

# WEIGHING THE PROS AND CONS OF CLOSING THE ENERGY GAP

BY RYAN ELARTON GENERAL MANAGER

ast month, we began a series of articles that will run over the next several months. Here, we'll lay out the facts—no sugar-coating and no biases—and explore solutions to bridge the energy gap as the world transitions towards a cleaner, more energy efficient future.

We'll dive into four of the most practical options: nuclear power, natural gas turbines, geothermal energy, and renewables paired with batteries. We'll dissect the pros and cons, and, most importantly, the cold, hard practicality of each option for our communities in southern Colorado. This month, we'll take a look at natural gas.

### Natural Gas' Role in Achieving 100% Renewable Energy

Natural gas is often positioned as a key solution to bridging the energy gap. It has lower emissions than coal-generated power, and is generally affordable due to its abundance and more efficient ways of producing energy from shale formations. However, prices can spike when demand is high. But reliance is declining due to greenhouse gas emissions

regulation, which could negatively impact the economy — especially in southern Colorado.

#### **Reliability and On-Demand Power**

Of the four resources we'll be examining, natural gas is the most flexible "dispatchable" resource - meaning it can quickly adjust to demand or the ups and downs of wind and solar resources.

Natural gas power plants can produce power in several ways. In a simple-cycle combustion turbine, gas is generally used in a generator similar to a jet engine, or an internal combustion engine, to spin a generator. In a combined-cycle power plant, combustion turbines are often paired with a steam turbine. While neither can be turned on instantly, both simple and combined cycle plants can start quickly. Most natural gas plants can reach full power within one hour. This flexibility complements renewables by providing energy when the sun isn't shining or the wind isn't blowing.

#### **Affordability**

Natural gas is an economical resource



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because of its current abundance especially with newer drilling techniques. — Because supply could eventually run low. Reserves are expected to last at least a half-century. Plus, price spikes can occur, when demand is high, as seen during winter storm Uri in 2021.

Fortunately, Tri-State Generation & Transmission Association, San Isabel Electric's power supplier, can mitigate price hikes by changing their natural gas combustion turbines to fuel oil. All their natural gas combustion turbines have dual fuel sources. Even though fuel oil is expensive, it is still significantly cheaper than the cost of natural gas during extreme weather events like Uri. Using fuel oil can shield member-owners from soaring costs and can provide plenty of dispatchable energy to meet demand.

#### Job Creation and Economic Impact

Natural gas supports jobs in extraction, transportation, and power generation.

#### YOUR CO-OP NEWS

The sector employs workers in skilled labor positions and offers substantial economic benefits in regions with active gas production.

While both blue- and white-collar workers in the natural gas sector have skills highly transferable to other fields, job opportunities in our region remain scarce. The seven counties San Isabel Electric serves — Custer, Costilla, Fremont, Huerfano, Las Animas, Otero, and Pueblo counties — have struggled to attract and retain high paying jobs for decades.

A zero-carbon economy would result in job losses in our region, particularly in Las Animas County where oil and gas extraction are among the top industries. Renewable energy jobs are growing, but are often temporary and require relocation.

#### Safety and the Environment

To produce electricity, natural gas emits carbon dioxide. Methane can also leak from the natural gas supply chain. Both gases are highly effective at trapping heat in the atmosphere. Carbon capture or carbon sequestration is expensive and requires large amounts of energy, often reducing the emissions reduction achieved.

In addition, methane leaks are a byproduct during extraction, storage, transportation, and production. Despite this, modern natural gas infrastructure incorporates advanced safety measures to minimize the risk of leaks or explosions.

Natural gas combustion turbines release fewer pollutants and are more efficient when compared to their fossil-fuel counterparts of oil and coal. Communities with natural gas plants also have superior local air quality.

A tremendous amount of funding is driving research and testing of advanced carbon capture technologies which may one day support the use of natural gas in a carbon-constrained energy generation environment.



## **2024 ANNUAL MEETING RECAP**

Families, friends, and neighbors from near and far gathered at Walsenburg Junior Senior High School on Saturday, September 21, for San Isabel Electric's 86th Annual Meeting.

While the electric cooperative's annual meeting is required to conduct elections and hold a public forum, the event has become more than just a procedural business meeting.

"Our annual meeting is a vital opportunity to bring the community together — neighbors who live miles apart, and those looking to build connections and support each other," SIEA board member Edward "Ray" Garcia said.

A key highlight was the election of a new director for District 7, which includes areas of Las Animas County east of Trinidad as well as Aguilar. Gregory Costa, the son of the late Joseph Costa, was elected by the membership to replace Don Tokar who chose not to seek reelection. Costa thanked the members for their trust and expressed his excitement to

continue his family's tradition of service. We appreciate Mr. Tokar's service to the Board of Directors and wish him the best in his next adventure.

The grand prize — a free year of electricity capped at \$1,500—was awarded to George Torres, a second-generation San Isabel Electric memberowner who lives in Las Animas County.

Attendees were also treated to a variety of giveaways. A total of 62 BINGO prizes — all purchased from small businesses within the cooperative's service area — were distributed. Additionally, 20 \$50 bills were handed out to lucky winners.

For the second year in a row, the board of directors invited three local potters to create unique membership gifts. This year, the potters handcrafted ceramic bowls for all members who were in attendance. Each member also received a San Isabel Electric cap, a thermal tote bag, and a pen with a foldable fan attached.

More than 350 members registered, and about 875 people attended the event.

### WHO'S IN CHARGE?



Every person who buys electricity from San Isabel Electric has the power to help guide the cooperative. The SIEA Board of Directors is elected by the members in their district to make decisions about how the co-op is operated, including decisions about services, rates, and infrastructure investments. **We are here to serve you**.

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## **NEW DAYCARE** Serves to Retain and Attract La Veta Teachers

Recently, three La Veta School District teachers welcomed new babies to their families, but struggled to find childcare. They feared they might have to quit their teaching jobs. Many teachers, districts, and communities across Colorado face this issue. But rural school districts have much greater challenges with childcare — or the lack thereof.

This article isn't about their story. It's not about the solution. And even though this is our magazine, it's not about San Isabel Electric either. It's about La Veta School District Superintendent Dr. Bree Jones, who thought way outside the box, who put her career out on a limb, and who persevered after numerous setbacks. She created a solution that saved jobs, filled a community need, and might even attract more employers to the area.

After months of brainstorming, one day Bree suggested repurposing the building next to the old laundromat by La Veta Propane — which had been vacant for at least the last seven years — into a childcare center. "This shows how well Bree does at strategy and how important it is to her retain fabulous teachers," President of the Board of Education and the La Veta School Foundation Annalee Hickey boasted.

"Oh, my goodness, you would not believe the amount of work Bree has put in. This was her innovative idea from the get-go," Hickey exclaimed.

The project's success also relied on the creativity of Jimmy Chambers from Chambers Design, the project's contractor. "He has been really digging deep to find us solutions we can afford," Hickey said.

The project had a tight budget from the beginning. But there have been countless unexpected expenses navigating regulatory requirements. Chambers has been able to obtain discounts from local suppliers and various businesses.

"It's no wonder more districts don't try this. It takes tremendous dedication to see it through. It has taken tremendous dedication and persistence to see it

through," Hickey added.

The Future Redhawks Childcare Center is expected to open this fall. Meanwhile, the school district has been providing temporary childcare. The new daycare, which will be operated by the school district, is accepting applications from teachers and the public. The center will serve children up to age three, and currently has several spots open.

Interested applicants can visit the district office, call, or email for more information.

#### **BACKGROUND**

La Veta has always been a wonderful place to live and raise children, but rural living presents many challenges for families. The severe lack of childcare has come to the forefront for many families, schools, and businesses.

Seven years ago, the La Veta School Foundation was created to help recruit and retain high quality teachers. Research identified two major obstacles: affordable housing and the lack of childcare. The foundation addressed housing first and raised \$400,000 to purchase a duplex that now houses three teachers and their families.

When the childcare issue became urgent, the district and foundation sought funding to create a daycare. Superintendent Jones secured two state grants totaling \$279,000 to cover the buildout of the old laundromat, employee training and licensing, and to help with operational costs. The La Veta School Foundation provided the required \$40,000 match.

SIEA and Basin Electric Power Cooperative contributed a combined \$5,000 toward the installation of electric thermal storage (ETS) heaters, the most efficient heating option for the facility.

For more information on SIEA's donation program, visit siea.com/donations. To learn more about ETS heaters check out siea.com/ets.

## DONATION IMPACT REPORT

SEPTEMBER 2024



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

The following donations were approved during September's board meeting. All donations were matched by Basin Electric Power Cooperative.

PUEBLO COUNTY			
Pueblo West Parks and			
Recreation— Cattail Crossing	Tom Sawyer Fishing Derby	\$500	Pueblo County
	Colo. City/Rye Lions 10th		
Colorado City/Rye Lions Club	Car Show & Craft Fair	\$1,000	Pueblo County
Greenhorn Valley Chamber			
of Commerce	2024 Casino Night	\$1,000	Pueblo County
Pueblo West High School	Pueblo West JROTC Raider		
JROTC	Team Obstacle Course	\$1,000	Pueblo County
HUERFANO COUNTY			
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Gardner Valley School	GVS Color Run	\$500	Huerfano County
Museum of Friends	Save the Roof & Dick 3rd		
_(AKA MoF)	Gala Fundraiser	\$1,000	Huerfano County
La Veta Rodeo Oktoberfest	Rodeo Oktoberfest	\$1,200	Huerfano County
LAS ANIMAS COUNTY			
Branson School District RE-82	Seats to Success	\$2,500	Las Animas County

Each month, the Board of Directors donates to community projects to help keep our communities strong and growing. All philanthropic funding comes 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 credit, visit siea.com/capitalcredits.