

Community Benefits Plan

Founded in 1940 by a group of local farmers, SYEMC holds deep, long-term commitments to the rural communities and residents that it serves, including 32 disadvantaged census tracts across five counties: Surry County, Yadkin County, Wilkes County, Forsyth County, and Stokes County, North Carolina.¹ As part of the Smart Grid Deployment to support Rural-Focused Resiliency at a Small-Scale Electric Co-Op Project (Smart Grid Project), SYEMC will engage in extensive community outreach and participation while implementing its Community Benefits Plan (CBP).

SYEMC provides electricity, but also supports and empowers its members and communities through economic development and community outreach. SYEMC is guided by the following seven principles: 1) Voluntary and Open Membership; 2) Democratic Member Control; 3) Members' Economic Participation; 4) Education, Training, and Information; 5) Autonomy and Independence; 6) Cooperation Among Cooperatives; and 7) Concern for Community. SYEMC is committed to working collaboratively with the North Carolina Department of Environmental Quality to implement Clean Energy Plan Goals for sustainable community development.

As part of a larger initiative to strengthen rural North Carolina, SYEMC has partnered with 25 electric cooperatives to implement the [Brighter Future](#) initiative. Brighter Future is grounded in delivering value to cooperative members and communities by reducing carbon emissions 70% by 2030 from 2005 levels, and achieving carbon neutrality (net zero) by the year 2050. SYEMC is committed to delivering low-carbon electricity over a grid that is more resilient and secure.

Every year SYEMC tracks its community giving, outreach, scholarships granted, education services, community engagement, outreach activities, and other metrics relevant to community benefits. These tracking systems are already in place and will be improved with the hiring of a full-time Data Analyst as part of this Project. Community outreach metrics are reported in the annual report and reviewed by members during the annual meeting. The Community Benefits Manager will be responsible for implementing SYEMC's CBP, and the Data Analyst will assist with data collection/reporting. (See Technical Volume for SYEMC Project Leadership Team).

Under this Project, SYEMC commits to expanding existing community benefits and notably:

- Implement targeted hiring of Workforce: project-driven job creation will foster equity, inclusion, and economic development (3 full-time jobs created)
- Participation of minority business enterprises (MBEs) in the Project
- Decrease energy expenses and line losses across the system's eight delivery points

¹ [Climate and Economic Justice Screening Tool](#) Surry County Census Tracts (37171930802, 37171931102, 37171930801); Wilkes County Census Tracts (37193960200, 37193960300, 37193960500 37193960700, 37193961100); Yadkin County Census Tracts (37197050501, 37197050400, 37197050300, 37197050200); Forsyth County Census Tracts (37067002901, 37067002806, 37067002903, 37067003105, 37067002702, 37067001400, 37067001602, 37067000500, 37067000600, 37067000700, 37067000801, 37067000802, 37067001901, 37067002001, 37067002002, 37067003701, 37067003500) Stokes County (37169070300, 37169070100, 37169070700)

- Improve monitoring, advanced fault detection, and smart grid capabilities that will decrease duration, frequency, or impact of power disruption.
- Increase access to clean power, ultimately reducing air pollution in SYEMC's service territory resulting in health-related improvements and reduced pollution burdens.

SYEMC is also in the late stages of completing a comprehensive Diversity, Equity, Inclusion, and Access (DEIA) plan, which codifies the direct community benefits and actions taken by SYEMC on an ongoing basis. This is expected to be completed by Spring of 2023.

As part of the CBP, SYEMC will input at least one SMART milestone during each budget period.

1. Community and Labor Engagement

SMART Milestone	Budget Period
The Community Benefits Manager will engage with 9 community partners and enter into a formal workforce/community agreement with one organization	Period 1
The Project Team will participate in 5 community engagements to solicit feedback from members on the Project.	Periods 1- 5 = one (1) engagement annually
SYEMC will execute an Intellectual Property Management Plan (IPMP) with all project partners	Period 1
Coordinated by the Project Manager and Community Benefit Manager, SYEMC will provide 10 educational activities/workshops.	Periods 1-5 (10 per year)

SYEMC's Community Benefits Plan will include engagement with local government, local stakeholders, and community-based organizations that support disadvantaged communities (DACs). The Community Benefits Manager will communicate quarterly with the Steering Committee which will include SYEMC Project Partners (below) and be formed at the onset of the Project. Each partner has provided a letter of commitment included with this proposal.

Partner	Role in Project/ Key Personnel
North Carolina Association of Electric Cooperatives (NCAEC) NCAEC is a trade association owned by all of North Carolina's local electric cooperatives. NCAEC provides association services, including legislative support, public and media relations, safety and educational training, and information technology services.	NCAEC works in partnership with North Carolina Electric Membership Corporation (NCEMC) and Tarheel Electric Membership Association (TEMA) as one of the largest generation and transmission electric cooperatives in the nation, providing reliable, affordable electricity to its 26 member cooperatives. SYEMC will work directly with NCAEC during the project period to vet vendors and contractors.
Surry County Economic Development Partnership (SCEDP)	By partnering with economic development agencies, electric cooperatives are supporting job creation and businesses seeking to start, expand or relocate. Promotes diversity and inclusion for a successful business community through engagement, advocacy, implementation, and policy integration.

Yadkin Valley (YV) Chamber of Commerce	Create opportunities for minority, women-owned, and veteran businesses to become involved with the Project.
Surry Community College (SCC)/ Surry-Yadkin Works Serves both Surry and Yadkin counties. SCC offers 36 areas of study and serves over 18,000 students in over 1,500 classes through their Workforce Training and Continuing Ed. Division.	Participates in Recruitment/Career Fairs EV Chargers at their location/OSHA training. SYEMC has an existing agreement with Surry-Yadkin Works, which is a state-recognized internship program that prepares students for work-based learning, assists with industry-recognized credentials, and encourages enrollment in Career & Technical high school and college courses.
Nash Community College	NC's electric cooperatives have been partnering with Nash Community College, which operates the Lineman Training Academy. The program provides job and safety training for line workers entering the field, and for those who are looking to advance their education.
Forsyth Technical Community College Forsyth Tech is a public community college in Winston-Salem, NC which offers a wide variety of areas of study and focuses on economic and workforce development as well as continuing education	The Electrical Lineworker Program is designed to train individuals who seek to become entry-level electrical lineworkers for private and public utility companies and related employers. This program is approved for national certification by the National Center for Construction Education and Research (NCCER) and for Pre-Apprentice credit by the N.C. Community College System and Department of Labor and credit towards their state and nationally recognized journeyman credentials. SYEMC has had great success with this program. 58% of all current SYEMC linemen have attended Forsyth Tech's Lineworker Program.
The Salvation Army	The non-profit agency provides services such as professional guidance, referral services and emergency assistance. Case managers work on increasing a family's self-reliance through job training, education, and offering a limited amount of emergency financial assistance for expenses such as housing, rent, or utilities. The Salvation Army provides assistance to SYEMC members, as needed.
NC Works/American Job Center	Job recruitment for Smart Grid Project Provides a full range of assistance to job seekers including training referrals, career counseling, job listings, and similar services.
Surry County Schools	Work with Surry Community College and Surry-Yadkin Works to prepare students for work-based learning, industry-recognized credentials, and educational advancement opportunities.

SYEMC also plans to engage with Project stakeholders including commercial and economic development partners and supplementary community benefit partners. Additional informal partners who will be involved with the creation and implementation of the Community Benefits Plan include: Yadkin County Chamber of Commerce (YCCC); Yadkin County Economic Development Council (YCEDC); Greater Mount Airy Chamber of Commerce; Blue Ridge Opportunity Commission, Inc. (BROC), Department of Social Services (Surry County, Wilkes County, Yadkin County, Stokes County, Forsyth County); area Ministries; Elkin Corporate Park; Shelton Site Opportunity Zone; and Utility Payment Assistance Programs. Combined, these project partners will help SYEMC to efficiently implement its CBP and help to foster equity and inclusion in its service territory.

Key elements of existing community outreach include direct assistance programs, low-cost energy efficiency and financing support, free home energy audits, member rebates, partnerships with multiple commercial and economic development members, community-targeted giving programs, core partnerships with its assistance programs, and youth program providers. SYEMC consistently communicates with members via a monthly magazine (Carolina Country), direct emails, social media, bill inserts, podcasts and up-to-date website material.

SYEMC also provides a variety of educational opportunities to its members and communities. These are adaptable to multiple curricula and grade levels and include:

- **Electrical safety demonstration** – tabletop high-voltage electrical demonstration
- **Pathway to electricity** – the basics of how electricity is made (generation), types of electricity (AC vs DC), power plants, how electricity is distributed, voltage/watts
- **Renewables/sources of electricity** – coal, nuclear, solar, wind, hydro, etc.; how each works, which is cleanest, etc.; small solar panel and battery pack to show how solar works
- **Beneficial electrification** – EV & charging, solar projects; solar farm tours, battery storage, electric transport refrigeration unit (eTRU); home energy audits, energy efficiency
- **Careers** – touch a truck (students interact with equipment); meet with linemen, accountants, communicators, customer/member services teams, dispatch, engineers, engineering technicians/system inspectors, IT, GIS mapping, operations support
- **Drone** – lineman and drone operator at a day-camp to demonstrate what they do in their line of work and how the drone technology assists in the field
- **Hands-on** – pole top interactive display where students use gloves and lineman tools to work with insulators, faults and other equipment used in the field
- **Pole-top and bucket rescue** – linemen demonstrate life-saving measures to rescue a fellow lineman and start CPR (includes pole climb)
- **Solar farm field trips** – a 30-minute presentation typically paired with hands-on or additional follow-up activities
- **Co-op 101** – Explores how the cooperative business model works, how business flows to interconnected departments; process from members sign-up to electricity being turned on

While there is no organized labor union within SYEMC's service territory, SYEMC is a member of NCAEC, a trade association that is owned by all 26 of North Carolina's local electric cooperatives. NCAEC provides association services, including legislative support, public and media relations, safety and educational training, and information technology (IT) services.

SYEMC places no restrictions on employees' ability to join a labor union and respects their choice to ask questions regarding unionization. SYEMC maintains equitable job design, classification, and compensation practices and is committed to equitable and fair labor. SYEMC has integrated the following policies and procedures into its hiring and management process: Whistle Blower Protection Policy; Anti-Harassment Policy; Equal Opportunity Employer; Clear chain of command; Clear job descriptions for all positions; Post all positions internally to promote opportunities for employee advancement; (b) (4)

(b) (4) Established internal apprenticeship for linemen/other positions with step progression; (b) (4) Education Reimbursement opportunities; Internal educational opportunities and certifications for all (based on position).

2. Investing in the American Workforce

SMART Milestone	Budget Period
SYEMC plans to contract with six full-time individuals for the duration of the Project (b) (4)	Budget Period 1
The Project Administrator and Project Manager will create a position and hire a full-time Data Analyst.	Budget Period 1
SYEMC will create two full-time positions (apprentice lineman and/or journeyman lineman) by the culmination of the project.	Budget Period 5
The project will generate an estimated 40+ temporary engineering / design and construction period jobs for consulting engineers and contractors to be hired under the project.	Budget Periods 2-5

Skilled Workforce

Attract, Train, and Retain a Skilled Workforce

SYEMC considers the Smart Grid Project an opportunity to invest in the local workforce. Attracting, Training and Retaining a Skilled Labor Force with strong labor standards will center on the Project's primary recruitment and training partners: three North Carolina community colleges, the county school system, and the workforce boards serving all five counties. All positions will be posted on SYEMC's website, NC Works/American Job Center local offices and website, Indeed.com, cooperative.com, and ncemc.com. Historically SYEMC has had hiring success with employee referrals and internships.

The community colleges are not only resources for hiring, but also for advanced incumbent worker training for the duration of the Project. Surry-Yadkin Works (through Surry Community College) matches interns to community business partners and prepares students for work-based learning, assists with industry-recognized credentials, and encourages enrollment in Career & Technical high school and college courses. Nash Community College and Forsyth Technical Community College have Lineman Training Academy and an Electrical Lineworker Program, respectively. Forsyth Tech's Electrical Lineworker Program is approved for national certification by the National Center for Construction Education and Research (NCCER) and for Pre-Apprentice credit by the N.C. Community College System and Department of Labor and credit towards state and nationally recognized journeyman credentials.

A comprehensive range of flexible benefits and services, including education, counseling, and physical and mental health services are provided equitably to all SYEMC employees whether permanent or temporary. SYEMC commits to supporting its internal workforce by posting all positions internally to promote opportunities for advancement within the cooperative.

Additionally, to support equity- and community-focused hiring, SYEMC will also post jobs with local equity-focused workforce development and hiring organizations (discussed above) including its community benefit Steering Committee and project partners. SYEMC will aim to hire

underserved individuals by working with these organizations. Furthermore, SYEMC will tap the paid Surry-Yadkin Works Internship Program, focused on recruiting local high school students and workers.

- A. Construction. In budget period 1, SYEMC will engage with contractors to provide engineering/design and construction period jobs. Engineering and design will be completed and SYEMC will bid in quarter 3 of budget period 1. Construction will continue through budget period 5. During this time, the project will generate an estimated 40+ temporary jobs. These quality jobs could potentially exceed the local prevailing wage and include basic benefits. Entry level positions will help employees develop the skills and experiences necessary to advance along a career path.
- B. Ongoing Operations/Production Activities. The Project will support continued employment for 15 existing SYEMC employees: One line Crew (four linemen, crew foreman); Substation Crew (four techs, one supervisor); Line Superintendent; Manager of Economic Development; System Planning Engineer; Staff Engineer; and an IT Support Specialist. By the end of the Project, SYEMC will create three full-time positions for ongoing operations (SYEMC plans to retain these positions after construction has been completed). These positions will be apprentice lineman and/or journeyman lineman and a Data Analyst, all of whom will earn competitive wages. The linemen will be given the opportunity to upskill through Nash Community College's Lineman Training Academy.

SYEMC has created a successful employee engagement model that benefits both the employer and employees:

Wages, benefits, and other worker supports. (b) (4)



Commitments to Workforce Education and Training. SYEMC provides on-the-job training and development support for its employees and pays for job-related certifications. SYEMC will extend all of these benefits to new hires through the Project. Advancing workforce training and development through Bright Ideas grants, partnerships with schools, and support for professional development opportunities will be key Project elements.

Engage Employees in Execution of Workplace Safety. Harvard Business Review found that organizations that scored higher in employee engagement reported 48% fewer safety incidents and 41% fewer patient safety incidents.² Employees, including new hires, are required to participate in OSHA compliant training and safety plans based on their position requirements.

Violations. SYEMC has not had any violations of the National Labor Relations Act, Fair Labor Standards Act, Occupational Safety and Health Act, Service Contract Act, Davis-Bacon Act, or

Title VII of the Civil Rights Act under the current management team (2011-present). As stated in the above section, there is no organized labor union that currently operates within SYEMC's service territory, but SYEMC places no restrictions on employees' ability to join a labor union.

Job Retention and/or Transition. The Project will support continued employment for 15 existing SYEMC employees. In addition, SYEMC plans to contract 6 full-time individuals to support the implementation of the Project with the possibility of up to three long-term positions. These employees will be hired for a variety of positions such as apprentice linemen, journeyman lineman, and a data analyst. Additionally, the project will generate an estimated 40+ temporary engineering /design and construction period jobs for consulting engineers and contractors.

3. Diversity, Equity, Inclusion and Accessibility

SYEMC is dedicated to hiring and maintaining diverse talent. This includes providing employees with an environment that supports and encourages DEIA to exceed our members' needs and expectations. With full board and executive management support, in 2022, SYEMC engaged with (b) (4) and 1). Assessed our DEIA practices against Global Diversity, Equity, & Inclusion Benchmarks; 2). Surveyed employees about workplace culture and inclusivity; and 3). Conducted a basic DEIA review. A comprehensive, organization-wide DEIA plan is currently being developed and is expected to be completed in the Spring of 2023. Once the plan is complete, SYEMC will host training sessions for all employees.

SYEMC will include the following DEIA initiatives as part of the Project	
Suggested DEIA SMART Milestones	Budget Period
Direct outreach to/with Project partners to recruit women, veteran, and minority-owned businesses as contractors/vendors for the Project. Current percentage for 2022 is 6%; Project Manager and Community Benefits Manager will increase minority-owned businesses as contractors/vendors 2% per budget period.	Period 1 = 8% Period 2 = 10% Period 3 = 12% Period 4 = 14% Period 5 = 16%
Promote positions (apprentice lineman, journeyman lineman, and other project vacancies) in underserved areas. This plan will be implemented by working with community recruitment partners. Baseline = 10% of new hires are minorities (since 2021)	Period 1 = (b) (4) (b) (4)

² Baldoni, John. Employee Engagement Does More than Boost Productivity. Harvard Business Review. July 4, 2016. Accessed at <https://hbr.org/2013/07/employee-engagement-does-more>

Provide DEIA training to all employees annually with testing measures to ensure that the information is comprehended correctly.	Periods 1-5 Annual Training
Direct and in-person community engagement to underserved businesses and communities/community members to receive feedback on relevant SYEMC programs and projects, their efficacy, and relevance. SYEMC will work with project partners to attend local events and stakeholder meetings. Additionally, SYEMC will directly communicate with member-consumers through feedback surveys.	Periods 1-5 5 community engagements, over the five-year project period and 1 survey annually.
Engage with local schools, community colleges, and communities to provide educational activities/workshops.	Periods 1-5 10 educational workshops per year

The DEIA plan will codify, formalize, and expand on many of the diverse DEIA support and services that SYEMC already provides.

- A. Supplier Diversity. SYEMC plans to engage local government offices and partners to connect MBEs for contracting and procurement opportunities. Many of the Chamber of Commerce partners represent disadvantaged businesses and can help engage them in the Smart Grid Project. In 2022, 19 (6%) of SYEMC's 311 vendors were owned by underrepresented populations. SYEMC is committed to increasing this percentage to 16% by Project end.
- B. Workforce Diversity. According to the National American University, the energy sector remains one of the least gender diverse occupations. Women make up only 25% of the workers in energy-related companies and only 13.9% in senior management.³ Currently, 38.4% of SYEMC employees are from underrepresented groups (minority, women, veterans), but only 10% of new hires since 2021 have been underrepresented. One goal of the Smart Grid Project is to increase this percentage to 20% of new hires. SYEMC is also working to remove gender pronouns in job titles and job descriptions. In August 2022, SYEMC made the commitment to [NRECA's Vets Power Us Initiative](#) which supports veterans, active military and their spouses by: 1) helping veterans explore meaningful career opportunities within America's electric cooperatives, 2) helping co-ops recruit, hire and honor veterans, and 3) providing co-ops with access to resources that will help them with veteran recruitment efforts and providing veterans with information about electric co- op career opportunities. SYEMC also posts all positions at NC Works, an American Job Center. This allows veterans to see job postings for 24 hours before they are made public.
- C. Offer DEIA Training. Once the DEIA comprehensive plan is completed, SYEMC will provide required DEIA training annually to all employees. This training will include testing measures to ensure comprehension. They also plan to incorporate DEIA into employees' daily

³ [Women in Energy Management](#). National American University. July 6, 2022.

functions and performance appraisals. The existing anti-harassment policy and equal opportunity policy training will continue as well. SYEMC also sponsors employees to be members of the [American Association of Blacks in Energy](#) and seeks to encourage employees from underrepresented groups to join similar associations regarding energy on behalf of or representing SYEMC.

- D. Partner Organizations that Provide Supportive Services. SYEMC will partner with the Chambers of Commerce, local ministries, and The Salvation Army to connect with underrepresented communities and businesses. Each year, the Project Leadership Team will provide one opportunity to gain feedback on the project from its 32 disadvantaged census tracks. SYEMC will also engage with workforce boards serving each of the counties to leverage supportive services, training stipends, childcare, transportation assistance, and career-track training specific to individual employee needs.
- E. Identify and Partner with Workforce Training Organizations Serving Underrepresented Individuals. SYEMC will continue and expand its support for quality pre-apprenticeship programs through local high schools and community colleges. Nash Community College and Forsyth Technical Community College both provide lineworker training for entry-level and incumbent workers. Surry-Yadkin Works through Surry Community College provides internships, credentials, and career pathways for high school students. SYEMC has found great success partnering with the public schools and local community colleges. Currently, SYEMC employs four full-time employees who have advanced from interns to lead linemen, engineers and managers who provide high quality work for the membership. SYEMC is currently hosting an IT intern during the spring semester 2023 through Surry-Yadkin Works.
- F. Local and/or Economic Hiring Efforts (Recruitment). Comprehensive strategies for the recruitment of disadvantaged populations will be based around community partners. Steering Committee members already have experienced, culturally-sensitive recruitment staff and repeated contact with potential participants. Employer participation in internship and pre-apprenticeship programs add demand-side approaches to increasing employment opportunities for disadvantaged populations.

4. [Justice40 Initiative](#)

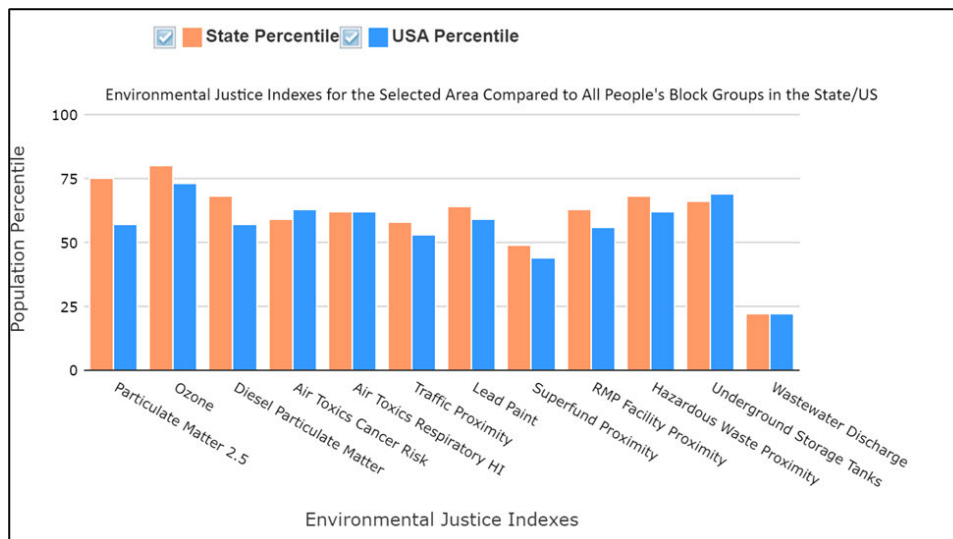
Identification of Disadvantaged Communities. As described in detail in the Technical Volume, SYEMC provides services to five rural counties in North Carolina - Surry County, Yadkin County, Wilkes County, Forsyth County, and Stokes County. Combined these five rural North Carolina counties have 32 disadvantaged census tracks.⁴ As a whole, these counties experience disproportionate environmental burdens. These counties rank in the 59th percentile comparatively to other areas of the state and 60th percentile nationally for air toxins related to cancer risk.⁵ Similarly, they rank in the 68th percentile compared to the rest of the state, and

⁴ 2017 Census of Agriculture County Profiles ([Surry County](#), [Yadkin County](#), [Wilkes County](#), [Forsyth County](#), [Stokes County](#))

⁵ Ibid

the 62nd percentile compared to the rest of the nation for hazardous waste proximity.⁶ The comprehensive chart below shows how the project location ranks against the state and national percentiles for a number of environmental justice indexes.

Figure 4: Surry, Yadkin, Wilkes, Forsyth, and Stokes County Aggregated Environmental Justice Indicators (EJScreen)



Within these counties, SYEMC's members tend to be located in rural, unincorporated pockets where environmental burdens may be even higher than statistically reflected.

Benefits to DACs

In alignment with the End of Project SMART Goal to lessen the impact of systemwide outages on our rural communities by 45-50%, the implementation of the Smart Grid Project will also impact several Justice40 outcomes, including measurable investments and positive project outcomes that contribute to the following in disadvantaged communities:

#	Benefit to DACs	Project Milestones
1	Reduce wholesale energy expenses.	SYEMC will measure and report wholesale energy expenses annually.
2	Decreased environmental burdens.	Reduce likelihood of environmental damage due to oil spills by 100% after installation is complete in Budget Period 5, Q4. Reduce outages caused by severe weather from approximately 80 per year to 72 per year.
3	Improve response time caused by downed power lines to reduce the chance of wildfires.	Improve response time caused by power lines by 50-75% at completion of FLISR implementation Year 5, Q4.
4	Reduction of SYEMC maintenance costs.	Reduce SYEMC maintenance costs by (b) (4) over the next 30 years.
5	Leverage ratio of 1:1 private to public dollars.	This project is requesting \$7,486,808 federal dollars and leveraging \$7,700,738.
6	Increase Skilled Workforce	The project will generate an estimated 40+ temporary engineering / design and construction period jobs for consulting engineers and contractors to be hired under the project; Budget Periods 2-5.

⁶ [Climate and Economic Justice Screening Tool](#)

7	Increase High-Quality Job Creation	SYEMC will create three full-time positions (apprentice lineman or journeyman lineman/data analyst) by the culmination of the project; Budget Period 5.
8	Provide economic benefits to DACs	Promote 6 contracted positions (apprentice lineman or journeyman-lineman, and other project vacancies) in underserved areas; Budget Period 1.
9	Increase in Clean Energy Contracting	SYEMC will increase minority-owned businesses as contractors from the current 6% to 16% by the end of the grant performance period (2% increase each Budget Period).
10	Equitable Access to Essential Services	One opportunity to gain feedback on the project from its 32 disadvantaged census tracts each year.
11	SYEMC will be prepared for DERs in areas improved by the Project	Increase capacity of the entire grid from 1 MW to 5 MW (approximately 500%) including 100 additional EV's and 75 residential solar arrays by Budget Period 5 Support 20 additional EV Charging Stations by Budget Period 5.
12	More Efficient Transmission of Electricity	Increase capacity and grid visibility by 100% on downline sectionalizing devices.
13	Quick restoration of electricity after power disturbances	The project is anticipated to decrease duration, frequency, or impact of power disruption by 15%.

These benefits and milestones address the following Justice40 outcomes and correspond to the above benefits / project milestones:

(1) Decrease in Energy Burden (1-4, 12-13). The Project will increase the efficiency of SYEMC's infrastructure, improving the transmission and distribution, resulting in cost savings for residents and businesses, as well as reducing the carbon footprint of the region. SYEMC currently tracks line losses across the entire system and at each of the eight delivery points.

(2) Decrease in Environmental Exposure and Burdens (2). Rural communities in North Carolina are vulnerable to the impacts of climate change, including more severe and frequent storms, flooding, and drought.⁷ Smart grids can reduce carbon emissions and improve energy efficiency by directly reducing power losses. Smart Grids can reduce the need for grid capacity by reducing energy usage and peak demand. By supporting distributed energy resources (DERs) such as Electric Vehicles (EVs) and EV charging, the Project will make it possible to incrementally shift users in its service territory away from the use of fossil fuels. In addition, oil containment projects at SYEMC's substations will protect the members' communities and waterways from releases of oil located at the substations caused by accidents or vandalism.

(3) Increase Access to Low-Cost Capital (4-5). SYEMC's members will benefit from the grant funding to rebuild aging infrastructure. Without the Smart Grid Project, members would bear the cost of the old infrastructure in the form of line losses and higher maintenance costs.

(4) Increase in High-quality Job Creation (6-8). The installation and maintenance of an electrical smart grid will require a skilled workforce and will create job opportunities in SYEMC's service territory. The Smart Grid Project will support the training and employment of local residents and provide economic benefits to disadvantaged communities.

⁷ https://ncics.org/wp-content/uploads/2020/10/NC_Climate_Science_Report_FullReport_Final_revised_September2020.pdf

(5) Increases in Clean Energy Contracting (9) (e.g., minority-owned or disadvantaged business enterprises). As part of the full DEIA plan, SYEMC will work with community partners to connect with disadvantaged business enterprises.

(6) Increases in Energy Democracy (1, 10-11). The Smart Grid Project will increase equity in energy by ensuring that rural communities in North Carolina have equitable access to the benefits of an electrical smart grid, regardless of income or location. This can help reduce energy poverty and increase access to essential services, such as healthcare and education, which rely on reliable energy sources. The Project will include various community engagement to underserved businesses and communities/community members to receive feedback on relevant SYEMC programs and projects, their efficacy, and relevance.

(7) Increased Parity in Clean Energy Technology Access and Adoption (11). SYEMC's system will be better able to support member-consumer or community-owned DERs such as solar, EV batteries, home batteries, and virtual power plants. New sensors, wireless technology and energy management tools – along with more access to energy data – enable utilities and the consumers they serve to waste less energy and gain more control over electricity use and costs.

(8) Increase in Energy Resilience (3, 12-13) including reduced outage frequency and/or duration. An electrical smart grid will improve the reliability of energy supply by enabling a faster detection and resolution of power outages and reducing downtime for residents and businesses. Replacing copper wire with aluminum wire will harden the grid against extreme weather and improve reliability at all times of the year. SYEMC tracks several metrics to measure system reliability at the substation feeder level. Rebuilding the lines will make the system more efficient, save on maintenance costs, and prepare the co-op for future opportunities.

Anticipated Negative and Cumulative Environmental Impacts to DACs

SYEMC anticipates at least 40% of all project benefits flowing to the disadvantaged community census tracts identified by the EJSscreen tool. As previously mentioned in the SMART Milestones, environmental benefits for SYEMC member-consumers include decreased energy burden and decreased environmental exposure and burden.

The Project is focused on alleviating SYEMC service area's vulnerability to power disruptions through the implementation of smart grid technology. The Project will foster equity, inclusion and economic development through job creation and strategic support of underserved enterprises. Once operational, the new technology will reduce fossil fuel use and greenhouse gas emissions while laying the foundation for increased use of clean energy in SYEMC's service territory. By incorporating its community outreach initiatives, SYEMC anticipates benefits reaching member-consumers during and after the Project concludes. There are no expectations of any negative cumulative impacts to disadvantaged communities as a result of this Project.

