat

POWER WITH PURPOSE

AFFORDABLE

Increasing costs quickly translate to impacts on the budgets for families and businesses of all types. As a not-for-profit, member-owned cooperative, Associated Electric Cooperative keeps a keen eye focused on the bottom line for its operations and, therefore, its member-owners. Maintaining an affordable power supply means striking a balance between affordability and cost escalations for inflation, regulatory compliance and generation and transmission projects to preserve the reliability member-owners expect.

Associated is well-positioned to weather storms both literal and those generated by a challenging economic climate, regulatory authorities and system power requirements. By keeping our financial foundation strong and flexible, member-owners can be assured when new regulations mandate expenditures, or member energy needs justify investment in new generation units, Associated is prepared to answer the call. A healthy financial position saves money through an ability to access funding with lower borrowing costs, a key benefit in a period where new generation will be necessary.

Despite the upward pressure on power supply costs, Associated has effectively managed rates to its member-owners to ensure competitiveness versus other power providers adjacent to our service area. Providing an affordable wholesale power rate is a core function for Associated, and while rates may go up to satisfy current and future power needs of the system, rates continue to be competitive with other G&T cooperatives, municipal and investor-owned utilities.

On the frontline of energy costs, since 2008 Associated has offered Take Control & Save, a menu of equipment rebates and other services for member systems to choose from, all designed to save energy and money. While no single program or project can solve the issue of rising energy costs, Associated continues to keep member systems equipped to offer energy-saving incentives, while exploring ways to keep its wholesale power rates competitive.

Right: Four generations have made Crane's Country Store in mid-Missouri an invaluable resource to its rural community since 1889. David Crane, proprietor, knows and values his customers and relies on the affordable cooperative energy that powers his business.



3.5 million
kWh saved through energy efficiency rebates since 2008

\$34.47
per MWh generated, third-lowest cost among G&T co-ops

Source: G&T Accounting and Finance Association's June 2023 directory

\$268 million

in member rate discounts from 2019-2023

\$548 million

applied for in grants from the federal government's
Inflation Reduction Act

236

interconnections with neighboring utilities help Associated generate nonmember sales that offset member rates

31%

of all energy sales in 2023 were to nonmembers, generating margins for the benefit of members

Associated team investigates low-cost funding opportunities

Maintaining its focus on affordable electricity, Associated Electric Cooperative formed a team of subject matter experts to explore potential funding opportunities from the federal Inflation Reduction Act, several grant programs and the Infrastructure Bill. The goal was to coordinate and increase the scope of analysis with one priority in mind: applying for new funding resources to benefit member systems.

A cross-divisional team, in collaboration with Associated's G&T member-owners, came together to explore various government grants, loan forgiveness, low or 0% loans and tax credits. Their goal was to create an overall financial strategy for a range of projects, from transmission to renewable generation, across the cooperative. Receiving any of these grants would give Associated access to low-cost funding sources for future maintenance and growth projects.

Financial research and exploration began with programs from the U.S. Department of Energy, U.S. Department of Agriculture, U.S. Environmental Protection Agency and specific state programs. The team coordinated services and communication, identifying potential opportunities, reviewing funding sources and requirements.

After this research, the group reported their findings to key stakeholders before submitting their formal request to the USDA New Era program. In its letter of intent, Associated submitted \$548 million in grant requests and \$264 million in 0% loans. Associated's G&T member-owners together requested \$179 million in grants and \$537 million in 0% loans. If Associated receives a notice to proceed, a community benefit plan and draft engineering and environmental documentation will be part of the final application.



Top right: Associated's government funding team – spearheaded by Barb Economon, vice president, finance (center), and supported by employees like Dhruvi Gheewala, financial analyst I (left) and Aaron Dennis, financial analyst II (right) – coordinated the co-op's response to federal funding opportunities in 2023.



Building equity, lowering future costs

Life is full of decisions that require courage to prioritize long-term benefits over short-term expediency. As inflationary price pressures impact all facets of daily life, Associated Electric Cooperative's goal to be the lowest-cost wholesale power provider grows more challenging. Ensuring a reliable power supply is expensive, but Associated's member-led board of directors never loses sight of the bottom-line impact on member-consumers.

In 2023, Associated's board made a difficult but visionary decision to prioritize long-term affordability with a 2% rate increase for its member-owners starting April 1, 2024. The rate increase is projected to produce higher margins, designed to build equity and maintain the financial strength of Associated as it funds existing generation, transmission projects and new generation to meet member energy needs.

With the rate increase, margins are expected to increase, which will increase equity and reduce the overall debt funding required for the construction of two new peaking gas plants. In turn, debt and interest costs are lowered, maintaining the strength of Associated's balance sheet and industry-best credit ratings. Retaining a strong credit rating also increases purchasing power with vendors during the large capital program, as well as offers counterparty credit advantages with natural gas providers and pipelines.

The strategic decision by Associated's board to build equity for the construction of new generation projects is a first for the cooperative, achieving the lowest-possible cost for members. Most importantly, the action enables Associated to maintain the reliability of its power supply today and well into the future.

Top left: Associated board secretary Larry Culwell (left), a member-consumer of Kiamichi Electric Cooperative in Oklahoma, tours New Madrid Power Plant with Shannon Sprouse, plant training specialist. Associated's member-led board understands firsthand the impact of their decisions and remains committed to bettering the communities it serves.
Bottom left: Associated never forgets about the member-consumers behind each meter, like John West with Liberty Church Cattle Company, who depend on affordable energy to power daily life and make an honest living.



Affirming the financial strength of Associated

Strong credit ratings are key indicators of Associated Electric Cooperative's financial strength. Every year, a leadership team travels to New York to meet with rating agencies and tell the story of the cooperative's financial strategies, forecasts, strength and the past year's performance. This credit review process is critical to keeping rates affordable for members.

Following meetings in fall 2023 with the three main international rating agencies, all three agencies affirmed Associated's credit rating. Fitch Ratings affirmed is AA- credit rating, upgrading its previous negative outlook to stable, Moody's Investors Service affirmed is Aa3 rating with a stable outlook, and S&P Global Ratings affirmed its AA credit rating with a stable outlook.

During the credit review process, the rating agencies review financial details, but also areas that impact future financial strength like strong governance, operations, environmental stewardship, systemwide cohesiveness, power marketing and risk management.

These ratings again rank Associated among the highest-rated G&Ts in the nation and set the foundation for the cooperative's ability to access the lowest cost loans and for its work with counterparties. They also allow the cooperative to buy fuel and transportation at no credit cost and receive lower interest rates when borrowing from financial institutions.

Rating agencies typically cite several organizational strengths, noting the enhanced stability gained from Associated's long-term wholesale power contracts and a strong and cohesive board of directors. Other noted strengths include long-term wholesale power contracts, ownership of diverse and flexible generation resources, progression of the cooperative's capital plan and participation in wholesale power markets, primarily the Midcontinent Independent System Operator and Southwest Power Pool.

Top right: Jody Morton, journeyman instrumentation technician specialist at Thomas Hill Energy Center, works hard to ensure the health of Associated's generation assets, a strength affirmed in Associated's industry-best credit ratings.



AA- rating

Fitch

Aa3 rating

Moody's

AA rating

S&P Global

POWER WITH PURPOSE

FINANCIAL HIGHLIGHTS

Associated Electric Cooperative's dedication to its members-first mission, along with its strong and flexible financial position, served as a constant guide through the opportunities and challenges of the year.

For the second-consecutive year, the Associated system set an all-time record summer peak. The summer brought drought and excessive heat to much of the Upper Mississippi and Ohio River Valley, resulting in record-low Mississippi River water levels. These weather conditions occurred at the same time planned and unplanned outages were underway at Associated's coal units, but the gas fleet rose to the challenge, delivering record-breaking performance in net generation.

Associated's financial strength continued to provide a basis for its excellent credit ratings from all three major rating agencies - Fitch Ratings, Moody's Investors Service and S&P Global Ratings - allowing for lower borrowing costs.

Lower total production costs, driven by low natural gas prices, and strong net marketing activity, enabled Associated to exceed budgeted margins by almost \$30 million in 2023. Net margin for 2023 was \$81.4 million compared to \$24.9 million for 2022.



Access the 2023
**Independent Auditor's
Report and Consolidated
Financial Statements**
by scanning the QR code

Right: The operational excellence of member-owned generation, like New Madrid Power Plant in southeast Missouri, helps Associated maintain financial strength and flexibility.



\$81.4 million

net margin in 2023

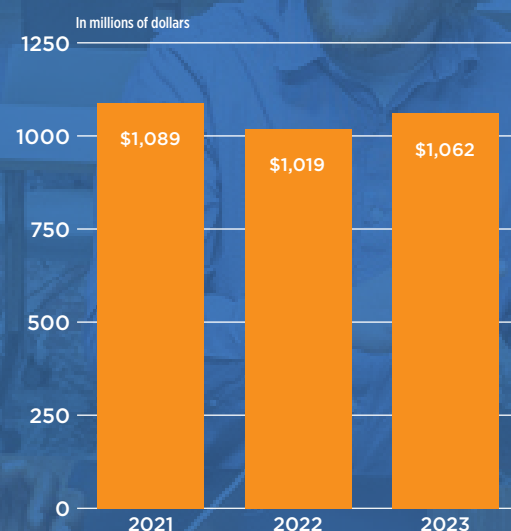
\$3.5 billion

total assets in 2023

Financial highlights

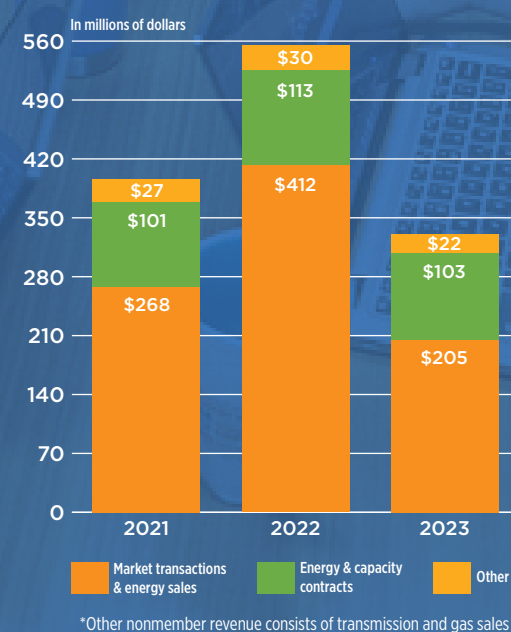
Member revenue

Member revenue was \$1.1 billion for the year ended Dec. 31, 2023, an increase of \$43.8 million from the prior year. Effective April 1, 2023, Associated had its first rate increase since 2017, resulting in additional member revenue of \$29.4 million in 2023. Additionally, member rate discounts totaled \$15.1 million in 2023 compared to \$67.6 million in 2022. Offsetting these increases was a decrease in energy sales volume of 5.3% in 2023, compared to 2022.



Nonmember revenue

Nonmember revenue decreased \$223.7 million in 2023 compared to 2022, primarily related to lower sales prices in the markets. The lower sales prices in 2023 were in large part driven by lower natural gas prices.



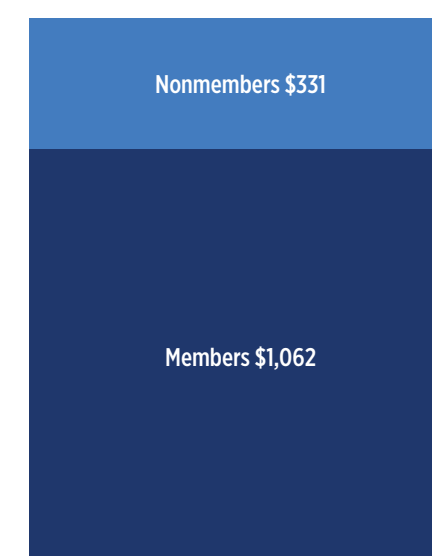
2023 financial and operational highlights

Financial (in thousands)	2023	2022	Increase (Decrease)	% Increase (Decrease)
Operating revenue	\$1,393,352	\$1,573,263	(\$179,911)	(11.4%)
Operating expenses	1,258,961	1,491,164	(232,203)	(15.6%)
Interest expense on long-term debt				
(less interest capitalized)	63,985	60,243	3,742	6.2%
Net nonoperating income	10,966	3,091	7,875	254.8%
Net margin	81,373	24,947	56,426	226.2%

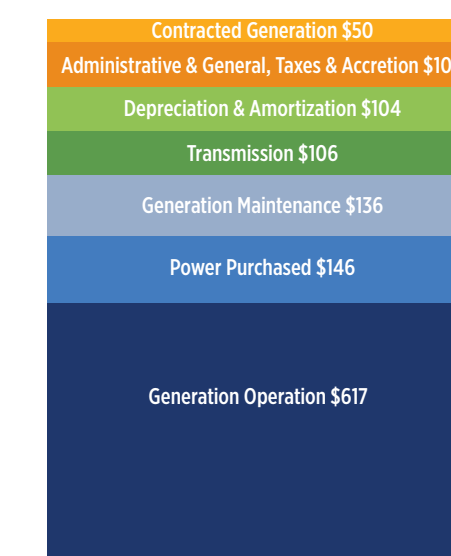
Operational

Energy sales (MWh)				
Members	19,700,928	20,809,048	(1,108,120)	(5.3%)
Nonmembers	8,871,137	8,853,204	17,933	0.2%
Member revenue (\$/MWh)	\$53.92	\$48.95	\$4.97	10.2%
Peak hour member demand (MW)	4,554	5,899	(1,345)	(22.8%)
Total capacity (MW)	5,618	5,626	44	0.8%
Net generation (MWh)	23,910,569	24,554,809	(644,240)	(2.6%)

Operating revenue (dollars in millions)



Operating expenses (dollars in millions)





Financial position

Associated Electric Cooperative's financial position as of Dec. 31, 2023, remains resilient with a diversified portfolio of assets, ample working capital and a strong liquidity position.

Total assets for the cooperative were \$3.5 billion, an increase of \$310.5 million from 2022. Utility plant assets increased \$222 million in 2023, which included upgrades to the transmission system, new gas generation projects and capital investments across Associated's generating fleet to ensure a diverse resource portfolio and reliability.

Since 1993, Associated has returned \$345.8 million of allocated patronage capital. In 2023, Associated returned 2% of equity, along with an additional \$10 million for the sixth-consecutive year, resulting in a total of \$25.3 million in payments to member-owners.

Unrestricted available liquidity was \$1.3 billion, which included cash and cash equivalents, designated cash and cash equivalents, and unused available funds on existing unsecured credit facilities.

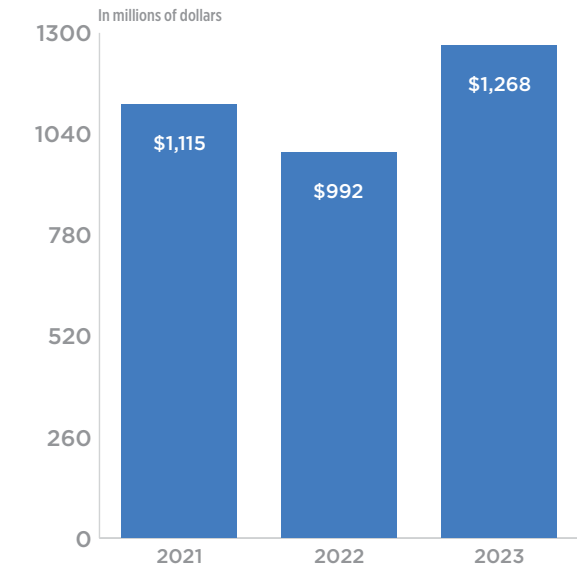
Associated works with the U.S. Department of Agriculture Rural Utilities Service (RUS) to secure lower-cost funding for projects that ensure reliable electricity for rural cooperative members. Associated closed three RUS loans totaling \$450 million in 2023 and borrowed \$377.7 million from RUS at an average rate of 4.3% for environmental control, generation maintenance, transmission and other work projects. Associated closed a \$100 million loan in 2022 to help fund its new gas generation projects. In anticipation of planned future borrowing, Associated has mitigated interest rate risk by hedging against rising interest rates.

Top left: Associated's annual meetings with rating agencies are central to its strong financial position and credit ratings that benefit members. From left: David Tudor, CEO and general manager; Meredith Roberts, senior vice president and chief financial officer; Doug Aeilts, Associated board member; Emery "Buster" Geisendorfer, Associated board president; Roger Clark, senior vice president and chief commercial officer; and Tom Howard, Associated board member, during the 2023 credit rating agency meetings in New York.

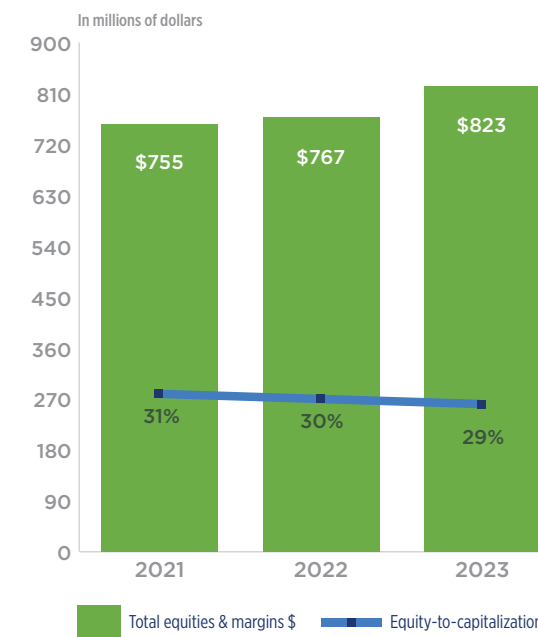
Average member revenue



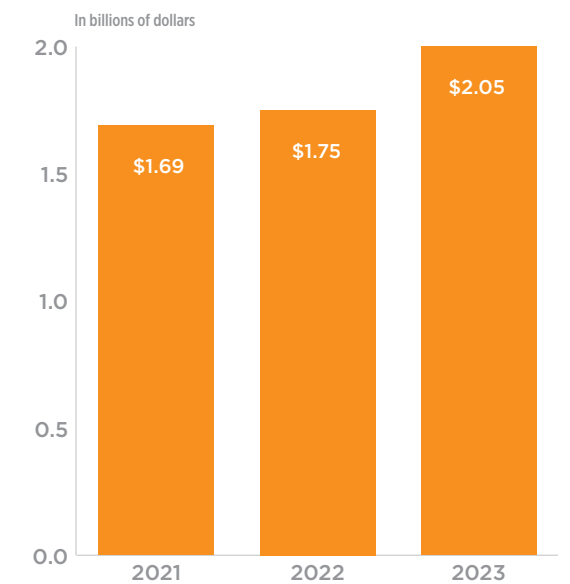
Total available liquidity



Total equities & margins and equity-to-capitalization ratio



Total long-term debt



Five-year statistical summary

Year (calendar year basis)	2023	2022	2021	2020	2019
Operating revenue (in thousands)	\$1,393,352	\$1,573,263	\$1,484,439	\$1,135,982	\$1,247,298
Sales (MWh)	28,572,065	29,662,252	28,025,964	27,762,367	29,724,096
Total member sales	19,700,928	20,809,048	19,454,686	18,734,107	19,284,984
Central Electric Power Cooperative	3,796,987	4,038,322	3,819,710	3,734,710	3,835,648
KAMO Power	7,775,994	8,141,438	7,432,573	6,978,652	7,185,095
M&A Electric Power Cooperative	1,777,763	1,881,714	1,787,267	1,732,893	1,764,990
Northeast Missouri Electric Power Cooperative	1,434,195	1,526,355	1,487,095	1,460,073	1,514,516
NW Electric Power Cooperative Inc.	1,761,805	1,846,763	1,755,055	1,723,436	1,782,683
Sho-Me Power Electric Cooperative	3,154,184	3,374,456	3,172,986	3,104,343	3,202,052
Total nonmember sales	8,871,137	8,853,204	8,571,278	9,028,260	10,439,112
Peak hour member demand (MW)	4,554	5,899	5,549	4,369	4,539
Member load factor (%)	48.8	40	39.7	48.2	47.8
Member load growth (%)					
Energy	(5.3)	7	3.8	(2.9)	(3.4)
Demand	(22.8)	6.3	27	(3.7)	(11.1)
Investment in facilities (original cost in thousands)	\$5,192,627	\$4,875,542	\$4,724,656	\$4,555,644	\$4,358,235
Total assets (in thousands)	\$3,513,122	\$3,202,660	\$3,042,828	\$3,028,804	\$2,928,229
Long-term debt (in thousands, excluding current maturities)	\$1,968,902	\$1,677,918	\$1,617,411	\$1,551,646	\$1,520,968
Total capacity (MW) (see capacity notes, back cover)	5,618	5,626	5,584	5,703	5,657
Revenue from members (\$/MWh)	\$53.92	\$48.95	\$55.97	\$46.98	\$48.19

Associated relies on diverse power resources

Associated's coal-based power plants:	MW capacity
New Madrid Power Plant	1,234
Thomas Hill Energy Center	1,180
Associated's combined-cycle, gas-based power plants:	
Chouteau Power Plant	1,005
Dell Power Plant (dual-fuel)	569
St. Francis Power Plant	496
Associated's peaking gas-based power plants:	
Essex Power Plant	113
Holden Power Plant (dual-fuel)	303
Nodaway Power Plant	196
Unionville Power Plant	44
Contracted power sources:	
Hydroelectric peaking power, Southwestern Power Administration	478
Wind energy *	0
Total	5,618


*Associated contracts with eight wind farms totaling 1,240 MW of nameplate capacity. Wind capacity is not included for peak planning purposes.

Associated sells and does not retain or retire all of the environmental attributes of energy generated by contracted wind facilities. This brings in revenue that helps keep members' electricity affordable.



SYSTEM FACTS April 2024

Associated Electric Cooperative Inc.

A Touchstone Energy® Cooperative 



A Touchstone Energy® Cooperative 

2814 S. Golden Ave., P.O. Box 754, Springfield, MO 65801-0754
417-881-1204, www.aeci.org

An equal opportunity employer and provider/disability/veteran.
© 2024 Associated Electric Cooperative Inc.
All rights reserved.