

Case Study:

Electric Cooperatives in Texas



CoServ Electric

Quick Facts

There are **275 subscribers** to the CoServ Solar Station program.

The CoServ Solar Station is located on **16 acres** of land.

The Solar Station is a **2 MW** array.

There are **8,448** fixed-tilt **315 watt** solar panels in the array.

Each panel is expected to produce **473.4 kW-hours** per year for a total of **3.9 million kWh**.

CoServ Solar Station is a Rate-Based Structure, selling blocks of energy produced to their customers.

A member's minimum usage over the past **12 months** is the maximum energy block that can be purchased.

solar project to help lower the cost of utility-scale power and make it a viable renewable energy option for electric cooperative members.

The most challenging step for CoServ was finding land suitable for the solar array. CoServ faced rising real estate prices and restrictive zoning and permitting regulations, leaving them with few siting options for the array. CoServ worked with a land broker who was able to help the co-op sort through property and find a decent size and location for the solar array. CoServ choose to build a 2 megawatt (MW) array based off the size of the land they acquired. The co-op determined that it would be more time and cost effective to utilize the labor and equipment already in use,

Summary

CoServ Electric (CoServ), based out of Corinth, Texas, is the second largest electric cooperative (co-op) in the State of Texas serving more than 152,000 members in Collin, Denton, Cooke, Wise, Tarrant, and Grayson counties. CoServ saw the value in diversifying their energy offerings to the public, a benefit to both customers who receive options and a value to company stakeholders who stand to profit from the diversification applied in the company's portfolio. The CoServ Solar Station program was guided by participation in the [National Rural Electric Cooperative Association's \(NRECA\) Solar Utility Network Deployment Acceleration \(SUNDA\)](#) project.



CoServ and Community Solar

Community solar is a concept that CoServ was interested in prior to being a part of the NRECA SUNDA project. In late 2013, CoServ began exploring options to install a large scale solar project to help their members who are unable to have solar on their rooftops, such as renters or members who do not have the correct roof conditions. When NRECA was granted the Department of Energy SUNDA project funds, CoServ took advantage of the opportunity to work collaboratively with 13 other cooperatives participating in the SUNDA project to get feedback on successes and failures during the project development process. The SUNDA program developed tools that ranged from resources for design, construction, and implementation of a large scale

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CoServ and Community Solar Continued

rather than return at a later time to fill up the remaining land with additional solar installations. With a 2 MW array, CoServ estimated energy production based off historical weather data and from that decided that 90% of annual historical production would be the subscriber goal. The Solar Station offers rates for residential, commercial, public buildings and industrial facilities. Rates are designed to reduce the under-recovery cost associated with a disproportional burden placed on non-solar customers. The energy blocks are purchased to offset the customers monthly electricity charge during a billing period. Customers have the option of buying solar energy blocks of 200, 400, 600, 800 kWh per month, each at a cost of \$24, \$50, \$75, or \$100, respectively. For more information on CoServ's Solar Station program, visit <http://www.coserv.com>.

Financial Information

The 2 MW solar array was a small undertaking compared to the over 1,200 MW load that CoServ generates. In the early stages, project managers found the initial financing to fund the project did not need to be a difficult undertaking and that the project costs could be fully absorbed even if no one signed up. With equity derived from a for-profit subsidiary of the company, they were able to initiate the project and utilize the federal investment tax credit and the accelerated depreciated tax benefit through the creation of a separate for-profit subsidiary company that owns the solar facility. CoServ Electric then purchases the power produced from the solar subsidiary through a power purchase agreement and in turn sells the power produced to its members in the forms of blocks of energy. The company used the for-profit subsidiary to satisfy the "tax appetite" necessary to receive federal investment tax credits, versus other co-ops who use mechanisms like tax-equity flips that allow them to indirectly receive these benefits.

Other Solar Opportunities

The Solar Station is CoServ Electric's second array. In 2009, CoServ installed a 95 kilowatt peak system on the roof of a truck shed at the corporate headquarters in Corinth, TX. The array produces about 136,000 kilowatt-hours (kWh) per year, serving about 2.5 percent of the kWh energy needs of the corporate facilities.



CoServ Electric also encourages members to interconnect their own source of power through the installation of solar panels. CoServ offers net metering which allows customers to recoup their investment as they produce energy output from their installation. Members interested in more information about generating energy at a home or business in CoServ territory can view the [CoServ Manual on Distributed Generation](#).

The North Central Texas Council of Governments recommends to have an energy audit done by the State Energy Conservation Office to establish where solar might fit into overall energy efficiency improvements and energy saving potential. For more information on the SECO Technical Assistance Program, please visit: <http://seco.cpa.state.tx.us/energy-reporting/gov-assist.php/>

The North Central Texas Council of Governments is working under contract with the State Energy Conservation Office (SECO) to expand best management practices for solar photovoltaic systems throughout the State of Texas. For more information about solar in Texas, please visit: www.GoSolarTexas.org.