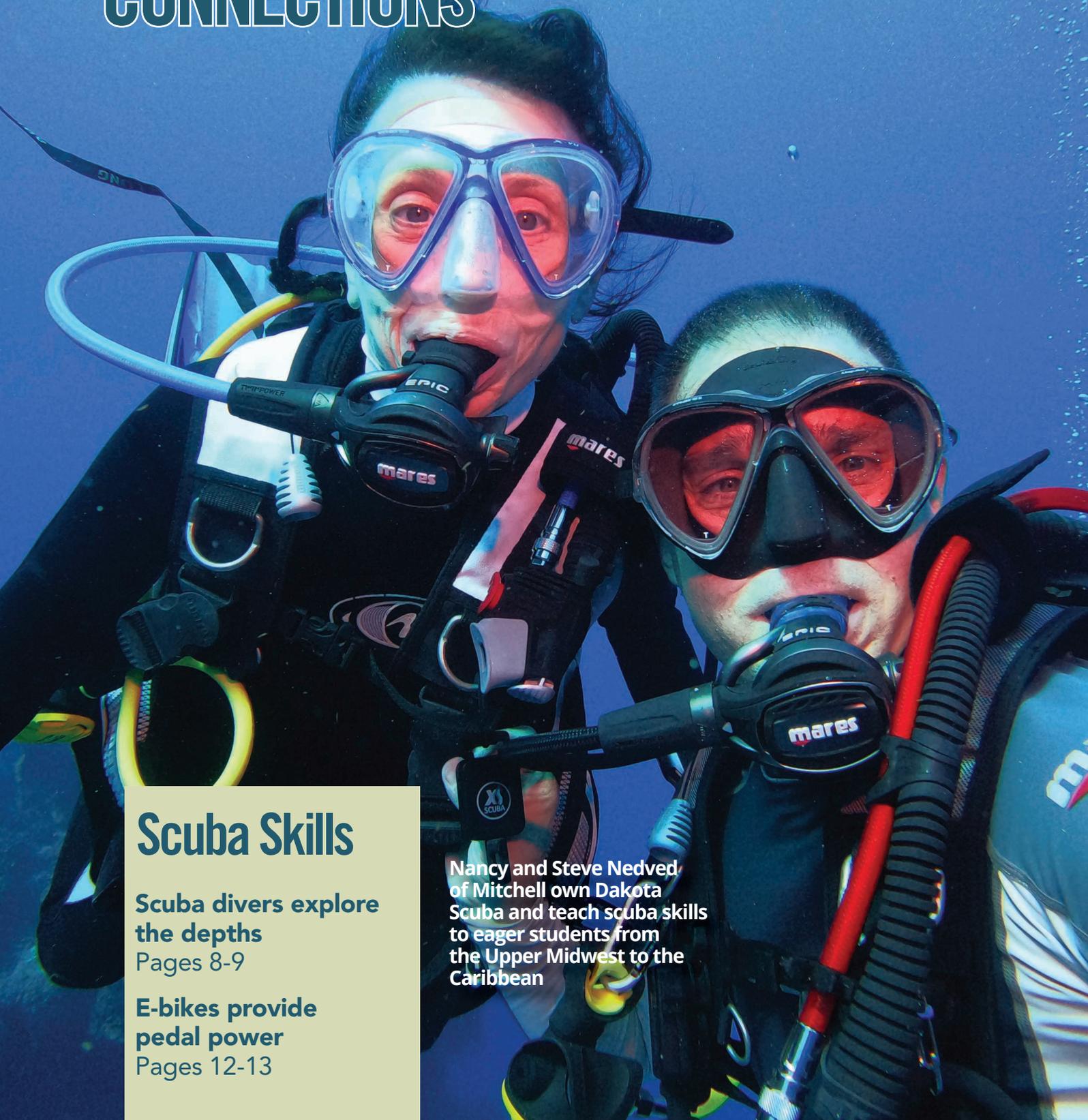


COOPERATIVE CONNECTIONS



Scuba Skills

Scuba divers explore
the depths
Pages 8-9

E-bikes provide
pedal power
Pages 12-13

Nancy and Steve Nedved
of Mitchell own Dakota
Scuba and teach scuba skills
to eager students from
the Upper Midwest to the
Caribbean



BASIN ELECTRIC



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COOPERATIVE CONNECTIONS

SOUTH DAKOTA ELECTRIC

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CO-OP CONSUMERS ARE FINDING NEW WAYS TO USE ELECTRICITY

If you listen carefully, you can hear a quiet transformation happening. Electric appliances and equipment are becoming more popular than ever among consumers.

Advancements in technology and battery power coupled with decreasing costs are winning over consumers looking for comparable utility and versatility. A bonus is that use of electric equipment is quieter and better for the environment.

Inside the home, consumers and homebuilders alike are turning to electric appliances to increase energy efficiency and savings. Whether a traditional electric stove or an induction stove top, both are significantly more efficient than a gas oven.



Trevor Jones

General Manager

That's because conventional residential cooking tops typically use gas or resistance heating elements to transfer energy with efficiencies of approximately 32 percent and 75 percent respectively (according to ENERGY STAR®).

Electric induction stoves, which cook food without any flame, will reduce indoor air pollution and can bring water to a boil about twice as fast as a gas stove. Robotic vacuums are also gaining in popularity. Fortune Business Insights attributes the growth and popularity of robotic vacuums like Roomba to a larger market trend of smart home technology and automation (think Alexa directing a Roomba to vacuum).

More tools and equipment with small gas-powered motors are being replaced with electric ones that include plug-in batteries. In the past few years, technology in battery storage has advanced significantly. Hand-held tools with plug-in batteries can hold a charge longer and offer the user the same versatility and similar functionality as gas-powered tools.

For DIYers and those in the building trades, national brands such as Makita, Ryobi and Milwaukee offer electric versions of their most popular products like drills, saws, sanders and other tools. In addition to standard offerings, consumers can now purchase a wider array of specialty tools that plug-in such as power inverters, air inflators and battery chargers.

Just a few years back, the list of new electric product categories that were making their way to the market was limited - electric scooters, lawn mowers, leaf blowers and vehicles. Today there are electric bikes, school buses, pressure washers, utility terrain vehicles, backhoes - even airplanes and boats. With the expansion of batteries and advancements in technology, we are seeing almost anything that burns gasoline or diesel as having an electric replacement available.

A case in point is the increased use of electric-powered tools and equipment, with more national brands offering a wider selection including lawn mowers, leaf blowers, string trimmers and snow blowers. The quality of zero- or low-emissions lawn equipment is also improving.

Electric equipment requires less maintenance, and often the biggest task is keeping them charged. In addition, electric equipment is quieter so if you want to listen to music or your favorite podcast while performing outdoor work, you can. On the horizon, autonomous lawn mowers (similar to the robotic vacuum cleaners) will be seen dotting outdoor spaces.

Another benefit of using electric equipment is that by virtue of being plugged into the grid, the environmental performance of electric devices improves over time. In essence, electricity is becoming cleaner through increases in renewable generation, so equipment that uses electricity will have a diminishing environmental impact over time.

June is National Safety Month

While your local electric cooperative often focuses on electric safety and provides information to keep you and your family free from harm, there are many other dangers lurking out there.

In recognition of National Safety Month, we're sharing the National Safety Council's list of the top causes of preventable injuries and death away from the workplace.

POISONING. In 2011, accidental poisonings overtook car crashes for the first time as the leading cause of unintentional injury-related death for all age groups combined. Poisoning deaths are often caused by exposure to gases, chemicals and other toxic substances, but prescription drug overdose is by far the leading cause.

VEHICLE CRASHES. Crashes are the second-leading cause of unintentional injury-related death overall. Impaired driving, distracted driving, speeding and inexperience can cause a life to be cut short in the blink of an eye.

FALLS. Falling is the third-leading cause of unintentional injury-related death over all age groups, but it's the No. 1 cause of death for those aged 65 and older.

CHOKING AND SUFFOCATION. Choking on food or other objects is a primary cause of harm and death. Suffocation and choking rank higher among the elderly and infants.

DROWNING. It's the No. 1 cause of death for children from ages 1 to 4, mostly due to children falling into pools or being left alone and unsupervised in bathtubs.

FIRES AND BURNS. Fires often start at night, when families are asleep and most vulnerable. A working and well-maintained smoke alarm will cut in half the chances of dying in a fire.

NATURAL AND ENVIRONMENTAL INCIDENTS. Weather-related disasters claim hundreds of lives per year. You should learn all you can about emergency preparedness and always have an emergency kit on hand in your home.

BOWLING FOR CHARITY IN MITCHELL



More than 80 cooperative employees showed up in Mitchell for the 7th Annual Line Patrol Charity Bowling Tournament sponsored by Central Electric. The Lacreek Electric Headhunters shown above (Tiff Pettit, Terri Gregg, Cody Allen, Ryan Pettit) took top honors. The event was organized to raise money for a fund used to help electric co-op employees and their families in times of need. Find out more about this event and South Dakota's electric cooperatives by visiting Cooperative Connections Plus. Simply scan the QR code at right.



Call 811 before you dig

Maddy Pannell

Maddy Pannell, age 10, reminds electric cooperative members to call 811 before digging into the ground when planting trees or pursuing other outdoor projects. Maddy is the daughter of Southeastern Electric members Scott and Kim Pannell of Sioux Falls.

Kids, send your drawing with an electrical safety tip to your local electric cooperative (address found on Page 3). If your poster is published, you'll receive a prize. All entries must include your name, age, mailing address and the names of your parents. Colored drawings are encouraged.

DELICIOUS DAIRY

SWEDISH CREME

Ingredients:

- 2 cups heavy cream
- 1 cup, plus 2 tsps. sugar, divided
- 1 envelope unflavored gelatin
- 1 tsp. almond extract
- 1 tsp. clear imitation vanilla extract
- 2 cups (16 oz.) sour cream
- 1 cup fresh or frozen red raspberries

METHOD

In a saucepan, combine cream and 1 cup sugar. Cook and stir constantly over low heat until candy thermometer reads 160 degrees, or steam rises from pan. (Do not boil). Stir in gelatin until dissolved; add extracts. Cool 10 minutes. Whisk in sour cream. Pour into eight dessert glasses or small bowls. Chill at least 1 hour. Before serving, combine raspberries and remaining sugar; spoon over each serving.

**Joanne Singrey-Johnson,
Watertown**

TUNA EGG SALAD

Ingredients:

- 3 6 oz. cans tuna packed in water
- 3 eggs hard boiled, peeled and chopped
- 2 small dill pickles diced
- 1 large celery rib diced
- 1/4 cup red onion minced
- 1 tbsp. lemon juice or red wine vinegar
- 2 tsp. garlic powder, optional
- 1/4 tsp. salt, or to taste
- Ground black pepper, to taste
- 1/2 cup plain Greek yogurt, 2% fat
- 2 tbsp. mayo

METHOD

Drain cans with tuna well. Transfer to a large bowl and separate into flakes with a fork. Add chopped and peeled hard boiled eggs, pickles, celery, red onion, lemon juice, garlic powder (if using), salt, pepper, yogurt and mayo. Stir well with a fork and refrigerate. Serve cold in a sandwich or over salad greens. Make Ahead: Tuna egg salad tastes best cold. For best results, refrigerate 30 minutes before eating.

ifoodreal.com

EASY SHERBET

Ingredients:

- 1 pkg. orange or lime jello
- 1 cup boiling water
- 3 cups milk
- Pinch of salt
- 2 tbsp. lemon juice
- 1-1/4 cup sugar

METHOD

Dissolve jello in boiling water. Add remaining ingredients. Freeze until 1/2 inch thick at edge of tray. Empty into mixing bowl and beat thoroughly. Return to freezer. This works well if put in a loaf pan.

Joy Hagen, Webster

EXTRA GRILLED CHEESE

Ingredients:

- 1 tbsp. butter, softened
- 2 tsp. Parmesan cheese, grated
- Dash of garlic powder
- 4 slices bread
- 2 slices sharp cheddar cheese
- 2 slices Swiss cheese

METHOD

In a small bowl, combine butter, parmesan cheese, and garlic powder. Spread an even layer on one side of each slice of bread. Place 1 slice of cheddar cheese and 1 slice of Swiss between two bread slices, with the buttered side facing out. Cook in hot skillet for about 2 minutes, until the crust is golden. Flip sandwich and grill until crust is golden and the cheese is melted. Slice and serve. May add grilled onions if you choose. Just saute in the pan before cooking the sandwiches and add to the sandwiches between the cheese slices.

Kristina Manecke, Midland

Please send your favorite recipes to your local electric cooperative (address found on Page 3). Each recipe printed will be entered into a drawing for a prize in December 2022. All entries must include your name, mailing address, phone number and cooperative name.

Q: I am considering a solar array on the roof of my home. What steps should I take with efficiency and energy savings in mind?



Miranda Boutelle
Efficiency Services
Group

A: When I tell people I work in energy efficiency, one of the first responses I hear is, “Oh, I’m thinking about getting solar installed on my house.” I hear it around campfires, meeting other parents at the park and on the ride to the airport.

Most people don’t realize solar is not energy efficiency. Solar is generating energy. Energy efficiency is finding ways to use less energy. I can see the association because both are thought of as beneficial to the environment and a way to save money.

My follow-up question is, “What are your motivations for installing solar?”

In my experience, people are motivated by saving money, concern for the environment or both. Focusing first on energy efficiency addresses both motivations. Here are considerations if you are interested in installing solar.

ENERGY CONSUMPTION

Solar systems are sized based on a home’s energy needs. The larger the system, the higher the cost. Before installing solar, make sure your home is as energy efficient as possible. It will use less energy and allow you to install a smaller system - which will save money and reduce your home’s environmental impact.

Verify the efficiency of your lighting, HVAC systems and insulation. A fully insulated and air-sealed home uses less energy, and those measures are less expensive than solar panels. Finish these energy efficiency projects before installing solar.

AFFORDABILITY

Consider your overall out-of-pocket expenses. The expected lifespan of a heating and cooling system is 15-25 years. Check the age and condition of your HVAC equipment and consider the expenses of replacement. If

something happens, will you be able to afford to fix or replace it?

ROOFING

Consider the age, orientation and shade of your roof. It is more difficult - and expensive - to reroof a home with solar panels. Will the roof need to be replaced before the solar panels need to be replaced?

The best orientation for solar panels is south-facing to receive direct light throughout the day. A shaded roof helps keep your home cool in the summertime but reduces solar energy production.

MAINTENANCE

A solar system doesn’t last forever. Lifespans range 25-30 years. As systems degrade over time, they produce less energy. Maintenance and repairs may be needed.

ELECTRIC BILLS AND STORAGE

Solar is not “off the grid.” Unless you plan to disconnect from your electric co-op, you will still receive a monthly bill.

Solar panels only produce power when the sun is shining. If you want power to your home at other times, like after dark, you need to be connected to your electric co-op or invest in a battery storage system - that comes at an additional cost.

During power outages, don’t assume solar panels will supply you with power. Typical solar interconnection to the grid requires the panels to shut down during a power outage. This protects lineworkers from injury while making repairs.

CONTACT YOUR ELECTRIC CO-OP

Solar contractors often work in several utility service territories and may not be familiar with your co-op’s offerings, rate structures and interconnection agreements.

Before signing an agreement, check with your electric co-op for local information rather than relying on what the contractor says.

As with any other system for your home, I recommend getting bids from three contractors to compare equipment and pricing.



Ryan Perrion prepares for the World Axe Throwing League championships in Minneapolis in July. *Photo by Billy Gibson*

Perrion works hard on his 'axe-pertise'

Billy Gibson

billy.gibson@sdrea.coop

Just about anyone can hurl a hatchet toward a stationary target. Hitting the bullseye? Well, that's going to require some practice.

Ryan Perrion is putting in all the practice time he can muster as he prepares for the 2022 World Axe Throwing League Championship (WATL) competition set for Minneapolis in July.

Ranked No. 33 in the overall WATL standings going into the tournament, Perrion is honing his hatchet blade – and his skills – in his quest to bring the world title back to his home in Aberdeen.

"I'm pretty confident in my abilities because I've put in the work to be the best I can be," Perrion said. "A perfect score is 64, and right now I'm averaging about 55 or 56 in league play. Like a lot of sports, anyone can have a good match but consistency is the hard part."

As a member of the WATL pro league and several regional leagues, Perrion also has plans to compete in Pennsylvania,

Missouri and Wisconsin in the coming months.

Perrion's interest in the sport started out as a hobbyist. He set up a target in his back yard and as his abilities increased it was clear this wasn't just a passing fad in his life. Perrion and his wife Amanda decided to go all in and open an indoor range to spread the axe-throwing love to the community. They launched Hub City Axe Throwing in Aberdeen with the goal of providing a venue for clean family fun.

"We built this place to bring a new sport into town and for families to get together and have a good time. That's our true focus. I have four little kids and they love throwing things. You're not allowed to throw a real hatchet until you're 12, but kids like to come in here and throw foam axes and they have a great time with their parents. Anyone can do it at any level."

Another goal, Perrion said, is to work with individuals of all ages and abilities and make them more knowledgeable about the sport and more skilled than when they arrived.

Meanwhile, interest in the sport is increasing both locally and across the region. Supervised lanes and leagues are available in Sioux Falls, Rapid City, Spearfish and Madison. Woody's Axe Throwing has facilities in Brookings and Sioux City, Iowa, and also has a mobile throwing range ready to roll.

While some questioned the safety aspect when Perrion was proposing the new axe-throwing facility, he said he's never witnessed or heard of an incident where someone was injured by a thrown axe. He said all safety precautions are taken at Hub City to ensure safety, including sturdy chain-link barriers between the venue's eight lanes.

Hub City offers recreational play, league play and special events. There's also Glow Throws held on Friday nights to spice things up and add to the adventure.

"I find that it's not only fun but very stress relieving," Perrion said. "You can get a rush of adrenaline when you get a bull's eye, but you also have to quiet your mind, settle down and focus."

DEEP DIVES

Dozens of scuba divers from South Dakota and Minnesota pursue their hobby not only in local lakes and rivers but also in the Caribbean. *Photos by Steve Nedved*

Divers explore underwater habitats from the lakes of the Upper Midwest to the Caribbean

Billy Gibson

billy.gibson@sdrea.coop

It's a sunny springtime Saturday morning and outdoors enthusiasts all across the state are buzzing with excitement to kick off another weekend adventure.

They're saddling up their horses, slinging their fishing gear into their boats, cranking their ATVs and lacing up their hiking boots.

In a small shop just south of Mitchell, there's a different kind of energy and amped-up anticipation filling the air. Steve Nedved is busy rigging up scuba tanks and inspecting air regulators for about 20 fledgling divers eager to learn a new skill and experience new thrills.

Nedved is owner of Dakota Scuba and he's finding that more and more adventurers are becoming interested in exploring the aquatic world through a fisheye view, whether that's in the chilly waters of the Missouri River or the crystal-clear surf of the Caribbean.

While the scuba diving season in

the Upper Midwest is relatively short, Nedved stays busy most months out of the year teaching scuba lessons in the Mitchell area and tending to vacationing clients from his Villa Dakota retreat in Cozumel.

It turns out that he and his student-clients can board a plane in Sioux Falls at 7 a.m., make a quick stop in Dallas-Ft. Worth, and be ready to hit the water in Cozumel just after lunch.

"It works out pretty well, and people love to take a fall and winter vacation and explore Cozumel, which is one of the best spots for diving because the visibility can be more than 100 feet and there's so much marine life to see," Nedved said.

The master diver's interest in scuba was sparked back when he was a firefighter and paramedic in Mitchell. After responding to too many emergency situations involving bodies of water, he and his colleagues decided they needed to be trained in diving as part of meeting their professional responsibilities and serving the public.

He received his certification in short order and later decided to venture down to Cozumel to earn his teaching certification through the Professional Association of Dive Instructors so that he could be qualified to train his colleagues back in Mitchell.

He and his wife Nancy, who together own the Nedved Media radio network, fell in love with the tropical paradise and after a dozen diving trips decided it made sense to purchase a home right on the water. Before he knew it, he found many others were beating the same path to Mexico to enjoy the sun, sand and scuba adventures.

"I didn't really start it with the intention of going public, I just didn't realize at the time how much interest there was," he said. "People around here in Mitchell started asking me to train them for recreational certification and then they'd dive here or they'd go to Florida or Cozumel on vacation with their families. We started renting out our place in Cozumel to accommodate people during the times we couldn't be there ourselves."

He also noticed an increasing interest in spearfishing in places like the Oahe



Downstream Recreational Area and Pactola Lake in the Black Hills, so he decided to open the shop to serve as a local and regional outfitter.

Nedved, who has logged more than 1,000 dives since he started in 2006, uses the Mitchell Recreation Center for local training and has played a role in certifying individuals from age 10 to 70.

“It’s not that physically laborious or difficult. Of course, you have to be in condition as with any kind of outdoor sport, but it’s not inherently dangerous in any way if you follow the guidelines,” he said.

Allen Hiller of Pierre is one of Nedved’s recent proteges. Though he had done some snorkeling and diving at sites like Sully Flats, Cow Creek and below the Oahe Dam, Hiller decided he wanted to kick his scuba game up a few notches. So he enlisted Nedved’s services and spent eight days at Villa Dakota last March earning his open water diving certificate.

At the age of 53, Hiller is a veteran of Desert Storm and Desert Shield, a former diesel and aircraft mechanic,



SCUBA DIVING

Steve Nedved is shown at left with his catch after a day of spearfishing at Sully Flats. Above, Nedved (at right) works with student Allen Hiller on open water certification.

and spent nearly 20 years working for the Union Pacific Railroad in North Platte, NE. He describes himself as an avid hunter and fisherman who is always up for an adventure. Since his visit to the Caribbean, Hiller says he wants to expand his knowledge and experience under water.

“I really caught the diving bug being down there in a beautiful part of the world with the sun and the sand and the clear water where it seems like you can see forever. I want to continue on and get my PADI certification, my night diving certification, and become a master diver,” Hiller said. “I also want to do a lot of spearfishing and learn how to get better at it. Steve was really great to work with.”

Nedved said that once his students become accustomed to the awkward act of breathing through a mouthpiece, they begin to relax and enjoy the experience of discovering a new environment with different lights, colors and sounds.

“People like to hunt for fish and explore underwater quarries and see what’s on the bottom of the river bed,” he said. “When I take them out for the first

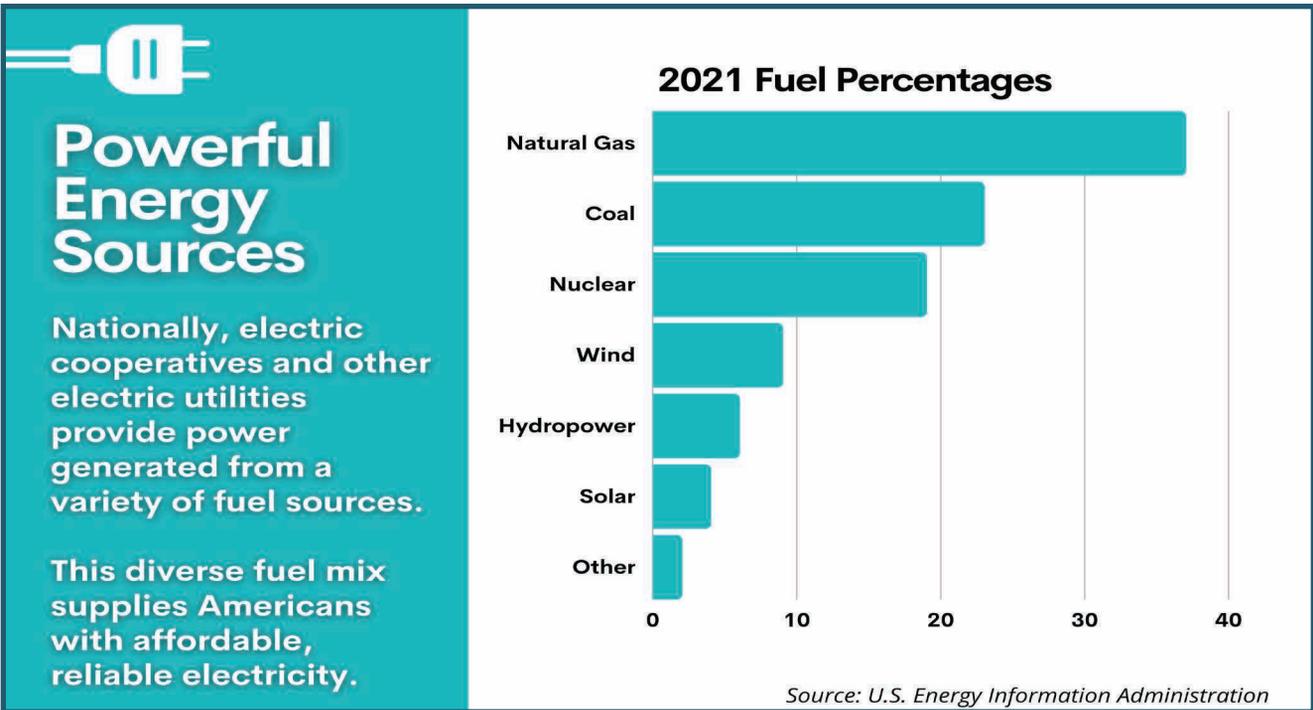
SCUBA RULES

Here are four requirements for scuba diving in South Dakota:

- Divers are required to use a red and white Diver Down flag when diving
- Dive flags must be at least 8"x10"
- Divers must stay within 75 feet of their dive flag
- Boaters and vessel operators are required to stay at least 75 feet from dive flags

time, we can’t really speak when we’re underwater, but when we come up they start chatting away with excitement about the things they saw. It’s really addictive. You rarely see just one person in a family that’s a diver. Usually, after one person does it, the others have to follow. It’s a good sport for a lot of people.”

ENERGY FUEL MIX



America's power generation mix continues to evolve in a post-pandemic market

Michael Leitman

As the economy continues to recover from the Covid-19 pandemic, the energy sector is still experiencing lingering impacts to fuel markets and sources for power generation. In the coming years, however, the industry is expected to return to recent trends and the pre-pandemic trajectory.

In 2020, national retail electricity sales declined by 2.5 percent, accompanied by a shift in demand patterns and in generation mix. As people spent more time at home, U.S. residential sales rose by 1.7 percent while commercial and industrial sales fell by 5.4 and 4.3 percent, respectively. With demand for natural gas declining, generators took advantage of low fuel prices and the share of power coming from gas-fired resources increased for the third straight year, while the share from coal continued to decline.

In 2021, the economy started to reopen, and demand recovered, but natural gas production was slow to ramp up, leading to increased fuel prices. As a result, the share of U.S. electricity powered by natural gas fell in 2021 for

the first time since 2017. This drop was offset by an increase in coal-fired generation, bucking a multi-year trend that saw the use of coal for electricity declining every year since 2014. Though natural gas remains the dominant fuel source in the U.S., the share from non-hydro renewables, primarily wind and solar, has steadily increased for the last several years.

Going forward, the U.S. Energy Information Administration (EIA) projects that the share of coal and natural gas in the electric generation mix will decline as the rapid growth of non-hydro renewables, especially solar, continues. According to EIA's projections, renewable energy sources will surpass natural gas as the largest source for generation by 2030.

Nevertheless, natural gas is expected to remain an important fuel source for electric power, due to its abundant supply. Perhaps more importantly, gas-fired units can respond more easily to changes in system conditions, which is crucial for maintaining reliability of the grid, as the fuel mix transitions to higher penetrations of wind and solar resources that do not run all the time. Batteries,

which have become cheaper and more powerful in recent years, will also play a role in supporting renewable resources.

In recent years, severe weather has highlighted the need for fuel diversity in maintaining system resiliency. That is, if one source of power is constrained during a storm, having others available to fill the gap can keep the lights on. But as the generation mix shifts away from conventional fuels, additional changes will be necessary to accommodate the upcoming changes and ensure both resiliency and reliability.

Modernizing the grid with new technologies can offer a variety of solutions during the energy transition. The use of advanced data, two-way communications and digital software enable better and more efficient management of the electric system.

Through the evolution of the power generation mix and the electric sector in general over the next several years, there will be a number of challenges and opportunities for electric cooperatives as they continue to provide safe, reliable and affordable power to the local communities they serve.



Charging into the EV future

With dozens of new electric vehicle models being released over the next few years, public charging availability will be more of an issue for consumers, especially in rural communities where stations are scarce.

Derrill Holly

With dozens of new electric vehicle models being released over the next few years, public charging availability will be more of an issue for consumers, especially in rural communities.

Utilities, including electric cooperatives, will be serving new electric vehicle (EV) load and extending the reach of public charging networks now under development or proposed for major transportation corridors.

“Electric vehicles are evolving rapidly, charging patterns are shifting and consumers are getting a better understanding of how they can use the vehicles,” said Brett Smith, director of technology for the non-profit Center for Automotive Research.

Still, one of the major challenges facing market acceptance remains a lack of charging infrastructure in many parts of the country. As of December 2021, there were about 113,000 charging ports available at 46,090 public charging stations nationwide.

“You’re going to see the need to really invest in infrastructure over the next five to 10 years,” said Smith, adding

that some buyers who have the option of home charging have not reached the comfort level essential to use EVs for longer trips.

The federal government estimates 500,000 public chargers will be needed by 2030, and it is currently investing \$7.5 billion to help build a network of public chargers along major highways and in rural areas. The funding comes from the bipartisan infrastructure bill signed into law last November.

According to the Department of Energy, the majority of ports now being deployed for public use are DC fast chargers that provide 60-80 miles of range for 20 minutes of charging time, compared to four minutes at the pump for most gasoline-powered vehicles.

Smith said it may be feasible to charge EVs up to 80 percent of capacity in about 15 minutes.

The Joint Office for Electric Vehicle Charging and Infrastructure operated by the Department of Energy and the Department of Transportation is developing a grant program to help states and local partners, including electric co-ops, develop public chargers.

Across the U.S., many electric

cooperatives are already in regular contact with their state departments of transportation (DOTs) to discuss current and proposed Alternative Fuel Corridors. These corridors will be the areas eligible for federal funding. State DOTs must submit an EV infrastructure plan to the federal government by August 1, 2022.

Under the bipartisan Infrastructure Investment and Jobs Act, public EV charging infrastructure should be located every 50 miles along major travel corridors, and no more than 1 mile from the highway.

Among the concerns are charger availability during peak travel periods. If wait times at available charging ports average 15 minutes per vehicle, the cumulative effects of several EVs in a waiting line could cause delays.

The DOE’s Alternate Fuels Data Center has developed a Station Locator Tool (SLT) mobile app. During the government’s 2021 fiscal year, the SLT site attracted 6 million views and topped 3,900 downloads. According to the DOE, the site provided more than 1.3 million searches for EV charging stations for the fiscal year.



Desmond Dean of Dakota Sports in Aberdeen says e-bikes are all the rage among outdoors enthusiasts. *Photo by Billy Gibson*

Electric bicycles give riders the little extra push they need - or not

Billy Gibson

billy.gibson@sdrea.coop

Sometimes when you find yourself struggling to move ahead, all you need is a little boost to get where you need to go.

That's the idea behind the invention of the electric bicycle. For those who enjoy mountain biking, pedaling for fitness or just commuting back and forth to work in the open air, the electric bike is becoming the cycle of choice.

Desmond Dean is manager of Dakota Outdoors in Aberdeen and he reports that sales are brisk with his line of Trek e-bikes. The first misconception he typically has to address with his growing list of curious customers is that an e-bike isn't a motorcycle.

"It's a bicycle. There's no throttle and you're in complete control the whole time. The battery and small motor are just there to give you some assistance when and if you need it," he explained.

"They're getting so popular because you can get a wide range of exercise. If you're having trouble with the wind or going up a hill, or if you just want to increase your distance, you can get the extra push you need. You can get some assistance or no assistance."

A battery usually takes about 5-6 hours to fully charge and there are models built for navigating off-road trails, touring, cruising or just moving around town from one point to the next. Prices can range from a few hundred dollars for a youth model to several thousand bucks for adult versions. Some bikes can top out at nearly 30 mph in the highest gear settings and some sweat equity.

Dean highly encourages his customers to take his e-bikes out for a spin around Aldrich Park across from the store because once the shopper puts the Trek through its paces and gets accustomed to the experience, "the bikes tend to sell themselves."

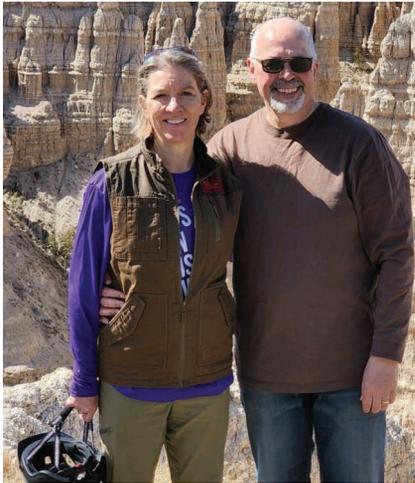
Mary Duvall, a state senator from

Pierre representing District 24, is a life-long fitness buff and has done a lot of pedal pumping over the years. So when her husband Rob suggested they purchase a pair of e-bikes, she was admittedly skeptical. What would be the point of pedaling if you're not going for the burn?

"I looked at it like it would be cheating and we wouldn't get a quality workout," she said. "But I quickly learned I was wrong. I can work as hard as I want and get whatever workout I feel like, or take it as easy as I want, depending on the day."

The Duvalls invested in his-and-her Aventons with thick sturdy frames and wide tires for handling uneven surfaces like the Black Hills, the Badlands and the undulating terrain around Pierre. They also chipped in for safety helmets equipped with an intercom system so they can keep in constant audio contact.

The couple covered 80 miles in a single day on the Mickelson Trail, stopped overnight in Hill City to recharge their batteries and their weary quadriceps, then rode another 56



Shown at left, Mary and Rob Duvall of Pierre have enjoyed their investment in e-bicycles and can go for long distances to see new sights. *Photos provided by Mary Duvall*

miles the following day. They ended up encountering another couple who had hauled their e-bikes from Texas to tour the Mickelson Trail. Another couple they met from Minnesota were using their e-bikes to complete the entire trail from Edgemont to Deadwood.

“We ride them at least once a month and they’ve opened up lots of options that we couldn’t tackle with regular bikes,” Duvall said. “It’s a fun way for us to get outside and enjoy some exercise and fresh air.”

its own pedal-assist system. By the end of 2023, worldwide e-bike sales are expected to reach 40 million units, or more if gas prices continue to escalate.

Surveys consistently indicate most e-bike buyers make the purchase with the goal of replacing trips they’d otherwise take in their cars. But Ron Block of Webster bought his for another reason: he needed to keep up with his wife Nancy, a school teacher who also

happens to be a competitive marathon runner.

“She was leaving me behind, so I figured I needed some assistance to make it a little easier on me,” Ron said. “I rode a lot when I was a kid, but now I’m middle-aged and the bike gives me the ability to set the power to however much help I need.”

The Blocks enjoy biking together each week as part of a local cycling club, though occasionally they like to venture farther afield. Last summer, they biked among the giant redwoods in northern California and Oregon and also pedaled the Katy Trail in Missouri. This year they plan to take a trip to The Netherlands and rent bikes to see the sights.

Ron said he would encourage those who may be interested in purchasing an e-bike to find a nearby dealer, or find a friend who already has one and ask to take it for a test ride.

“That’s what I did before I bought one and I’ve been very satisfied,” he said. “I’ve talked to a lot of people who have them and they’re very happy they made the investment.”

Ron Block of Webster pedals his e-bike along a floating bridge on the Mesabi Trail in northern Minnesota. *Photo provided by Ron Block*



Approximate number of e-bikes expected to be sold worldwide in 2023

40 million

Of course, the idea of attaching a small battery-powered motor to a bicycle frame isn’t new. The first patent for an e-bike was issued in 1895. There was a global surge in sales of 35 percent between 1993 and 2004 after Yamaha invented, manufactured and marketed



FUN AND FISHING ON PACTOLA LAKE

Pactola Lake near Rapid City holds different interests for different outdoor enthusiasts. *Photos by SD Tourism*

Pactola Lake has something for everyone, from anglers to history buffs

Billy Gibson

billy.gibson@sdrea.coop

Pactola Lake is a unique body of water nestled in the heart of the Black Hills that has come to mean many different things to many different people.

For outdoors adventurers, the 1.1 square mile lake offers a wide range of activities including boating, camping, canoeing, fishing, swimming, paddle boarding, beach combing, hiking and even scuba diving for those interested in capturing an up-close glimpse of the aquatic life that teems throughout the underwater habitat. Fly fishing is a popular pastime for anglers in the shallow waters of Rapid Creek.

Tourism promoters have dubbed

Pactola Lake as South Dakota's version of Atlantis because the lake bed was once the site of a small town that was submerged after Pactola Dam was constructed and the area was flooded in the mid-1950s.

However, explorers today will find very little left of the old town's structures as most were moved or auctioned off when plans for the dam were made public. The Bureau of Land Reclamation clear cut and cleaned off what would eventually become the lake bottom. One of the few buildings still standing in the deep water is the old Civilian Conservation Corps camp dynamite bunker. Scuba divers have reported finding construction equipment and portions of the train tracks in the depths.

Conservationists and biologists study the Pactola Reservoir Complex area for its abundant wildlife habitat and diverse landscapes, while civil engineers operate the reservoir as a means of flood control and as a source of water for the Rapid City metropolitan area - including Ellsworth Air Force Base - located about 15 miles to the east. Farmers also rely on the embankment dam to irrigate their crops.

For historians, Pactola Lake holds a special curiosity as a former hunting ground for Native American tribes and a site where miners went to seek their fortunes and pursue their quests for gold in violation of the Treaty of Fort Laramie. The small settlement that emerged was named for Gen. George Crook, a U.S. Cavalry leader in charge of keeping the ambitious miners away and upholding the terms of the treaty,



Paddlers catch some exercise while enjoying the serene surroundings of Pactola Lake.

although the hills were eventually opened up to prospecting activity in February of 1876. The village was later named Pactola after the legendary “golden sands” that were said to be found along the ancient Pactolus River located in modern-day Turkey.

History buffs also delve down into Pactola’s intriguing past as a thriving boom town in the 1870s where claims were being filed at a breakneck pace and more than 300 miners flooded the place decades before the waters did.

One of the first post office facilities in the Black Hills was established there, two stage lines served the town’s residents and the Black Hills and Western Railroad laid down train tracks to set up a main transportation line. The Sherman House hotel was the center of social activity and a popular gathering place for locals and travelers alike.

During the summer months, children would make the trip from nearby towns to take part in the Presbyterian and Methodist church camps.

To fishermen, in particular, Pactola Lake is prime spot for landing lunker rainbow trout, brown trout, crappie, largemouth bass, bluegill and Kokanee salmon. Below the surface, spearfishing scuba divers stalk bigmouth buffalo.

David Hollister, a CAD specialist at Rushmore Electric in Rapid City, enjoys taking his family out to the lake during the weekends and holidays when the weather cooperates. He and his wife, Jade, like to enjoy the scenery with son Bryce along the hiking trails and they occasionally launch a kayak to explore Jenny Gulch, a shallow, no-wake, area.

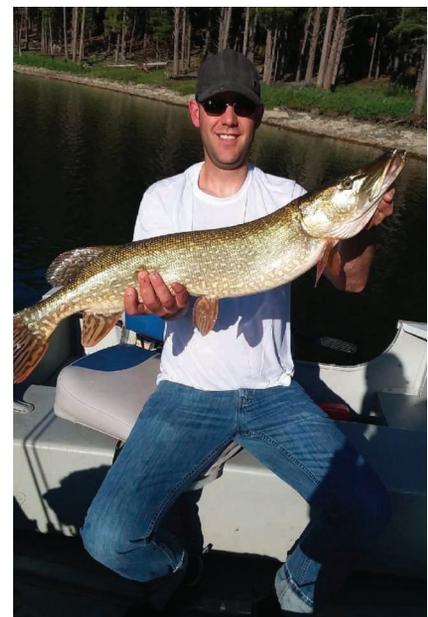
David also enjoys the thrill of fishing for trout and pike as he’s done for the past 10 years. He’s not too proud to admit that Jade often brings home the biggest catch.

“The natural beauty is a huge draw. Everywhere you look it’s gorgeous and the fishing is great. They get big and fight hard,” he said, noting that his personal record for trout is 32 inches. “It can be a challenge because the depth can change pretty drastically from the shoreline to 100 feet. It takes a little time and effort to learn the lake.”

The Pactola Reservoir Complex is open year-round and costs \$6 per vehicle per day. The U.S. Forest Service operates the Pactola Visitor Center, which is located at the south end of the dam. The center provides interpretive exhibits, travel information and a scenic view of the water. There’s also a marina located at Custer Gulch on the south

shore. The privately owned facility has a capacity of 200 vessels and has fishing boats, canoes and paddle boards for rent to the public.

For more information on the area, visit the U.S. Forest Service’s website at www.fs.usda.gov/. Boat ramp data can be found on the Bureau of Reclamation website for Pactola and Deerfield Reservoirs at www.usbr.gov/gp/boat/.



David Hollister enjoys angling for lunker pike at Pactola Lake.

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JUNE 3-5
Lake Andes Fish Days
Citywide, Lake Andes, SD

To have your event listed on this page, send complete information, including date, event, place and contact to your local electric cooperative. Include your name, address and daytime telephone number. Information must be submitted at least eight weeks prior to your event. Please call ahead to confirm date, time and location of event.

To view the publication's master event calendar, scan the QR code below:



Or visit <https://sdrea.coop/cooperative-connections-event-calendar> to view more upcoming events.

MAY 28
Deadwood Live: Hank Williams Jr.
Outlaw Square, Deadwood, SD,
www.deadwoodlive.com

MAY 28
Memorial Weekend in Mitchell
Main Street, Mitchell, SD,
605-292-4444

MAY 28-29
Black Hills Renaissance Faire
Manuel Brothers Park, Lead,
SD, www.blackhillsrenfest.com

MAY 29-30
Back When They Bucked
Days of '76 Arena, Deadwood,
SD, 605-718-0810

MAY 30
Prairie Points Quilt Guild Show
204 Hodge St., Buffalo, SD,
605-641-5591

JUNE 2-4
Annual Black Hills Quilt Show & Sale
The Monument, Rapid City, SD,
bhquilters.org/events

JUNE 2-5
Wheel Jam
South Dakota State Fairgrounds, Huron, SD,
www.wheeljam.com

JUNE 3-5
Fort Sisseton Historical Festival
11907 434th Ave., Lake City, SD,
605-448-5474

JUNE 3-5
Lake Andes Fish Days
Citywide, Lake Andes, SD,
605-487-7694

JUNE 10-12
Annual Custer Off-Road Rally
Various Locations, Custer, SD,
custersd.com/Off-Road-Rally

JUNE 11
The Big Mick
George S. Mickelson Trail,
Deadwood, SD,
mickelsontrailaffiliates.com

JUNE 16-18
Czech Days
Lidice Street, Tabor, SD,
605-463-2478

JUNE 16-18
Wild Bill Days
Main Street, Deadwood, SD,
deadwood.com/event/wild-bill-days/

JUNE 16-19
South Dakota Shakespeare Festival
Prentis Park, Vermillion, SD,
605-622-0423

JUNE 17-18
Oahe Days Arts & Music Festival
Steamboat Park, Pierre, SD,
oahedays.com

JUNE 18
605 Summer Classic Beer & Music Festival
Cherapa Place, Sioux Falls, SD,
605magazine.com/605-summer-classic/

JUNE 18-19
Aberdeen Arts in the Park
Melgaard Park, Aberdeen, SD,
605-226-1557

JUNE 18-19
Brookings Kite Festival
Fishback Soccer Complex,
Brookings, SD, 605-695-9071

JUNE 22-25
Crystal Springs Rodeo
17803 479th Ave., Clear Lake,
SD, crystalspringsrodeo.com

JUNE 24-26
Black Hills Bluegrass Festival
Rush No More RV Resort & Campground, Sturgis, SD,
blackhillsbluegrass.com

JUNE 24-26
Main Street Arts & Crafts Festival
Centennial Park, Hot Springs, SD,
mainstreetartsandcrafts.com

JUNE 24-26
Quarry Days
Citywide, Dell Rapids, SD,
605-428-4167

JUNE 26
Prairie Village Variety Show
Prairie Village, Madison, SD,
605-256-3644

JUNE 30-JULY 4
Annual Black Hills Roundup
300 Roundup St., Belle Fourche, SD,
blackhillsroundup.com

Note: Please make sure to call ahead to verify the event is still being held.