



NC SUSTAINABLE
ENERGY ASSOCIATION

2018 | ANNUAL REPORT



A NOTE FROM **THE NCSEA TEAM:**

In the following pages, you will read how North Carolina Sustainable Energy Association (NCSEA) used our core tenants of Inform, Connect, Advocate, and Advance to move us toward a robust clean energy economy that unifies and benefits all its stakeholders: consumers, business, the clean energy industry, and utility energy providers. By no means are we in this alone. NCSEA owes inexpressible gratitude to the members, partners, and funders who have enabled us to work with them to make demonstrable impacts possible in every county and legislative district of our state.

NCSEA turned 40 years old in 2018, and in many ways it was one of the most transformational years NCSEA has ever had.

While working toward our mission of driving policy and market development to create clean energy jobs, economic opportunities, and affordable energy that benefits all of North Carolina, we saw the results of many years of incremental change come to fruition. At the same time, we came into full awareness of the imperative that we must see a large-scale, systemic overhaul of the utility business model in our state if clean energy is to truly reach its full potential.

Despite the barriers caused by an outdated electric utility model, the clean energy economy in North Carolina reached some incredible milestones. The clean energy industry now represents over \$14 BILLION in annual revenue and employs over 40,000 people in North Carolina. 2018 saw the results of momentum that had been building for several years—32 percent of cumulative clean energy investment over the last 12 years occurred in 2017 and 2018. And, through 2018, all but 18 North Carolina counties had experienced clean energy project investments of over \$1 million, with several experiencing investments of \$100s of millions.

Moving forward, we are committed to meeting people where they are, while continuing to use the incredible experience of our partners and members to demonstrate how a clean energy economy can unleash growth, innovation, and opportunity for all North Carolinians.

Thank you for joining us on this journey. We look forward to seeing how far we go together.



2018 HIGHLIGHTS

43,238 JOBS
in North Carolina's
clean energy
industry.



Clean energy brought North
Carolina **\$14 BILLION IN
REVENUE** in 2018.

133 PERCENT INCREASE FROM 2016



12 percent of all
electricity generated in
North Carolina in 2018 came
from clean sources.

24 PERCENT INCREASE FROM 2017

Over the course of 2018, NCSEA
sent **over 42 newsletters** with an
average open rate of 26 percent.



With our partners, we
prevented Duke Energy
from securing a 50 percent
rate increase over the
next 10 years.

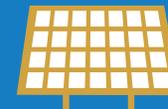
NCSEA held **23 member
calls** to discuss some of
the most important issues
impacting clean energy in
North Carolina.



We worked with members
to create the **Solar Business
Code of Conduct.**

We hosted **SEVEN events**
throughout the year.

Solar PV registrations reached
their **highest levels EVER** in
the fourth quarter of 2018.





Advance

DEPLOYMENT | VISION | EQUITY, DIVERSITY, AND INCLUSIVENESS

Through our work, we kept North Carolina #2 in the nation in installed solar capacity as we worked toward our long term goals of achieving:

- 40 percent clean retail electric sales by 2027
- 30 percent GHG emissions reduction by 2025
- 50,000 clean energy jobs by 2028

We saw 12 percent of all electricity generated in North Carolina in 2018 come from clean sources—a 24 percent increase from 2017. NCSEA is proud of these achievements, but we know there is still a long way to go if we hope to create a resilient, reliable, and affordable clean energy economy for all North Carolinians.



ADVANCE: Deployment

Evidence that our work, and the work of our members and partners, has actually advanced North Carolina's clean energy future is in the numbers, and the progress made in 2018 comes despite the roadblocks laid by our opponents. From 2017 to 2018, there was significant and demonstrable growth in the number of clean energy systems installed in North Carolina, with **the fourth quarter of 2018 seeing the largest number of solar PV registrations ever**. Additionally:

- Clean energy brought North Carolina \$14 billion in revenue in 2018;
- Rooftop solar increased by 11 MW, a 28 percent increase from 2017;
- Utility-scale solar increased by close to 600 MW, a 17 percent increase from the end of 2017; and
- At least 82 DC Fast charging stations were installed, a 17 percent increase from 2017.

More than
doubled
since 2016

\$14
BILLION
in Revenue

Total Level 2
charging stations
at end of 2018

1280

393

Total DC Fast
charging stations
at end of 2018



ADVANCE: Energy Efficiency

In 2018, Duke Energy Carolinas achieved the milestone of serving over 1 percent of load with energy efficiency and Duke Energy Progress was close, at about 0.84 percent.

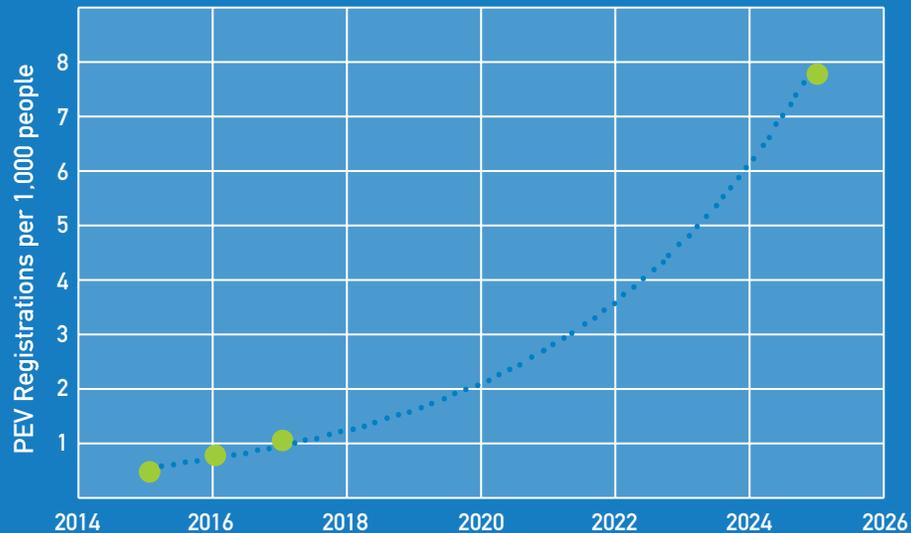
As we close out NCSEA's fourth decade, take a look back at highlights of the more than 20 energy efficiency legislative and regulatory decisions that led to North Carolina's first energy efficiency milestones in this [report](#).



ADVANCE: **Deployment**

In 2018, we laid the groundwork to help North Carolina achieve the goals set out by Governor Cooper's Executive Order #80. For example, we now know that for us to achieve the Governor's 80,000 zero-emission vehicle (ZEV) goal by 2025, there needs to be a ZEV registration rate of 7.00 registrations per 1,000 people. Though this almost 650 percent increase may seem daunting, we know that the clearest path to achieving a goal is to know the full picture. We know what we are working toward, and we will spend the next several years advocating for the right combination of policies and incentives to help us get there.

What PEV Registration Rate does NC Need to Meet PEV Goal in EO 80?





ADVANCE: **Vision**

Over the last several years, we have seen numerous examples of the highly regulated monopoly utility model fail to work in favor of North Carolina customers. Duke Energy is changing the rules of the game to stall solar deployment in our state, if not stop it altogether. In 2018, we continued to fight what sometimes seemed to be an uphill battle, while beginning to consider whether a clean energy economy is possible without comprehensive regulatory reform and transformation of the utility business model.

This question, and all its implications, weighed heavily on us this year. In an endeavor to find an answer, we embarked on a journey with our members and partners to develop a shared vision for our energy economy and develop an energy system that puts us on the path of achieving it together.



ADVANCE: **Vision**

The NCSEA team, along with our Energy Landscape Committee—a group of 25 members and partners from across three areas of our clean energy system—convened numerous times over the course of 2018 to dialogue on a path forward. We owe immense gratitude to the thought leadership and work of our Energy Landscape Committee. Without their leadership and contributions, our Vision Program principles would be incomplete.

These principles, which will guide the Vision Program beyond 2018, include:

- Urgently establish an energy system that enables a healthy and sustainable environment and quality of life for current and future generations;
- Ensure that energy efficiency, as a resource, is firmly established as the low-cost, high-return and first step in addressing current and future energy needs;
- North Carolina's energy system should be sufficiently flexible to accommodate evolving energy trends, technologies, and practices;
- Ensure North Carolina's energy system planning is transparent, comprehensive, and integrated;
- Citizens and stakeholders have a voice and influence over energy decisions;
- Ensure clean energy is accessible and affordable for all North Carolinians; and
- Ensure North Carolina's energy economy promotes economic prosperity for all.



ADVANCE: Equity, Diversity, and Inclusiveness



A resilient, reliable, and affordable clean energy economy for *all* North Carolinians will not be achieved with a one-size-fits-all plan. NCSEA took our commitment to a more equitable, diverse, and inclusive clean energy system to the next level in 2018 by engaging in critical conversations about the ways in which the energy community is party to structural systems of inequity.

Our Vision Program aims to address these issues, but we did even more: we supported utility business model innovation that will break down barriers and increase access to energy efficiency and clean energy over the long term.

We contributed to a Department of Energy project called Powering Energy Efficiency and Impacts Framework (PEEIF), which enhances the efficiency of energy services provided to low-income households in Northeastern North Carolina. We dialogued with partners to consider if (and how) certain clean energy technologies were just solutions. We began working with Historically Black Colleges and Universities (HBCUs) in North Carolina to expand and diversify our reach.



ADVANCE: **Equity, Diversity, and Inclusiveness**

We stood up our Energy Solutions Reserve Fund (ESRF), to ease the disproportionately high cost of energy in the most disadvantaged areas of our state. Utilities enrolled in our ESRF receive marketing, and data analytic services and support for home energy audits provided to utility customers.

Internally, our whole team joined the commitment to an equitable clean energy future.

In the fall, the entire NCSEA team engaged in an intensive two-day racial equity training, where we opened ourselves up to the realities of structural racism and learned how to apply a racial equity lens to our daily work.

We created an Equity, Diversity, and Inclusiveness Program, with a program manager and representatives from each NCSEA core team to lead the organization's work.

If before, NCSEA had just dipped our foot in the water of equity, diversity, and inclusiveness work, in 2018 we dove head first into the water, hoping to lead by example and partner with others to learn by doing and grow as a community.



Inform

SECTOR AND WORKING GROUPS | MEMBERS ONLY CONTENT
NEWSLETTERS | PUBLICATIONS AND WEBSITE CONTENT

In 2018, NCSEA lived our mission by positioning ourselves as *the* source for reliable, evidence-based, and timely information necessary to understand the latest clean energy trends and developments. We accomplished this during sector and working group discussions and bi-weekly members-only phone calls, which provided a forum for information sharing and strategic discussion.



INFORM: Sector and Working Groups

Convening key players in our clean energy landscape was key to NCSEA's success in 2018. While unique in practice and implementation, both NCSEA **sector groups** and **working groups** included collaborative dialogues to address strategies for success and removing barriers to each sector's development in North Carolina.

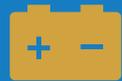
THE SECTOR AND WORKING GROUPS WE CONVENED IN 2018 INCLUDE:



Biogas



Electric
Vehicles
(EV)



Energy
Storage



Local
Government
& Solar



Residential/
Commercial
Solar



Utility-
Scale
Solar

NCSEA convened each sector group and working group at least twice over the course of 2018, with some groups, such as the Energy Storage Working Group, coming together five times to ensure that the Energy Storage Study was completed by NC State University and UNC Policy Collaboratory fully and on time. The study, *Energy Storage Options for North Carolina*, was released to the public on December 1, 2018, and the Energy Storage Working Group spent the end of 2018 discussing the urgent opportunity for energy storage before us and planning for 2019.



INFORM: Members Only Content

Throughout 2018, NCSEA convened our business members on a bi-weekly basis to share important regulatory, policy, and programmatic updates as well as dialogue with our members on the issues they faced in real time. These calls provided members with routine opportunities to have their questions answered and issues heard by their peers and numerous NCSEA team members, while receiving information about key topics such as:

Legislative and policy updates, such as the status of the Wind Moratorium

Regulatory updates on key NCSEA and partner filings in relevant dockets such as Interconnection, Avoided Cost, and others

23
Hour-long
Calls in 2018



Presentations from national partners including The Nature Conservancy, Solar Energy Industries Association, and Advanced Energy Economy

Updates from NCSEA's Executive Director

Important meetings or events



INFORM: Members Only Content

In 2018, we heard from our members and partners that there was a need to recognize our business members who share our commitment to protecting North Carolina consumers. **We worked with these members to create the Solar Business Code of Conduct, which all 26 of our members working on residential and commercial solar installation signed.** By signing our code of conduct, these businesses committed to uphold the highest professional standards of the industry—strengthening the relationship between advocates, consumers, and businesses.

Signed by all
26
members working
on residential and
commercial solar





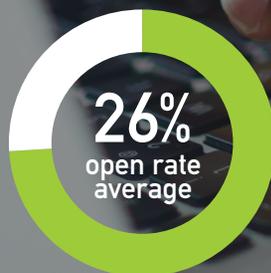
INFORM: Newsletters

Over the course of 2018, **NCSEA sent over 42 newsletters to our subscribers** with just under half of these newsletters reaching over 4,000 people! Even with such a large audience, our newsletters consistently achieve higher-than-average open rates for non-profit organizations, **with an average open rate of 26 percent** (7 percent over the national average)!

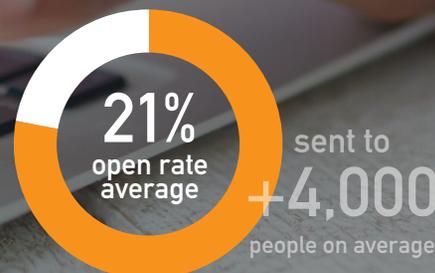
We shared timely topics in **Clean Energy Insights** such as of-the-moment updates regarding HB 589 program implementation; promoted new members and shared how clean energy impacts the daily life of North Carolinians in **Clean Energy Storyteller**; advertised NCSEA and partner events where the people of our community could come together to connect and learn in **Clean Energy Events Radar**; and shared the latest legislative updates from the General Assembly in **Clean Energy Policy Update**.

Through our newsletters, we were able to tell the story of clean energy in 2018. We fought for our friends and fellow consumers in the Duke Energy Carolinas Rate Case. We shared your frustration when the Solar Rebates Program was delayed, and then sold out in just 17 days. We celebrated all that can be achieved, and all that there is left to do, after the Governor issued Executive Order #80. We welcomed new members and acknowledged those returning to us for another year.

Clean Energy Insights

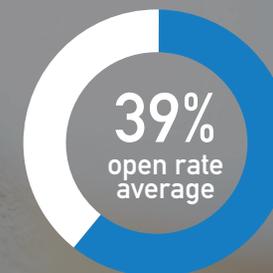


Clean Energy Storyteller



sent to
+4,000
people on average

Policy Update





INFORM: Publications and Website Content

135,694
page
views

In 2018, we released the Consumer Adopter Survey—helping us to better understand what draws North Carolinians to adopt clean energy. And, after a complete website overhaul in 2017, we saw our hard work come to fruition in 2018. Our website had over 135,000 page views, with our **“What is Clean Energy”** and **“Maps”** pages ranking high among the most visited on the website. In 2018, we created a map where visitors to our website could view, download, and share the types and locations of energy storage facilities in the entire Southeastern United States.

We are proud to provide website visitors the opportunity to interact with our data and to connect with clean energy in their community on their own terms—so they come to see how clean energy is for them, too.



Connect

EVENTS AND CONFERENCES | WICE | YOUR NEXT CLEAN ENERGY JOB

Connection—perhaps the most important theme of our work in 2018. NCSEA endeavored to build new connections and strengthen existing ones. We enjoyed connecting with fellow clean energy supporters, watching as their businesses, goals, understanding, participation, and careers advanced through partnerships.



CONNECT: Events and Conferences

In 2018, NCSEA spent countless hours amplifying the work of our members, partners, and stakeholders to ensure that our network became your network. We were at events and conferences all year connecting with clean energy professionals, including:

- American Council for an Energy-Efficient Economy Rural Energy Conference
- Appalachian State University Energy Summit & Mid-Year Meeting
- Energy Storage Association events
- National Association of Environmental Professionals Annual Conference
- National Association of State Energy Officials
- National Environmental Justice Conference
- North Carolina State Energy Conference
- Rocky Mountain Institute's eLab Summit
- Solar Power International
- Southeast Energy Efficiency Alliance Annual Conference
- Southeast Renewable Energy Summit
- University of North Carolina Clean Tech Summit



CONNECT: Events and Conferences

Our people are our strongest voice, and we worked diligently throughout the year to ensure that you were in front of key audiences—leading discussions, guiding policy decisions, and sharing your expertise. Over the course of 2018, NCSEA helped place our members and partners at numerous events all over the country so that North Carolina's interests were always considered and promoted.

There were numerous opportunities to connect with the clean energy community right here in North Carolina at NCSEA hosted events, as well.

Throughout the year, we hosted seven events, of all varieties, that provided our community with an opportunity to come together and connect.

- We learned about clean energy law in the Southeast at our Continuing Legal Education (CLE) Course;
- We celebrated **(three times!)** the women in our clean energy community at our Women in Clean Energy networking events in Winston-Salem, Wilmington, and Charlotte;
- We shared a beer and a baseball game with our closest friends and champions at our Friends and Family Night at Durham Bulls Athletic Park;
- We brought our members together to review the successes of the last year and the work that's still to do in the years to come at our Annual Member Meeting; and
- We celebrated the joy of the holiday season and a year of triumph, challenge, and opportunity with our entire community at our Jingle & Mingle Holiday Party.



CONNECT: Women in Clean Energy

WI Women in CE Clean Energy

In 2018, we celebrated the women of our clean energy industry and made a conscientious effort to amplify the voices of women and support gender equity by getting our Women in Clean Energy (WICE) project off the ground. The goal of WICE is to foster a network of support, camaraderie, and opportunity for self-identifying women in the North Carolina clean energy community. Using the concept of **“we cannot be what we cannot see,”** WICE has endeavored to bring women in the clean energy system together to meet and interact with other women in the sector, so that they know *who* and *where* their fellow women are in this space.

A component of NCSEA’s Equity, Diversity, and Inclusiveness Initiative, in 2018 WICE took the form of three networking events across the state: in Winston-Salem, Wilmington, and Charlotte. In 2019, WICE will continue to bring women together, but we look forward to using WICE as a mechanism to delve deeper into the work of addressing systemic inequities at play in our clean energy community here in North Carolina.



CONNECT: Connecting You to Your Next Clean Energy Job

43,238
CLEAN
ENERGY
JOBS

Employment in clean energy is thriving, with 43,238 jobs in the clean energy industry in North Carolina. We are working hard to increase this number, and spent the year connecting the next generation of clean energy professionals with leading jobs in the industry. **It appears to be working—the Career Center on our website was the top-visited page across our entire website!** In 2018, we employed nine interns from across four North Carolina universities to help develop the future of the clean energy workforce.

We understand the role of students as the future leaders of North Carolina's energy system—their passion, drive, and initiative—and invested ourselves in building relationships with these future leaders, and their schools. We provided guest lectures and assisted with university certificate and program delivery at numerous North Carolina institutions including: North Carolina State University, Appalachian State University, North Carolina Central University, and Duke University. And, as in previous years, we sponsored the Appalachian State University Energy Student Summit and served as mentors during the University of North Carolina at Chapel Hill Clean Tech Summit.



Advocate

In 2018, NCSEA continued to engage in the important work of advocating for smart public policies that consider the diverse needs of North Carolina consumers and support the growth of our state's clean energy economy.

We fought tirelessly to protect the interests of North Carolina energy consumers and businesses by engaging with partners and other important stakeholders to **prevent Duke Energy from securing a 50 percent rate increase over the next ten years**. During this process, Duke Energy publicly recognized the importance of energy storage, electric vehicle charging stations, consumer access to energy use data, and a long-term integrated resource planning process that provides for clean energy resources. In 2019 and beyond, NCSEA will continue working to ensure that Duke Energy is doing all they can to deploy these clean energy resources in our state.



After the passage of HB 589 in 2017, NCSEA spent much of 2018 supporting the development and implementation of utility programs required by the legislation.

- **Solar Rebate Program:** though the final program and launch was imperfect (it launched seven months late and, according to Duke Energy, sold out in just 17 days!), the extensive collaboration with key stakeholders that occurred to get us to this point has us optimistic that the program will be improved upon in future iterations.
- **Solar Leasing Program:** 2018 saw NCSEA member, Eagle Solar & Light, approved as the first solar lessor in North Carolina.
- **Green Source Advantage Program:** the proposed Green Source Advantage program was insufficient to meet the needs of North Carolina's business, university, and military customers. NCSEA worked with numerous stakeholders to argue in front of the North Carolina's Utilities Commission for improvements to the proposed program, but the Commission had not issued a ruling before the end of the year.



ADVOCATE: **Executive Order #80**

As you have read in detail throughout this report, 2018 saw our Governor issue Executive Order #80 (EO80). Here, we reaffirmed our commitment to a sustainable, clean future for our state. NCSEA continues to work with members, partners, and stakeholders to strategize how we might achieve the three targets set in EO80:

- Increasing zero-emission vehicles on the road to 80,000 by 2025;
- Reducing energy consumption in state-owned buildings by 40 percent by 2025; and
- Achieving a 40 percent reduction in greenhouse gas emissions from 2005 levels.

With EO80, the clean energy community, our members, and our partners in the environmental and sustainability communities now have a common goal to work towards.

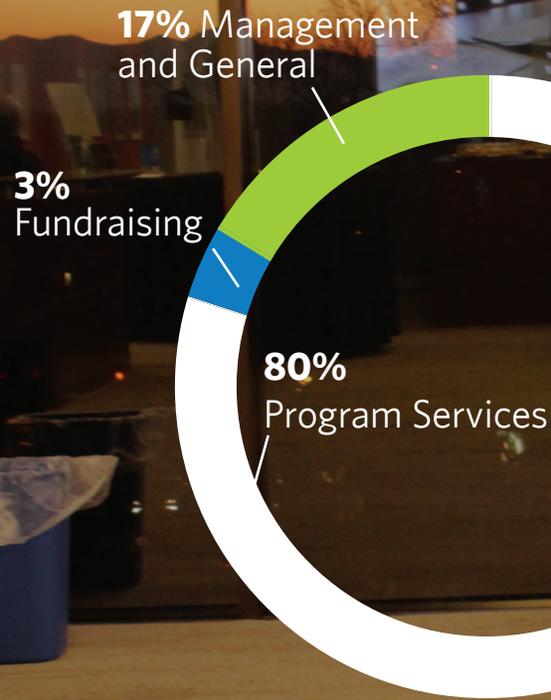


2019 GOALS

- Make progress on our long-term goals by putting North Carolina on a path to: meet and exceed 40 percent reduction in greenhouse gas levels by 2025; supply 40 percent of retail electric sales with clean energy; enact comprehensive utility regulatory reform
- Through our program work in energy efficiency and equity, diversity, and inclusiveness, directly reduce the energy burden faced by low-income consumers across North Carolina
- Advance our programmatic work at the General Assembly and North Carolina Utilities Commission:
 - Create opportunity for more community solar to become available in 2019
 - Make progress on resolving interconnection issues for utility-scale solar development
 - Further clarify rules of the road for energy storage market development
 - Resolve barriers to electric vehicle infrastructure development
 - Stop any legislation that aims to ban the development of wind energy in North Carolina
 - Work with our members, partners, and policymakers to further improve the Solar Rebate Program
- Expand practical utility business model solutions to make energy efficiency and solar benefits available to more North Carolina and Southeast consumers
- Make NCSEA's program and operational work more inclusive
- Engage and involve more donors and members in our work
- Continue growing and diversifying our funding sources



FINANCIALS SUMMARY



REVENUE AND SUPPORT

Grants	\$598,000.00
Direct Public Support	\$1,134,821.00
Indirect Public Support	\$330,853.00
Sponsorship	\$15,875.00
Membership	\$129,606.00
Program Income	\$114,295.00
Interest Income	\$3,274.00
MISC Income	\$371.00
Total Revenue	\$2,327,095.00

EXPENSES

Management and General	\$410,840.00
Fundraising	\$68,366.00
Program Services	\$1,822,673.00
TOTAL	\$2,301,879.00
Net Assets - Beginning of Year	\$1,413,463.00
Net Assets - End of Year	\$1,438,679.00
Change in Net Assets	\$25,216.00



THANK YOU

Thank you to our major donors, grant funders, partners, and members. Our success would not be possible without you.

Major Donors & Partners

Coastal Federal Credit Union

Energy Foundation

Z. Smith Reynolds Foundation Inc.

Foundation for the Carolinas

Upper Coastal Plain Council of Government

Merck Family Fund

Cypress Creek Renewables



Lifetime Members

Joyce Brown

Edwin Cox

Kurt Creamer

Rich Crowley

Catherine Elkins

Richard Harkrader

Steve Kalland

Betty Kenan

Bob & Maria Kingery

Paul Konove

Robert Lee

Joe Lemanski

Ward Lenz

Jeffrey A. Martin

Richard McBane

Gene Messick

Moyna Monroe

Michael Nicklas

Josie Patton

Peter & Ona Pickens

Paul Quinlan

Cy Rich

James & Mary Serene

Larry Shirley

Brad & Shelli Stanback

Fred & Alice Stanback

Tim & Megan Toben

391
Members
in 2018



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