

Project Name:

ROANOKE ELECTRIC COOPERATIVE SOLAR INSTALLATION

A grant approach for solar, storage and energy efficiency

Size:

1.0 MW_{AC}

Location:

Aulander, North Carolina

of LMI customers:

75

Project Website:

<https://www.roanokeelectric.com/roanoke-center/donate/#:~:text=Community%20Solar%20Low%Income%20Assistance%20Program>

BEST PRACTICES

- Philanthropic grant



Overview

[Roanoke Electric Cooperative](#) (Roanoke) has an all-encompassing solar, battery storage, and energy efficiency strategy with a specific goal to increase participation of low- and moderate-income (LMI) members. This community solar project (referred to in this case study as “SolarShare”) aims to develop a total of 1 MW of solar energy through four projects that integrate battery storage, energy efficiency programs, sustainable forestry, and land ownership.

The integrated strategy includes Roanoke setting a goal to receive \$1.7 million in grants from foundations to support the program’s mission of increasing participation of LMI households and providing access to distributed solar (the generation of power near where it’s used). This strategy is also dedicated to improving utility services by leveraging distributed generation (specifically solar PV and battery storage), energy efficiency programs, smart energy devices, and automation of member’s metering infrastructure. The battery storage reduces Roanoke’s peak demand cost, which can be six to seven times the base energy cost.





Photo Credit: Roanoke Electric

Innovative Approaches

- **Grant supported integrated programs.** Roanoke uses philanthropic grants to fund subscriptions of solar panels for each subscriber, grant enough panels to ensure credits that will offset health and safety tariffs applied to the member's home, and discontinue panel ownership when the tariff ends, thereby making it a revolving fund open to all member-owners. By spreading out the 1 MW capacity into four different solar projects, Roanoke is able to distribute landowner lease value and benefit rural landowners. As a result, they are able to raise additional philanthropic dollars from foundations interested in land retention and use the funds through their nonprofit organization, [The Roanoke Center](#), to offset the higher cost of building smaller scale projects and drive costs down.
- **Integration with energy efficiency and weatherization programs.** In the first three years of Roanoke's energy efficiency and weatherization program, [Upgrade to \\$ave](#), which is based on the [Pay As You Save](#)® (PAYS®) model, 40% of members who inquired about Upgrade to \$ave were unable to fully participate due to the need for significant repairs to their housing. The health and safety tariff is a one-year tariff necessary to recoup program operator fees (with interest) and funds that Roanoke invested to address health and safety concerns at the member's home to make it eligible for the Upgrade to \$ave program. Roanoke estimates that their member-owners see at least 20% savings via reduced electricity use by participating in the SolarShare program. In addition to the programs described above, Roanoke offers referrals to [USDA 504 programs](#), supported via the federally funded [Low Income Home Energy Assistance Program \(LIHEAP\)](#).
- **Land leased for Roanoke's solar installations provides long-term revenue for landowners.** For landowners participating in Roanoke's land lease project, lease payments are \$750 an acre. The lease terms for land used for solar development is around 35 years to 45 years – long enough for a consistent rate of revenue and to be passed on to multiple generations. Since solar leases are much longer-term and less volatile than crop leases, solar leases generate stable and predictable tax payments to support the local economy and meet community needs.

Lessons Learned

- Creating the SolarShare program as an integrative strategy allows Roanoke to merge various existing services for an all encompassing program to increase member participation. The philanthropic funding helps to support battery storage, energy efficiency programs, sustainable forestry, and land ownership.
- While participation is open to all members — not just LMI members — Roanoke serves counties recognized for their high rates of persistent poverty, and the cooperative is deliberate in designing the program to help members reduce their energy burdens. Having a good business case, grant approach, and finding the right partners to implement the solar plus storage, energy efficiency, and landowner support allows Roanoke to combine program initiatives to tackle the challenges from income inequality, barriers to the adoption of renewables, and energy affordability.



This case study is a part of the LIFT Toolkit initiative. To explore more case studies and best practices visit LIFT.Groundswell.org research@groundswell.org