



News for Members of
San Luis Valley Rural Electric Cooperative

The Newsboy



The



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Joe Gallegos was elected as a county commissioner for Costilla County in 2000. His campaign promise: to help improve the economy for the constituents he would serve.

It was a tall order. According to the 2000 census, the median household income of Costilla County's 3,663 residents barely exceeded \$19,500. Unemployment was in the double digits.

As a first step in solving the puzzle of how to bring economic development to the county, Gallegos initiated a study to look for opportunities. Costilla County's unique characteristics pointed the way.

With virtually no federal land, neither the Forest Service or BLM provided road maintenance support as they do in most other counties in the Valley. An extensive network of subdivision roads required county maintenance. Additionally, agriculture and ranching dominated the economic landscape. Thus Gallegos felt development opportunities needed to support agriculture.

A 2001 forum with Costilla County and Rural Community Assistance Corporation (RCAC) identified a biodiesel production facility among 11 other possible priorities. The pieces fit. Production of biodiesel

would support farmers who grew seeds for oil; help ranchers who would use the seed solids remaining after oil removal as a high-quality

animal feed; and control fuel costs for the county by supplying diesel for road maintenance equipment. The idea resonated with Gallegos, who graduated

with a degree in mechanical engineering from CSU and who worked in the oil industry for 15 years.

The next piece fell into place when Gallegos learned of a chemist who returned to the Valley to retire. Dan Quintana was born and raised in San Luis. He graduated from Adams State College with a B.S. in Chemistry and went on to work for 22 years as a chemist, chemical engineer, process engineer and engineering manager.

Gallegos talked to Quintana. Would Dan be interested in working with the commissioners to develop a biodiesel production facility? Yes. Yet another piece of the puzzle clicked.

County employee, Ben Doon, a graduate of Colorado University in Boulder with a M.A. in English, had been hired in 2002 to manage grants and other administrative duties. The commissioners sent Doon and Quintana to an Iowa State University biodiesel demonstration plant in Ames, Iowa to make sure the project was feasible.

Doon said, "The trip to the Ames plant was a sanity check to see if this crazy scheme was doable. Iowa State was doing something very similar to what the commissioners had in mind."

They liked what they saw. Furthermore, the Valley's high elevation created a cool sunny growing climate favoring canola—the best crop for biodiesel production. Here, canola would produce excellent oil yields. The project was a go.

Doon and Quintana started researching and learning. Doon said, "Unlike a private company, Iowa State was willing to share their knowledge. Dan and I each took a 5-day course from them."

Continued on page 4



John Villyard, SLVREC CEO

Summer is always a busy time of year in the Valley and this year has been no exception, especially here at SLVREC. Power use has remained high. We are starting our budget process for 2012. We've completed a number of projects on our 2011 work plan including the installation of three miles of underground line at the Sand Dunes National Park and replacement of the lines serving the town of Crestone. We retired capital credits (read more on page 3).

Additionally, the board interviewed candidates to fill my position when I retire at the end of the year. There were close to 100 applications. With the help of a national hiring consultant, they narrowed the field to eight strong candidates.

I am pleased to announce that after much deliberation, the board selected Loren Howard for the position. Mr. Howard has most recently served as the General Manager for Holland Board of Public Works in Holland, Michigan. You can read more about him on page 3.

I am very pleased with the board's selection and believe Mr. Howard will be an excellent fit with

this cooperative. The board had a difficult choice; but, as I see it, they have worked hard to ensure a smooth transition for the members and the cooperative as a whole.

Tri-State has continued to work on their rate philosophy. As I have mentioned in previous issues, we anticipate this to be a positive change for our cooperative. We are hopeful the new philosophy will help us keep rates stable. However, don't expect to see changes in place prior to 2013.

Utilities face tremendous pressure to increase rates. Congress did not pass carbon legislation two years ago. Instead, they handed the task over to the U.S. EPA. The path EPA is taking will be very costly. We are concerned that Congress's failure to act has centered power in the hands of a comparatively small group of people. This will affect industries across the board, not just utilities.

I am sure no one knows all the answers to the dilemmas we face. I do know we will be better off if citizens take the time to express their concerns to legislators. Let them know electric rates are important to you. Help drive the message home that keeping electricity affordable needs to be one of their priorities.

On a happier note, we have been revamping our safety program. It's not that the old program wasn't working. In fact, we are well into our second year with no lost-time accidents. However, industry experts at Federated, our insurance company,

and National Rural Electric Cooperative Association have found a better way to handle safety. The new program does away with numeric scores and instead creates an arena that emphasizes goals and methods of achieving goals

So far, the response from employees has been outstanding. We've identified some excellent ways to improve our safety program for employees and members alike.

We place as much emphasis on maintaining a safe distribution network for our members as we do on maintaining a safe workplace for our employees. Your safety is important to us. However, I ask you to keep in mind that in the Valley, there are two main power providers and one municipal utility. By law, we are not allowed to work on each other's systems, even in times of crisis.

The reason is simple. Each utility has their own construction and safety protocols. Working on a different system places employees, both ours and theirs, in extreme danger. Please understand that there are many mitigating circumstances in all situations involving multiple utilities.



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Scheduled Meetings

Board Meeting September 27, 6:00 p.m.
The Board of Directors meet the last Tuesday of each month unless otherwise stated. Members are welcome.

Statement of Publisher

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Pamela Wilson: new rep

After 8½ years as town clerk and treasurer for the City of Creede, Pamela Wilson started work as the cooperative's newest customer service representative on August 1.

Pamela, who lives in South Fork with her husband Earl, applied for the position at SLVREC because she thought the commute might be a little smoother, especially in winter months. She said, "I was ready for a change and the easier commute from South Fork to Monte Vista appealed to me."

This won't be Pamela's first time working for a cooperative. She has worked at farmer's co-ops too.

A Wyoming native, Pamela has spent many years in the Valley. She graduated from Alamosa High School and Earl is from Monte Vista. The couple lived in north-east Colorado for many years, but family brought them back to the Valley.

Pamela said, "I hope I can meet member expectations. I look forward to meeting each and every member and helping out the best I can." ☺

Reminder!

October 1 starts the winter season for time-of-use rates.

On-peak electric rates are higher than off-peak rates. If you have ETS heat, you will minimize your electric bill by shifting as much electric use as possible to off-peak times. Your ETS heater will automatically capture heat during off-peak hours.

SLVREC recommends checking your heater now, before you need it, to make sure it's operating correctly. If you have any questions regarding your heater, contact SLVREC's energy services specialist. For more information on time-of-use billing rates, please contact customer service. ☺

Time-of-Use Rates

October thru March: Winter Hours

On-Peak—5:30 a.m. to 12:00 noon
and 4:30 p.m. to 10:30 p.m.
Off-Peak—12:01 p.m. to 4:29 p.m.
and 10:31 p.m. to 5:29 a.m.

April thru September: Summer Hours

On-Peak—4:00 p.m. to 10:00 p.m.
Off-Peak—10:01 p.m. to 3:59 p.m.
the next day

CEO Selected

SLVREC's current CEO, John Villyard, will retire at the end of the year. In preparation, the board hired a national firm to help with the search for a new CEO. In mid-August, a selection was made. Loren Howard from Holland, Michigan, will start work at the cooperative at the start of November.

Howard said, "This new position with the San Luis Valley REC offers many new professional challenges and opportunities."

Howard currently works at the Holland Board of Public Works (HBPW). He began his tenure with the HBPW in March 1987 as an electric production superintendent. In 1993 he became the power resources director and subsequently held positions as Sales & Marketing Director and Electric Services & Technology Director. Prior to joining the HBPW, Howard worked at Packaging Corporation of America and Century Boat Company. He served in the U.S. Coast Guard for 22 years.

During his service with the HBPW, Howard has overseen the development of the municipal utility's broadband services, snowmelt system and electric generation expansion. Most recently, he has been responsible for the development of a strategic plan, a reorganization of services and the implementation of renewable energy, among other achievements. The HBPW employs 175 people and provides full electric generation and distribution services, water filtration and distribution, wastewater collection and treatment as well as broadband services. ☺

New Co-op Connections Business

Aspen Ridge Cabins, located at 0710 Highway 149 in South Fork signed on as SLVREC's newest Co-op Connections partner. Members who present or mention their Co-op Connections Card at the time of booking will receive a 10 percent discount (excluding monthly rentals and holidays). It's that easy to save!

Launched earlier this year, the Co-op Connections program is another way cooperatives help add value to the services they offer members. The national program is sponsored by Touchstone Energy.

A card and key fobs were mailed to all active accounts this spring. Members may use the card at both local and nationally participating businesses. A complete list of all participating merchants and pharmacies is available online at www.connections.coop. A list of local merchants is available at the cooperative's web site at www.slvrec.com. For more information on the program, or to sign up your business for free, contact SLVREC! ☺

But even with all the pieces fitting together, the project couldn't get off the ground without funding. The commissioners asked Doon to start writing grant requests.

Since 2004, when the first grant was awarded, Doon has successfully written 10 grants bringing in over \$600,000 for the project. The money has come in, one or two grants at a time, for 8 years now. Doon believes the slow rate of development is the key to the project's ultimate success.

"Other biodiesel facilities have not weathered the economic downturn," he said. "If things get too big, too fast, it's harder to sustain. We've built slowly, trying one thing at a time. Our production has steadily increased every year."

The project started with a building, a safe first step. Even if the project failed, the county would end up with a new building in Mesita for the District 3 road maintenance shop. Construction began in 2004.

Finding equipment for the plant proved challenging. Doon said, "Finding processing equipment for this small scale was hard. Now, some American producers have caught on and it's possible to find smaller equipment. But when we started, we had to source equipment from Costa Rica, Argentina, Canada, China, India and the U.S."

They started with three Chinese oil extractors. Learning how to use them wasn't easy. "First, we got the machines without a manual. Finally, we got a manual, but it was in Chinese. Next we got a manual in Spanish, but it turned out to be Argentinian Spanish and there were some nuances we couldn't figure out," Doon said.

Even now, with several years experience, Doon says running the machines is more art than science. "You have to find the sweet spot and

it changes every day."

The machines worked, but oil production was low. The seeds needed to be heated in kettles before pressing. A company from India had a machine pre-fitted with such a kettle, but that machine cost \$40,000. As it turned out, the Indian company had a sales representative in Nebraska. Quintana talked him into selling just the heating kettles and these were retrofitted onto the \$5,000 Chinese oil extractors.

Next, they had to find a way to filter the oil. Simple machines from India fit the bill perfectly. A series of standard sock filters completes the job.

Every step of the way took trial and error. Hard work too. "Now we have augers to move the seeds. But when we started, we moved everything by hand. It was slow. We filled the machines by hand with 5 gallon buckets. We were just trying to understand how all the machines worked," Doon said.

Today, the plant is automated. The facility employs three people full-time and two part-time. Production has reached 200 gallons per day and is climbing. With over 900 miles of roads in District 3, the Mesita shop uses between 30,000 to 40,000 gallons of fuel each year.

Doon said, "By the end of 2011, our production will be around 35,000 to 40,000 gallons. Our goal over time is 100,000 gallons a year." As production increases, transport and distribution problems will have to be solved, one step at a time.

That's the way the facility has grown, one step at a time. The way Doon looks at it, "We've received one-to-one grants. The equipment was purchased with grant money. It is a pilot project. I think it's proven itself. I hope we have one of these at each of the county shops in five years." ☺

The process of producing biodiesel is simple, deceptively simple, according to Ben Doon. It's just a matter of mixing vegetable oil, alcohol and a catalyst while applying heat and agitation. However, if you make mistakes, you won't get the finished product.

Seeds are brought to the facility by local farmers. The plant buys from an average of three Costilla County farmers a year. Seeds are stored in grain silos (picture on page 1). Flex flow augers in PVC tubes—like those used in hog and chicken feeding operations—move the raw seeds to a standard seed cleaner (1). Canola has a round, uniform seed that separates from chaff easily. Chaff is sold as an animal bedding product and as a feed for chickens.

Next, augers move seeds into the heating kettles atop the oil extractors (2). Crushing the seeds is the trickiest part of the operation. If all goes well, the machines produce 35 percent oil and 65 percent cake, the left-over seed solids. It's easy to tell if oil extraction has been maximized by looking at the cake. If thin sheets are produced, workers have tuned the machines perfectly (3). Canola cake contains between 26 to 35 percent protein and is highly palatable to livestock, as evidenced by three local Mesita goats who snuck inside the shop to have a snack (4). Cake is sold to local ranchers and has been in high demand.

The oil must be filtered to remove all fines. Cloth separators handle the first filtering (5). A gravity tank helps settle out more (6). Then a series of standard sock filters take out successively smaller and smaller particles. The thick oil sludge, heavy with particles, is also sold as an animal feed. The cleaned oil is stored, ready for processing (7). Raw canola oil is dark green, almost black. Light-colored, store-bought canola is refined, bleached and deodorized. Canola (center bottle) is flanked by mustard seed oil to the left and sunflower oil to the right (8).

The oil is heated to 180 °F using a solar heater. The heater was purchased and installed with Governor's Energy Office grant funds this January. For each batch of biodiesel, 100 gallons of pre-heated oil is placed in a mix container with methanol and a catalyst, sodium methylene, to speed the reaction (9).

Using high temperature and pressure, the chemicals are added to the vegetable oil. After the tank reaches 80 °C, the mixture is transferred to a settling tank. For every 100 gallons of vegetable oil, about 10 to 12 gallons of glycerine separate out (10). The remaining biodiesel moves into blend tanks where it is mixed with conventional diesel in a ratio fitting to the season.

For now, glycerine is burned in shop heaters. Ben Doon (11) is looking for a higher-value use. Every by-product in the production of fuel is used. (See color photos in the online edition of the *Newsboy!*)

1



2



3



4



5



6



7



8



11

9



10





What Are My Lighting Options?

Starting in 2012, lightbulbs must be more energy efficient. Many of these bulbs are already available for purchase. The three most common bulb options consumers will find on store shelves are:



Halogen incandescents

Energy Savings:* 25 percent
Lifespan:* Three times longer
Annual Energy Cost: \$3.50



Compact Fluorescent Lamps (CFLs)

Energy Savings:* 75 percent
Lifespan:* 10 times longer
Annual Energy Cost: \$1.20



Light-emitting diodes (LEDs)

Energy Savings:* 75-80 percent
Lifespan:* 25 times longer
Annual Energy Cost: \$1

* As compared to traditional incandescent bulbs

Learn more at
energysavers.gov/lighting

Saguache Goes to Town

Kim Smoyer is wearing a lot of hats these days. She's coordinating this year's Philanthropy Days event, to be held in Saguache on September 14, 15 and 16.

Philanthropy Days (www.slvrec.org) is held in the San Luis Valley region once every four years. The three-day event enables networking between local non-profits, builds the knowledge and skills of event participants through skill-building sessions and gives agencies the opportunity to meet face-to-face with potential program funders. Over 200 non-profits, funders and representatives from local government agencies are expected to attend.

Additionally, as program and development director for ScSEED (Saguache County Sustainable Environment and Economic Development) Smoyer is helping to coordinate a downtown revitalization project. Smoyer helped to write the grant that brought a half million dollars to the town.

The \$500,000 CDBG grant from the Colorado Department of Local Affairs will be used to begin the third phase of the Saguache Downtown Revitalization Project. The first phase included planning. The second phase began implementation through gathering of funds. This, the third phase, includes the physical changes and improvements to 4th Street. The renovations are expected to be completed prior to the start of Philanthropy Days.

Smoyer has also worked with SLVREC through the Saguache Alliance for Green Energy (SAGE). The group hosted a workshop on renewable energy, energy efficiency and energy conservation in January. In July, SAGE members went door to door, visiting 85 homes in the Town of Saguache. They gave out 61 free compact florescent light bulbs, 13 Low Income Weatherization applications and conducted 12 energy surveys. They left another 42 surveys for residents to turn in at the Town Hall.

Congratulations to Saguache and ScSEED for their work to revitalize their community and to improve the lives of local residents! ♪

Capital Credits Allocated

Did you notice a credit on your billing statement in August? SLVREC's board allocated \$1.3 million in capital credits to members on August bills.

This year, 50 percent of the allocation went to members who received service from the cooperative in 1988, the oldest year for which capital credits are owed to members. The remaining 50 percent was allocated to all other years. In this way, most members received a credit for their patronage.

SLVREC allocates annual operating margins, or profits, to members who received service during the year. These margins are based upon the amount of electric service a member purchases for that year compared to the total electric service purchased that year by all members. Capital credits are retained by the cooperative for operating funds. They are paid back to members as the financial condition of the cooperative permits.

Those who no longer receive service from SLVREC, but who did at one time, may be eligible for capital credit payouts. For this reason, it is important to keep your address current with the cooperative.

At the end of August, the cooperative also began estate payouts. For certain joint accounts, if one partner or spouse passes away, the other may receive a reduced payout instead of waiting until the capital credits would normally be returned. If you believe you may qualify for an estate payout, contact customer service. ♪

Zucchini Pancakes

- 1½ cup shredded zucchini
- 1 egg, lightly beaten
- 2 Tbsp. biscuit mix
- 3 Tbsp. grated Parmesan cheese
- pepper and salt to taste
- 1 Tbsp. vegetable oil

In a large bowl, combine the zucchini, egg, biscuit mix, cheese and seasonings. In a large skillet, heat oil over medium heat; drop a quarter cup of batter into skillet. Fry for 2 minutes on each side and or until golden brown. Serve with applesauce.

Swiss Potato Soup

- 4 medium potatoes, peeled and cubed
- 1 medium onion, chopped
- 2 medium carrots, chopped
- ½ cup celery, chopped
- 2 cups chicken broth
- 3 Tbsp. butter
- 3 Tbsp. all-purpose flour
- 2½ cups milk
- 1 Tbsp. fresh parsley, minced
- salt and pepper to taste
- 1 cup shredded Swiss cheese

Combine the potatoes, onion, carrots, celery and broth in a large saucepan and bring to a boil. Reduce the heat; cover and simmer for 15 minutes or until the vegetables are tender. Lightly mash.

Meanwhile, in a small saucepan, melt the butter and stir in the flour until smooth. Gradually stir in the milk. Bring to a boil; cook and stir for 2 minutes or until thickened. Stir the milk mixture into the vegetables. Cook and stir until thickened and bubbly. Add parsley, salt and pepper. Remove from heat. Add cheese and stir until melted.

Slow Cooker Pork & Cranberries

- 1 (16 oz.) can whole berry cranberry sauce

- ⅓ cup French salad dressing
- 1 onion, sliced
- 1 (3 lb.) boneless pork loin roast
- ½ tsp. salt (or more to taste)
- 1 tsp. black pepper
- 1 to 2 tsp. garlic powder

Mix salt, pepper and garlic powder together on a plate. Pat roast dry, and roll in the spices. Place in a skillet on the stove and brown on all sides on medium high heat.

In a medium bowl, stir together cranberry sauce, salad dressing, and onion. Place pork in a slow cooker, and cover with the sauce mixture. Cover, and cook on low for 8 hours. Pork is done when the internal temperature has reached 160 °F.

Curried Squash Kabobs

- 1 butternut squash, peeled, seeded and cut into 1-inch cubes
- 3 Tbsp. butter, melted
- 1 tsp. curry powder
- ¼ tsp. salt

Preheat oven to 450 °F. Place squash in a greased 13 x 9 x 2-inch baking dish. Combine the butter, curry powder and salt. Drizzle the mixture over the squash and toss to coat. Bake, uncovered, for 20 to 25 minutes. Cool on a wire rack. Thread squash cubes onto 12 metal or soaked wooden skewers. Grill, covered, over medium heat for 3 to 5 minutes on each side until or until heated through.

Cornbread With Zucchini

- ½ cup butter, plus more for pan
- 2 large eggs, lightly beaten
- ½ cup buttermilk
- 1 large zucchini, grated
- 1 cup all-purpose flour
- ½ cup whole wheat flour
- ½ cup sugar
- 1 tsp. baking powder
- ¾ tsp. salt
- ½ tsp. baking soda

- ¾ cup cornmeal

Preheat to 350 °F. Grease a 9 x 5 x 3-inch loaf pan with butter.

Melt butter and pour into a medium bowl. Allow to cool slightly; then whisk in eggs and buttermilk. Add zucchini to butter mixture and stir until well blended.

Sift both flours, sugar, baking powder, salt, and baking soda into a large bowl. Whisk in cornmeal. Add zucchini; fold to blend (mixture will be very thick). Do not overblend. Spread batter in the prepared pan.

Bake 60 minutes or until a toothpick inserted into the center comes out clean. Let cool in the pan for 10 minutes, then remove from pan and cool completely on a wire rack.

Sautéed Apples With Red Cabbage

- 1½ tsp. kosher salt
- 1 small red cabbage, chopped
- 1 tart apple, peeled, cored and diced
- 1 lemon, juiced
- 1 Tbsp. olive oil
- 1 Tbsp. butter
- ¼ medium white onion, diced
- ¼ tsp. garlic powder
- ½ tsp. dry mustard
- ¼ tsp. black pepper
- 1 Tbsp. sugar (or substitute 2 packets Splenda)

Bring a large pot of water to a rolling boil, add 1 tsp. salt, and gently drop the cabbage into the pot. Cook for 2 minutes, remove from heat and drain.

Place the diced apples in a bowl and pour the juice from the lemon over the top. Toss to coat.

In a large skillet, heat the olive oil and butter over medium heat. Add onion, apple, seasonings and sugar. Sauté, stirring to prevent scorching until softened slightly, about 3 min. Add cabbage; toss to combine. Heat through and serve.

Conservation Corner

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Disconnect Policy
changes:

*SLVREC's Board of Directors
has changed the cooperative's
disconnect policy. If you see a
previous balance on your bill,
call immediately to avoid late
fees and/or disconnection.*

Don't wait!

September 2011



Livestock watering

If you have livestock, you know how important winter watering is for keeping animals in good condition. Now, while the weather is still warm, take the time to investigate energy efficient watering systems that will keep water open and accessible while helping you cut energy costs at the same time.

First and foremost, make sure that water sources do not overflow. Having water on the ground creates mud or ice, wastes water and increases your pumping costs. To help minimize water loss to evaporation and to retain heat in winter months, cover the water source, leaving only a small opening for animals to access. If you can, provide shelter from the wind. This will also reduce evaporation and heat loss in cold winter months.

There are a number of different types of automatic watering devices on the market. Automatic waterers can simplify animal care year round. Those constructed from insulated concrete can help prevent water from freezing too.

Investigate options now, before cold weather hits. In this way, you can make necessary changes while the ground is unfrozen and it's easier to provide an alternate water source for animals. There are a number of online resource with information on livestock watering options. Additionally, Colorado Extension has publications that can steer you in the right direction.