

# SOLAR'S ROLE IN POWER GENERATION

BY RYAN ELARTON GENERAL MANAGER

Are there bigger sunshine enthusiasts than our pets? They follow sunbeams streaming through windows like solar panels tracking the sun. Except, they don't appear to gain much energy from the sun, as they lie in the same spot until it's in a shadow; then they move as little as possible to scoot back into the warm sun.

If you have one or two sunshine enthusiasts — or consider yourself one — mark your calendar for the second Friday in March: Solar Appreciation Day.



Even the littlest sunshine enthusiasts enjoy tracking their warm spot in the sun throughout the day.

This day offers an opportunity to acknowledge the economic and environmental benefits that solar energy brings, while recognizing the challenges that prevent it from being an omnipresent source of power. Solar is part of the energy resource portfolio in Colorado. It pairs well with baseload and dispatchable generation resources to provide the energy we need to power our lives.

Solar energy is growing in prominence as a low-cost solution at a utility scale. The days of solar panels dotting only a few neighborhood rooftops are gone. Utility-scale solar farms are turning sunbeams into megawatts at competitive prices. Governments, businesses, and communities around the world are progressively turning to solar power as a key component of their energy portfolios, driven by both environmental consciousness and financial prudence.

While governments race to be 100% carbon free, solar energy still casts a shadow of its own. It still falls short of being a consistently reliable source of “always on” power. When darkness falls, so does solar power generation. The intermittent and variability associated with solar power, such as weather conditions and the day-night cycle, pose challenges for meeting our constant demand for electricity.



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Power lines require a consistent voltage to ensure the reliable functioning of electrical devices. Fluctuations in voltage — whether dips or spikes — can disrupt the normal operation of electronic equipment. To achieve “always on” power, utilities need a baseload: a constant and steady power supply. With the demand for electricity increasing due to the adoption of electric vehicles, the beneficial electrification movement, and humans becoming more and more reliant on technology, carbon-based fuel sources must be used to power our lives. Until significant advancements are made in energy storage technology, renewable-sourced energy alone cannot make up the majority of our power mix.

As we celebrate Solar Appreciation Day, it is crucial to recognize the interconnected nature of our energy landscape. While solar power is not a standalone solution, it is a component of a diverse and resilient energy mix. This isn't a reason to turn our backs on the sun, but rather a call for balance.

## LAS ANIMAS COUNTY SOLAR FARM ONLINE THIS YEAR

The 140-megawatt solar farm located about 20 miles north of Trinidad — known as Spanish Peaks Solar— is expected to come online this year.

The project was recently acquired from Germany-based renewable energy company JUWI, by Deriva, a renewable energy company operating out of Charlotte, North Carolina. Deriva will own the plant, sharing maintenance and operations with JUWI.

When the project is complete, more than 300,000 photovoltaic solar panels will span 660 acres on single-axis tracking arrays that follow the sun.

The project broke ground in 2022 and is expected to provide about 250 jobs from commencement to completion.

San Isabel Electric's power supplier, Tri-State Generation and Transmission, has entered into a 19-year agreement to purchase all the power generated by the plant, enough to serve about 38,000 homes annually.

By 2025, 50% of the electricity San Isabel Electric members use — supplied by Tri-State — will come from renewable sources. Currently, about 1/3 of Tri-State's energy portfolio comes from renewable sources.

# How To Optimize Your Investment in Solar Energy

BY JACK SNELL ENERGY SERVICES MANAGER

As prices decline and technology improves, installing a solar system — also called a photovoltaic or PV system — is making sense for more and more property owners. More than 1,400 San Isabel Electric members are solar owners, and that number grows every day. While PV systems are very durable and virtually maintenance free, there is always a better way to use them to their best potential. PV solar systems are always an investment into your home and lifestyle. Keeping up with maintenance and changing some habits are the key to your PV system's lifespan and to see a great return on your investment.

Here is a basic list of best practices and ways to take full advantage of your solar investment.

## **SHADING AND DEBRIS**

Check for debris or shading on your solar system. Every square inch of the panels makes a difference in production. Get your panels cleaned, especially in a dry environment where rain is rare. Just a quick rinse with a hose is enough for almost every situation.

## **DO HOUSEHOLD CHORES DURING THE DAY**

Running appliances during the day takes full advantage of your solar system. Try to stagger their use so you never use more electricity than what your system is producing.

## **BENEFICIAL ELECTRIFICATION**

If your system is sized correctly, you should only be paying the \$30 monthly grid access charge most months, and not exporting much power. If you are exporting excess power, it might be time to think about beneficial electrification. Electric heat pump water heaters use 75% less energy than a conventional water heater and are ideal for any solar system — and SIEA offers a great rebate on heat pump water heaters.

## **BUNDLING ENERGY-EFFICIENCY UPGRADES**

Bundling solar with energy-efficiency upgrades may help you generate savings from day one. Reduce your electric consumption by making energy-saving improvements. Making improvements before going solar results in a smaller-sized system thus saving you thousands in upfront costs and interest. Some improvements include replacing your old water heater, adding insulation, or installing a whole house attic/high-volume-low-speed fan. If you've already made the leap, these projects may still help reduce your consumption of grid energy.



Make the most of your rooftop solar investment: Do your research and follow best practices.

## **YOU'RE SMART! DON'T FALL FOR "TOO GOOD TO BE TRUE" SCAMS**

Don't trust anyone that tells you when you add solar, your meter will spin backwards and that you won't have an electric bill after going solar.

First, meters have not, do not, and will not ever spin backwards if they're working correctly. Second, everyone connected to the grid pays the \$30 monthly grid access charge. SIEA's grid access charge ensures you have access to electricity when your PV solar system is not generating. And it covers the associated costs of repairing damage, maintaining power lines, and restoring outages. You will have to go off grid if you don't want an electric bill.

SIEA will never go door-to-door to ask you for money or inspect your meter without notifying you first. Our employees all wear clothing with the SIEA logo, and they all drive SIEA-marked vehicles. We are happy to verify if one of our employees is really on your doorstep. Just give us a call at 800-279-SIEA, option 3.



# HIGH VOLTAGE FUTURE: APPRENTICESHIP PROGRAM LIGHTS A WAY FOR UTILITY WORKERS

San Isabel Electric Association is training the next generation of electric utility workers, providing good-paying jobs and an opportunity to serve the very communities they call home.

“This program isn’t just about building careers; it’s about keeping the talent and skills of our youth in our communities, and keeping families intact,” SIEA General Manager Ryan Elarton said. “Enabling individuals to work close to their families and friends ensures that the benefits of skilled employment aren’t just for the co-op and the community; they aren’t just economic but they’re deeply personal.”

In March, a class of four proved they have everything that it takes to do the important and sometimes dangerous work of keeping the electricity flowing. Lineworkers Billy Bloesser, Jesse Madril, and Matt Zagar, and Meter Shop Technician Devon Jensen are the latest to complete the co-op’s rigorous apprenticeship program. It’s no small task with 77 textbooks and tests, and more than 7,200 hours (about four years) of fieldwork. The final written test assesses their comprehensive knowledge and readiness for the field.

One distinctive aspect of SIEA’s apprenticeship program is the mentorship provided by seasoned colleagues, who boast more than a decade of experience. Jensen took the final exam two years into the program, his mentor said. He took it as a practice test to use to help him study, but passed it the first try. The mentorship approach not only imparts technical skills but also cultivates a deep sense of responsibility and camaraderie among the apprentices. It’s a passing of the torch from one generation of lineworkers to the next.

Unlike a traditional college or trade



▲ SIEA Lineworker Billy Bloesser



▲ SIEA Meter Shop Technician Devon Jensen



▲ SIEA Lineworker Jesse Madril



▲ SIEA Lineworker Matt Zagar

school route, SIEA’s program leaves students debt free when their education is complete. Apprentices earn a comfortable paycheck every step of the way; they gain valuable skills and build a secure financial future. By the time their training is complete, they’re not just certified journeymen — they’re also free of education-related debt and ready to hit the ground running as valuable assets to the company and their communities.

That’s what attracted the men to their trades: a way to better their financial future, and stay in the communities they were reared in. The apprentices all had friends or family members of friends who worked for SIEA and saw what a great company it is, and how well they were able to provide for themselves and their families. All four men got their foot in the door as tree trimmers, and when

apprenticeships opened up in the line of work they were interested in, they were hired.

SIEA is dedicated to maintaining a skilled and reliable workforce for the future. While opportunities are limited, typically at least one apprenticeship position — either in linework or staking engineering — and one or two entry-level positions are open and posted each year. The co-op has 11 apprentices in various stages of progress who are expected to complete their apprenticeships in 2028.

The company plans to hire at least two entry-level tree trimmer positions and possibly a warehouse position in 2024. Interested candidates can view current job postings at [siea.com/careers](http://siea.com/careers). SIEA also posts available positions in local newspapers circulated across southern Colorado.



## Need New Lawn Equipment? Consider going electric

If it is time to replace yard equipment, going electric has many benefits.

If you are considering buying a battery-powered mower or a corded or battery-powered trimmer, edger, or leaf blower, there are not only more options available now than in recent years, but improvements have been made to run times, features, quality, and service life.

### ADVANTAGES

- **Less smell:** There are no emissions, which means no exhaust odor.
- **More free time:** There is no need to buy and change the oil, spark plugs, and air filters.
- **Less noise:** Electric yard tools and mowers may be quieter than gas-powered ones.
- **Ease of use:** Simply plug in or charge to use. Some brands offer battery continuity between devices.
- **Less weight:** Corded electric devices are often lighter than gas-powered equipment.



## DONATION IMPACT REPORT

Donations approved at the January board meeting



San Isabel Electric operates under seven cooperative principles, which includes practicing a Concern for Community. Each board member lives in the community he or she serves, and we all work together to help our communities thrive.

Each month, the board of directors donates to community projects to help keep our communities strong and growing. All philanthropic giving funds come from unclaimed capital credits, not from member rates and electric bills. Our process for using unclaimed capital credits follows state law for unclaimed property. Unclaimed capital credits cannot be used for system improvements, maintenance, payroll, or other overhead costs.

For more information about capital credits and unclaimed capital credits, visit [siea.com/capitalcredits](http://siea.com/capitalcredits).

**\$750**  
After Prom —  
Rye High School Booster Club

**\$500**  
Annual Dinner —  
Pueblo West Chamber of Commerce

**\$500**  
Western Landscape Symposium —  
Pueblo County CSU-Extension Office