

# BIG PIVOTS

ENERGY and WATER transitions in Colorado and beyond

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## 350 Colorado ballot initiative hopes to phase out leases for oil and gas by 2031

350 Colorado and associated groups coalesced as Safe & Health Colorado have launched an effort that members hope will result in a ballot proposal in the 2024 general election.

If successful, this ballot initiative would end new oil and gas permits issued on lands governed by state government before the end of 2030.

In an interview with Big Pivots, Micah Parkin, the executive director of 350 Colorado, said her group has been buoyed by polling that shows Coloradans are “very concerned about the impacts of the climate crisis that we see in our state.” Too, she added, “we feel this plan aligns with what scientists around the world are calling for, to phase out fossil fuels and move toward renewable energy.”

In 2021, Colorado was responsible for 3.7% of crude oil extraction in the United States, fifth among states. Texas was first at 42.4% and New Mexico second at 11.1%.



Micah Parkin

Colorado ranked seventh in natural gas production. It is responsible for 4.9% of the nation’s production.

“We really need to be dealing with our contribution to the climate crisis,” she said.

An additional impetus is more localized. Oil and gas drilling has a substantial contribution in creating high ozone levels during summer months.

Organizers have created two, overlapping draft proposals, unsure which one they will eventually seek to put before voters. They will use polling to evaluate which one is most likely to be approved.

One measure would specifically target oil and gas operations that use hydrofracturing technology, i.e. “fracking,” and the other more broadly all oil and gas drilling.

Both proposals have been submitted to the Legislative Council as required by state law. The state agency is required by law to “review and comment” on initiative petitions, basically to ward off confusions and make sure the proposals conform to state law.

In their first draft, the proponents said they wanted to phase out and discontinue the issuance of new oil and gas operation permits by the state’s Colorado Oil and Gas Conservation Commission by Dec. 31, 2030. The Legislative Council asked whether those permits would be effective beyond this deadline or would there be expiration dates?

The reviewers at the Colorado Capitol also suggested using “gases,” the more familiar spelling, instead of “gasses.”

And then the law requires a single title for the bill? What would that title be?



The Legislative Council also recommended addressing the loss of severance taxes on oil and gas extracted, as those severance taxes are used to fund a wide variety of programs in Colorado, half to water projects and other natural resource management programs, and the other half to local governments.

In fiscal year 2018-2019, before covid slowed drilling, the tax yielded almost \$236 million, [according to the Legislative Council](#).

The draft language also calls for a “state program to explore transition strategies for oil and gas workers.”

Legislative council reviewers responded: “Is the new program intended to merely ‘identify’ funding sources for workers and communities to access on their own OR is the program intended to provide funding to assist workers and communities?”

Ballots for the November 2024 election won’t go out until October 2024, still more than 17 months away. Why the effort now?

Parkin points to the necessary legwork, including signatures for petitions for the measure, whatever is finally chosen, to go on the ballot. “It will be more affordable and there will be less competition with other campaigns.”

Why not seek a legislative remedy instead of going directly to voters?

“We actually have been proposing it as legislation, and there was a legislator willing to cover it, but was unable to get leadership

approval to move a bill forward. It was a bill just to study the phase-out, what it would be like. And our governor (Jared Polis) really has not shown much interest in reining in the oil and gas industry. The Colorado Oil and Gas Commission has permitted more than 5,000 wells since he has been in office (starting in January 2019), about 1,000 a year. He really has shown no interest. We have talked with different staff members and have gotten no interest, even though (the oil and gas sector) is a massive source of greenhouse gases and runs in opposition to our emission goals and our air quality goals.”

Downsides? “It takes a lot of effort, it’s expensive, and it takes a lot of fundraising. Unfortunately we don’t have the money of the fossil fuel industry.”

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# Can this threat of a ‘big, bad wolf’ keep Tri-State members from straying?

by Allen Best

Whether the proper metaphor is of a flock, herd, or litter, Duane Highley has his work cut out for him in his position as chief executive of Tri-State Generation and Transmission.

Tri-State has 42 member electrical cooperatives and public power providers, and Highley must persuade them that Tri-State as their wholesale provider has the core competency that will prevent many more of them from hopping the fence in search of greener pastures created by plunged prices of renewable resources.

Two members have already left since 2016, three more—including United Power, alone responsible for more than 20% of demand for Tri-State power—have declared their intentions to leave. Still others have opted for partial requirements contracts. Discussions are under way among yet other cooperatives whether to stay or go.

Highley, at the annual meeting of Tri-State on April 5, tried to persuade his remaining members that the grass isn’t necessarily greener. To make his point, he employed the childhood story about a litter of pigs and the big bad wolf.

“Today we have a big bad wolf that’s coming in the utility industry in the West, he said during his 21-minute speech. “The big bad wolf is resource adequacy—or maybe the lack of that. And it’s good that Tri-State has a plan, because a big bad wolf is coming in.”

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Highley then proceeded to cite warnings from the Electric Power Research Institute, North American Electric Reliability Corporation, and others.

“And this particular quote is from the Western Energy Coordinating Council,” he said. “What they said in their report that was issued in December 2022 is that if nothing is done to mitigate the long-term risks within the Western Interconnection by 2025, we anticipate severe risks to the reliability and security of the interconnection. They’re not

the only one saying this. It is just one representative quote.”

Tri-State, he declared, has the necessary and diverse resources to ensure reliability. The new suitors pitching to the electrical cooperative? Some own bits and piece of generation but not enough to insulate them from risk of high prices such as occurred in 2021. Others, none at all.

He teased out the example of Winter Storm Uri. Xcel Energy was vulnerable to skyrocketing prices of natural gas at a cost to consumers of \$500 million, he pointed out.

As for Tri-State, it has nearly 6,000 miles of transmission that involve six different balancing areas with eight dispatchable power plants independent of the weather, six wind and three solar projects, with six more utility-scale solar projects coming on line by 2025.

(It also has whole or partial ownership in five coal-burning units, several of which are to be closed.)

“We also sit in a very enviable position, bridging the Eastern and the Western Connection with a DC (direct current) tie that could be expanded to help us arbitrage those market opportunities between the East and the West grids.

“We have a plan,” he declared.

Highley’s carefully crafted plea/warning seems unlikely to dissuade directors of United Power. At the annual meeting of United seven days later, chief executive Mark Gabriel offered not a hint of suggestion that staying with Tri-State is an option.

Elizabeth Martin, the chair of United’s board of directors, said the decision to exit Tri-State was unanimous with the exception of the board member who represents United on the Tri-State board and hence excuses himself from discussions.

“We have genuinely sought other solutions for at least the last 10 years—without any success. We feel we have no other recourse and are acting on behalf of our members,” she said in an e-mail to Big Pivots.

Both Brighton-based United and Northwest Rural Public Power District of Hay Springs, Neb., submitted unconditional notices of intent to withdraw from Tri-State on April 29, 2022. That puts United out the door on May 1, 2024.

First, however, the Federal Energy Regulatory Commission must rule about what constitutes a fair and just fee that the cooperatives must pay in order to leave remaining members whole. The FERC decision is expected this summer. An administrative law judge recommendation heavily favors the approach advocated by United.

Granby, Colo.-based Mountain Parks Electric submitted its notice of withdrawal on Jan. 23, 2023. That begins a two-year ticking of the clock before its exit. [In the annual report](#), new chief executive Virginia Harman—formerly of Delta-Montrose Electric—

mentions, said Mountain Parks expects to see prices increases from Tri-State.

Several other cooperatives—Durango-based La Plata Electric, Ridgway-based San Miguel Energy and Windsor-based Poudre Valley Electric—want to have partial requirements fulfilled by Tri-State, allowing them to obtain lower-priced power from other sources. A FERC administrative law judge is scheduled to hear that case in October and then issue a recommendation to the FERC commissioners, according to Jay Sturhahn of Tri-State.

Highley wants them to be wary of turbulence ahead. The theme of the two-day gathering was “resiliency.” And, of course, Tri-State is resilient.

**A** 40-year veteran of the electric industry, Highley sketched a history of ebbs and flows for electric utilities since the 1970s, a time of shortages and a binge of new coal plants that lasted into the early 1980s. After a time of relative stability came a push for new natural gas plants.

From 2010 to 2022, he said, fuel costs were low, low-cost renewables came on, inflation held steady, and supply chains were stable.

“Some would say, “Why should I pay any more for power? What’s the benefit of being part of a G&T when there are these low market prices?”

Volatility has returned, and for evidence he pointed to rate increases: New Mexico Public Service has announced a 9.7% rate increase. “Which they’ve tried to convince their members, their customers, is really a 0.9% rate increase, but it’s really a 9.7% base rate increase.”

In Wyoming, he said, Rocky Mountain Power has announced a 21.6% increase.

Colorado’s Xcel Energy has announced three rate increases. “They say it this way: 24.9%, so they don’t have to say 25, right?”

And the four Colorado cooperatives “that have contracts to purchase power from Xcel have announced their intent to cancel those

contracts at the earliest possible date.” (Holy Cross Energy, one of those four, says it has no intention of doing so.)

Tri-State, he said, has not had a rate increase since 2017. “In fact, because of the financial strength that Tri-State has built, we’ve not only weathered these storms, we’ve been able to deliver two consecutive rate decreases. And I would ask you, are you aware of any other utility that has announced rate decreases in the last decade? Has your cell phone provider decreased rates? Has your DISH Network reduced rates? Has your Sirius XM radio reduced rates?”

Tri-State weathered Storm Uri in 2021, he said, because it has dual-fuel gas units that can burn oil when natural gas prices are extremely high.

“We weathered Storm Elliot in December 2022. Similar situation, no rate impact to members. And most recently we weathered this banking crisis when some people could not issue debt and Tri-State was able to continue to successfully issue short-term debt throughout that banking crisis.

“We may all look alike when the sun is shining, but it's when times are tough that you'll see the differentiation between a full service, fully hedged power supplier and maybe somebody who has less of a hedge and less of a system. Another way to say it is this, when the tide goes out you can tell who was swimming naked, and that's the difference.”

Tri-State’s strength, he argued, lies in the diversity of its members: large and small, urban and rural.

“By all of us combining together and bringing all those differences to the table, we end up with a system that’s stronger collectively than any of us could do on our own. And that covers risk better than any of us could on our own.”

Plus, Tri-State has “incredibly valuable contracts” with Basin Electric and with the Western Area Power Administration and, as of April 1, was in the Southwest Power Pool’s

day-ahead market. (So are Guzman Energy and Xcel Energy, among others).

“And looking forward to 2026, we hope to have a full-blown RTO operating in the West that will bring day-ahead markets for even greater efficiency and greater savings altogether. What you own at Tri-State is \$5 billion in assets but most importantly, what you own is a very talented and diverse workforce.”

Then again, Highley said, Tri-State has a plan – and also dispatchable resources. “We have to have that dispatchable resource on top of all the renewables we’re adding. We’re going from a majority fossil portfolio to a majority renewables with a dispatchable base load.”

And Tri-State will expand its transmission in eastern Colorado to allow more electricity to move from north to south, the better to balance loads in New Mexico and Wyoming and integrate the renewables.

Too, Tri-state is “aggressively” seeking opportunities in the \$9.6 billion in federal funding available through the Inflation Reduction Act for electrical cooperatives, with requests pending for \$100 million.

And hydrogen research at the Craig station in 2023, he said, “is a key year for Tri-State.”

Then it was onto the pigs, beginning with the house of straw. “In my mind, the first little pig represents the coop that might say, or our public power district that might say, let’s just

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play the market. Let's just go out and see what energy we can get short term."

The wolf, of course, blew the house of straw down. "Because if you're in a house of straw, just on the short-term market prices, what happens when we have that market price spike and instead of \$60 or \$70 power, even \$40 power, at times we find ourselves with \$900 a megawatt-hour. That's \$9 a kilowatt-hour. You can lose a lot of money fast."

The house-of-sticks pig? This one has the short-term market power supplemented with actual physical resources "to some limited extent," he said, in what may have been a reference to United.

"We've heard a co-op recently announce that they intend to go into a market but they intend to have a gas plant, a solar project, a wind farm, and a battery. So that's diversified. But that still leaves that cooperative vulnerable, on the day when the one gas plant trips. They're right back in the market just like anybody else. And I can promise you that this trip will happen on one of the worst, coldest days of the year when the power prices are the highest."

The third pig? The one with the house of bricks? Well, that's Tri-State, of course, with its "17 different generating resources."

"A coop working together, we have built this house of bricks together that can weather the storm. Can't say nothing will ever happen, but I can say a lot of bad things have already happened. And look at how well we've fared, we're hedging risks together."

## Money for Tri-State's stranded assets?

Tri-State has partial or full ownership in five coal-burning units, three in Colorado, one in Arizona and one in Wyoming. How will it pay down the debt on these assets that have or will become stranded by the shifting economics of energy?



A member of a Tri-State Generation and Transmission cooperative had a different perspective at the annual meeting on April 5. Tri-State, he suggested, had investments that "apparently are not wanted anymore." He suggested Tri-State was being stripped of its protective towel. Would the federal government help out on that debt?

The question was directed to Andrew Berke, the administrator of the Rural Utilities Services, who said he had traveled to Denver in large part because he wanted to thank Tri-State for helping carve out \$9.7 billion in the Inflation Reduction Act that will be earmarked for the nation's electrical cooperatives and their generation and transmission organizations.

There would be money for operators of shuttering coal plants, Berke said, but he said he couldn't say exactly how much or how or when.

"One of the goals of the Inflation Reduction Act is to lower the pain that these stranded assets are putting on your balance sheets. That is absolutely one of the goals."

The IRA, he said, will give his agency – the replacement for the Rural Electrification Administration created in 1936 to electrify rural America – something it has never had before, the opportunity to extend zero-interest loans. The "products" the RUS will be offering will be designed for exactly this sort of problem. But Tri-State will still have a problem to solve," he suggested, as the federal aid "won't magically make this go away."

## At United Power, talk of hyper-localization

At the annual meeting of United Power, it seems that the only way you didn't win a door prize was because you left early. I did (slip out the door early), but not before hearing what Mark Gabriel, the chief executive, had to say.

Seemingly in response to what Duane Highley had said the week before at Tri-State, he said this: "A lot of the conversations that I hear when I go to industry events revolve around insurance for reliability, reliance, and, of course, affordability. Let me tell you, those are watchwords every day, and we focus on those in operating your cooperative.

"There is a lot of doom and gloom sometimes – 'Oh, we're worried about what the future looks like.' But I can assure you that when I think about it, I'm excited about where the future is."

As he had in [an essay published in Energy Central](#) a few days prior, Gabriel talked about a "quiet revolution in localized grids." His central thesis was that the time of building giant new power plants or stringing big transmission lines will not be the first option. Energy solutions must quickly become more localized and flexible.

"By the way, this will empower you as members help monetize the investments you make in what is becoming a shared energy economy," he said.

"A distribution utility like United Power really stands at the crossroads of a changing energy industry," said Gabriel. This new ecosystem of electrical generation and demand "must be agnostic to what the inputs are."

Gabriel's remarks were interspersed with videos, including a segment with Jeff Frim, the chief executive of Golden Aluminum, a rolling mill located in Fort Lupton that produces products for food and beverage packaging. His company uses a lot of energy, he said, and they want to convert from natural gas to



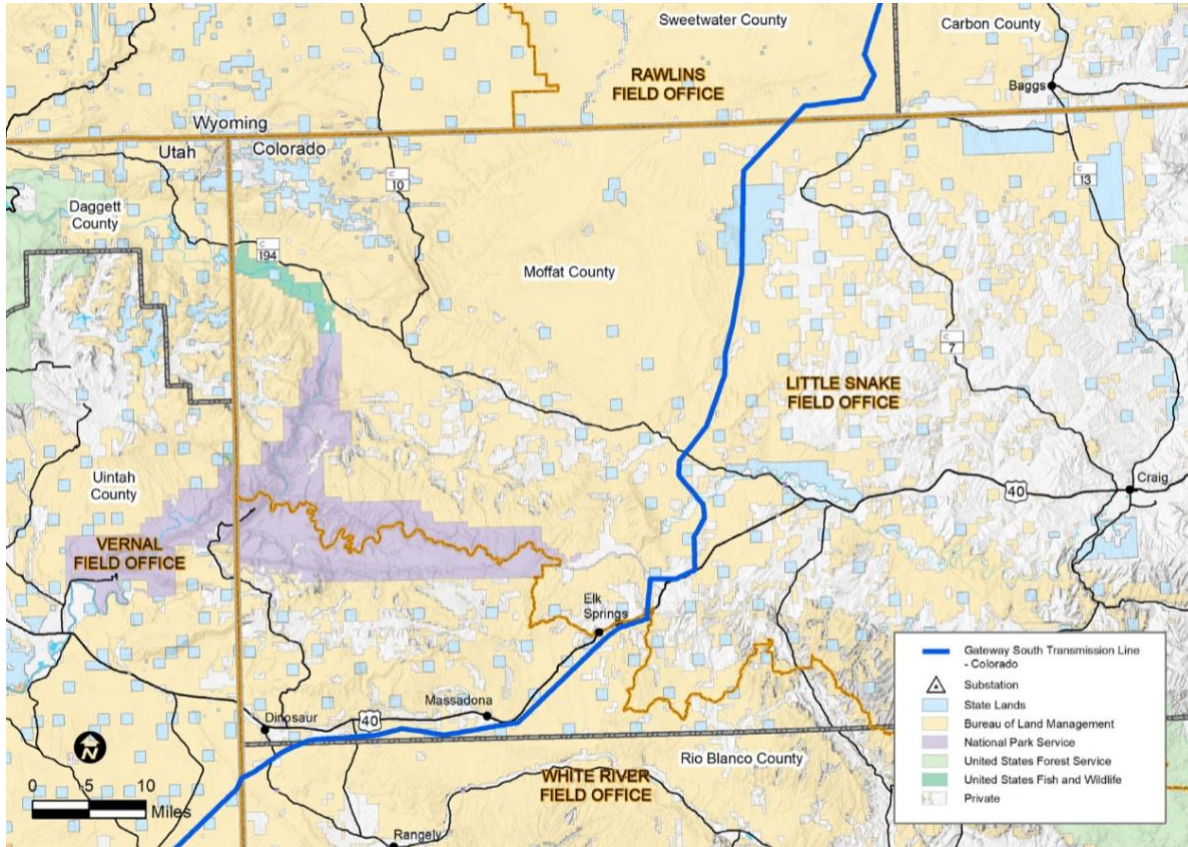
electricity. "United Power can help us be successful by being that partner," he said.

Gabriel's essay went deeper: "Coupled with the increasing need for capacity and the move to community choice aggregation, the only solution in the short and medium-term will be to improve the efficient creation and deployment of electronics at the edge of the grid.

"The hyper-localized movement to this new electricity paradigm has occurred in a disjointed and often unrecognized fashion. It represents both a significant societal opportunity and major threat to the thinking and operations of the electricity enterprise. In the current electric industry, the idea of anchoring based on a simple generation-to-transmissions-to-distribution model creates a system where the edge of the grid, local generation and control are not seen as a viable alternative to large-scale systems. Yet, it is happening under the radar in many indirect and direct ways."

This is not to say that more transition is not needed and also large-scale generation – including investments in small-modular reactors. "This is not to say that market expansion into the West, rebuilding the AC/DC ties across the Western and Eastern grids, and development of grid-scale controls should not occur," he wrote. "They must. However, given the immediate needs for grid resilience and reliability, attention should be paid to the growing power of hyper-localization."

And when United leaves Tri-State in 2024?



# Buzz-over country in northwest Colorado

The Gateway South transmission line bisects Moffat County, and the newly approved TransWest Express transmission line will hew to a somewhat similar alignment. (See map next page).

by Allen Best

Moffat County, in northwestern Colorado, will soon become buzz-over country as construction has begun on one high-voltage transmission line and, on April 11, the [The Bureau of Land Management issued a permit](#) for a second, even higher-capacity line.

The two transmission lines will export massive amounts of wind-generated electricity from giant, new wind farms under construction along Interstate 80 in southern Wyoming to energy consumers in California and other southwestern states. Neither will enable renewable generation in northwest Colorado.

## Major transmission lines to ferry wind-generated electricity from Wyoming

In the short term, this will make Craig a boom town once again. Already motels and hotels report plenty of construction crews in town, at least some of them to work on the \$2.1 billion Gateway South line. Although snow has slowed the work, ground has been broken and foundations laid in several locations, a spokesman for Rocky Mountain Power, subsidiary of PacifiCorp, confirmed.

The transmission line is part of PacifiCorp’s plans to add 2,000 miles of high-voltage power lines to five other Western states in PacifiCorp’s service territory.

This particular 416-mile line crossing Moffat County will harvest wind in Wyoming from turbines near Medicine Bow—yes,



“When you call me that, smile”—and deliver it to a substation in central Utah. PacifiCorp has said it expects to have that line completed in 2024.

The other transmission line crossing Moffat County, the 732-mile [TransWest Express](#), will convey wind-generated electricity near Rawlins, Wyo., to a switchyard at Delta, Utah. From there, the electricity can be delivered in various ways to Arizona, Nevada, and California, including the Los Angeles Department of Water and Power system. The transmission line will cost \$3 billion.

Interesting elements abound in this beginning with the capacity of these transmission lines.

The Gateway South has 500 kV capacity. That’s more than any existing power lines in Colorado, where capacity tops out at 345kV. TransWest Express is even greater, 600 kV, using an old but high-capacity technology. Think of the first one, Gateway South, the line now under construction, as being like a 6-lane highway. Think of the second line, TransWest Express, being like a 20-lane highway without any on-ramps or off-ramps for hundreds of miles.

**T**here’s the wind itself. The TransWest Express will transmit electricity from not quite 600 wind turbines in the adjoining Chokecherry and Sierra Madre wind projects in Wyoming. Turbines are to be placed equally on private and federal land in the landscape south of Interstate 80 and west of the resort town of Saratoga.

Together, these turbines will be capable of generating 3,000 megawatts, making this the largest onshore wind energy facility in the United States.

This compares with the collective nameplate generating capacity in Colorado of the Craig, Hayden, Rawhide, Pawnee and Nixon coal-fired power plants of 2,721 megawatts. They’re not always operating of course. For that matter, in theory the wind doesn’t always blow in southern Wyoming.

Those who have spent time there can be pardoned for thinking otherwise.

In a 2022 story published by [WyoFile.net](#), Jonathan Naughton, professor of mechanical engineering and director of the Wind Energy Research Center at the University of Wyoming, said several regions have “wind capacity factors” of more than 50%, compared to 35% in other interior states. “That means that the turbines that they put up are running at full capacity more often,” Naughton said.

It’s some of the best (or worst, depending upon your perspective) wind in the continental United States.

Wyoming wind also tends to be more consistent during winter months and during evening hours throughout the year, explained Wyofile’s Dustin Bleizeffer. That means that when solar power generation drops off in the evenings in California, Wyoming wind can backfill the power supply.

The same dynamic applies between eastern Wyoming and Colorado’s Front Range urban corridor.

“There’s some attractive things about combining solar and wind from Wyoming,” Naughton said. “And if you build out a really robust transmission system, it’s easy to move power around, and it solves a lot of these issues with variability.”

**A**nother element of interest in this TransWest Express line is that it will employ high-voltage direct current. Most of our electrical grid operates on alternating current. High-voltage direct current offers advantages at longer distances, because less electricity is lost from DC transmission lines, [explained Power magazine in a 2018 article](#).

“HVDC is the technology of choice for reliability and efficiently transmitting large amounts of power over long distances with minimal losses. It is ideal for integrating remote renewable energy into the power grid,” said Claudio Facchin, president of ABB’s Power Grids Division, in a press release about

a project connecting a wind farm along the coast of Netherlands with Germany.

The technology is well established but the cost is high, because of the need for costly conversion stations at both ends. By one estimate, this limits application of the technology to lines of 300 miles or more.

TransWest Express will be the first major use of HVDC technology in the United States to deliver on-shore wind power and will significantly advance the nation's net-zero goals," said Tim Holt, member of the executive board of Siemens Energy, which has the contract to deploy its technology in the new transmission line. Siemens calls its technology [HVDC Plus](#).

**T**he third major element in this story lies in the switch from fossil fuels to renewables. It exists in at least a couple of dimensions.

The [Power Company of Wyoming](#), the company developing the two closely located wind projects in Carbon County that will produce electricity for the TransWest Express line, is a subsidiary of the Denver-based Anschutz Corp. So is TransWest Express.

The owner is Philip Anschutz, who came from a Kansas family of oil drillers and who went on to amass a fortune by harvesting oil from the Overthrust Belt in southwestern Wyoming. (And this writer, when a relative youngster, worked on a surveying crew that assisted his ambitions). Forbes estimates his net worth at \$10.1 billion.

In a 2019 profile by Forbes, Anschutz said his big bet on wind isn't motivated by climate concerns first and foremost. Instead, it was triggered by California's law mandating a shift to 100% renewable energy by 2045.

"We're doing it to make money," he said.

Anschutz, 83, also built his fortune in railroads, telecom, real estate, and entertainment. His Anschutz Entertainment Group operates more than 350 owned or affiliated arenas and concert venues around the world. That includes the FirstBank Center in Broomfield, the Gothic Theater in

Englewood, and the Bluebird and Ogden venues on East Colfax in Denver, among others, plus the Aspen Snowmass Jazz Festival; Anschutz has also owned sports teams in Los Angeles.

WyoFile also notes that wind now accounts for nearly a third of Wyoming's total electrical generation capacity— and these big wind farms are yet to come on line. This compares with 2003, when coal accounted for 97% of the state's power generation.

An additional 6,000 megawatts of new wind power capacity may come on line in Wyoming by 2030, the WyoFile story says, citing "those close to the industry."

Most of Wyoming's electricity is exported to other states. In the case of Rocky Mountain Power, owner of several coal plants, it's 85%.

**A** fourth salient element is how long it took both companies to move forward—and why transmission is altogether so difficult almost no matter where it is. It takes deep pockets and time. In the case of PacifiCorp, it is owned by Berkshire-Hathaway whose most significant figure has a home in Omaha.

The effort by Anschutz's TransWest and his related wind company started in 2008. There were many problems. As the New York Times and others have suggested, the United States needs to revamp its environmental impact process created by the National Environmental Policy Act. But the transmission line from Wyoming to the Southwest was most significantly snagged by one landowner in Moffat County.

In 2021, Bloomberg sent a team of reporters and photographers to describe what was going on. Their 3,000-word story, titled "The Clean-Power Megaproject Held Hostage by a Ranch and a Bird," took readers to the Cross Mountain Ranch. They described it as "one of the last pieces of a historic American West that's since been eaten up by subdivision and strip malls. It's also been a burr under the saddle of one of the richest men in the world."

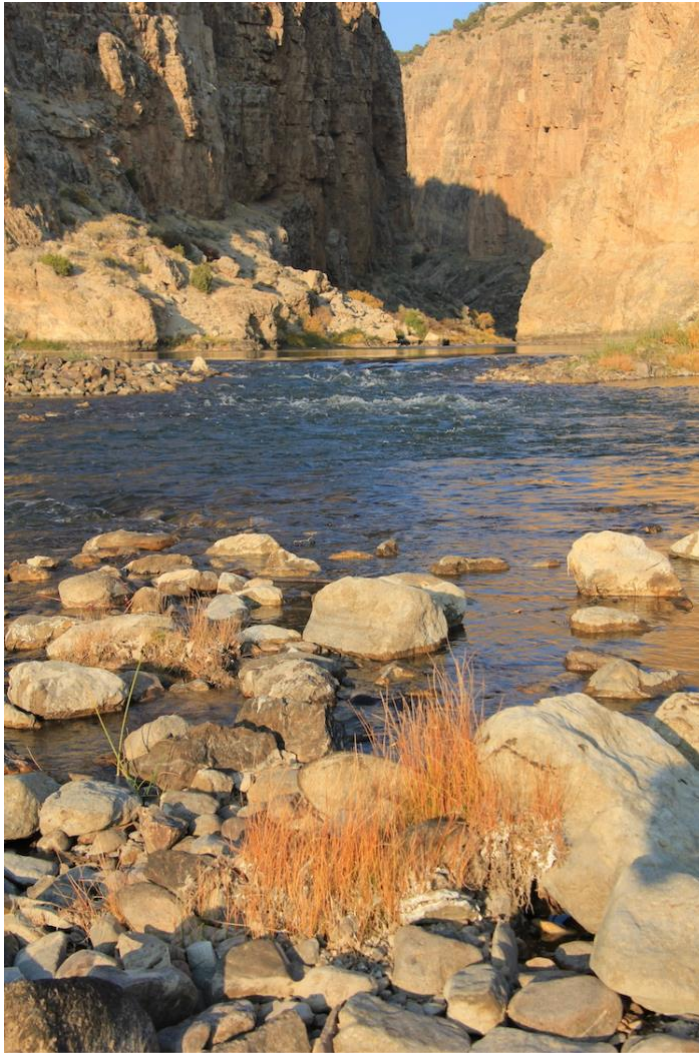
That would be Anschutz, of course.

The 56,000-acre ranch located near where the Yampa River enters Dinosaur National Park is owned by the family of the late Ronald Boeddeker, a real estate developer who purchased it in the early 1990s. Matt Boeddeker, a son, started trying to get a conservation easement in a key location in 2012. This, says the Bloomberg story, is a year after TransWest made public its plans for power-line corridors running through the ranch. The family teamed up with the Colorado Cattlemen's Agricultural Land Trust, which would actually hold the easement. (Full disclosure, this writer has contributed small donations to that land trust).

The conflict described is between conservation and ... well, conservation, if you think that preventing emissions is exactly that. The Bloomberg story, though, does suggest skepticism about the motives. Sammy Roth of the Los Angeles Times in 2021 also visited the topic of tensions between conservation and renewable energy build out.

In December 2021, the impasse was resolved. Citing a filing in U.S. District Court, S&P Market Intelligence explained that developers of both transmission lines had reached an agreement with Cross Mountain. The settlement specified that the ranch and the cattlemen's land trust would grant easements for both transmission lines—provided the U.S. Department of Agriculture's Natural Resources Conservation Service approves applications to waive interest in the easements. If there were other terms—and surely there were—they were not disclosed.

That same story said that a notice to proceed was expected in early 2022. In fact, it was April 2023.



**The Yampa River flows out of Cross Mountain and a few miles later enters Dinosaur National Monument. Photo/Allen Best**

The projects could play a key role in slashing U.S. carbon dioxide emissions from electricity production. U.S. President Joe Biden has called for decarbonizing the country's power grid by 2035, and many Western states have set ambitious goals to lower or eliminate emissions from the electric sector.

But industry experts have said Biden's goal cannot be reached without a major build-out in transmission capacity that would link renewable energy-rich parts of the country with more populated areas.



## Major farmland owner plans gigawatt of solar in eastern Colorado

Crossroads Agriculture, which has 400,000 acres of land in production of wheat and milo in eastern Colorado as well as New Mexico and Kansas, has announced it will partner in development of two major solar projects in eastern Colorado near the towns of Haswell and Cheyenne Wells.

The capacity of the projects will be more than one gigawatt of photovoltaic solar energy, according to a press release.

This is part of what will almost certainly be far more renewable energy generation in eastern Colorado, both solar and wind, as Xcel Energy strings 550 to 600 miles of new double-circuit transmission in a loop around eastern Colorado. The transmission line will cost at least \$1.7 billion.

While the new renewable will bolster treasuries of local schools and other governments, whether it can reinvigorate the dying farm and ranch towns is another matter.

The solar projects are to cover more than 7,500 acres of the Crossroad's farmland near Cheyenne Wells and Haswell. Cheyenne Wells, the county seat of Cheyenne County, is near the Kansas border and south of Interstate 70. Haswell is located about 90 miles east and a little north of Pueblo.

Crossroads has entered into an agreement with a subsidiary of NextEra Energy Resources to develop the solar projects. The buyer of the energy has not been identified.

Many specifics are lacking, such as whether these projects will depend upon Xcel Energy's transmission line. Pressed for specifics, Next Era issued a statement saying that it is "in the early stages of developing renewable energy projects on the Eastern Plains for Colorado. Our team is evaluating existing transmission infrastructure, landowner and county officials' interest, as well as conducting environmental surveys."

The agricultural company already has 30 wind turbines operating on its land in New Mexico and says it will have another 40 built on its land in Colorado in 2024. "Hundreds



**Stefan Soloviev is chairman of Crossroads Agriculture.**

more are expected in the years to come," said Stefan Soloviev, chairman of Crossroads Agriculture.

From his farms near Lamar and Yuma, John Stulp has been tracking the conversation about renewable generation. "There is a lot of activity right now," he says. He cites the example of a case south of Grenada, where a company has offered to buy the farm for three to four times the appraised value.

But will this restore those small towns?

"My fear is that most of the population base has left," says Stulp, who was the state



ag commissioner in the administration of Gov. Bill Ritter.

Construction brings in workers, but then they leave and a minimal staff is needed for maintenance. There will be payments to landowners, and those royalties will help them.

"I am not sure it will rejuvenate some of the small communities to what they might have looked like the '50s and '60s," he says.

Schools reflect that population loss. He cites his farm in country south of Lamar. Probably 50 families occupied the area 50 to 60 years ago. That had fallen to maybe 15 about the time that Bill Clinton was elected president in 1992. Today, there are just three families.

It's just kind of depressing, the economic viability of these communities. You see a few nice homes, but for the most part they are pretty run down and a lot of times abandoned," he says, describing towns like Grenada, Two Buttes, and even Springfield.

Agriculture has become more mechanized, with fewer people needed to work a section of land. Instead of people, farms have become much bigger and require more capital.

NextEra already has a giant presence in Colorado. The company calculates its wind and other projects are responsible for 11% of the market share of electricity sold in Colorado. It has \$3.5 billion in capital investment. [A map at the company's website](#) shows projects scattered from the Front Range east in Colorado. They include:

- In 2020, it completed 225-megawatt Roundhouse wind farm just north of the Colorado-Wyoming border for delivery of electricity to Platte River Power Authority.
- In 2021, it completed a 200-megawatt wind farm east of Sterling, in northeastern Colorado. [It sells that power to Tri-State Generation and Transmission.](#)
- The Thunder Wolf Solar Energy Center in Pueblo County will go online this summer, delivering 200 megawatts of solar and 400 megawatt-hours of battery storage.

## Solar industry takes dim view of rates proposed by Holy Cross Energy

Holy Cross Energy, the electrical cooperative with more than 50,000 members in the Eagle and Roaring Fork Valleys as well as downstream in the Rifle area, is revamping its rate structure.

Solar providers and their statewide organization, Colorado Solar and Storage Association, are not pleased with what Holy Cross plans.

The utility wants to shift some costs for operating the electrical grid to owners of solar systems that currently enjoy attractive net-metering arrangements.

In an [op/ed published April 13 in The Aspen Times](#), Mike Kruger, the chief executive of the trade organization, reports head-scratching.

"The new proposal is a wet blanket for solar adoption in the region and will heavily impact small electricity consumers—those who are struggling to make ends meet," he writes.

The new rate structure proposes to provide only partial credit for electricity generated by rooftop solar installations. This, he says, would violate Colorado's 2008 net-metering law, which requires uniformity across utilities. Plans by Holy Cross would also create inequities for future solar adopters.

"Our analysis shows that despite the 2% average overall increase in rates across the entire Holy Cross membership—the goal stated by Holy Cross, there is a dramatic difference for individual members based on home size and consumption," he writes.

"When fully implemented in 2025, smaller homes and townhomes/condos stand to see bill increases in the range of 8%-18%. Conversely, larger homes (4,500-6,000 square feet) could see their bills drop by 4%-17%.

Earlier, in an April 9 story, the Vail Daily's Scott Miller talked with Rich Clubine, owner

of Active Energies, a local solar farm (co-founded by PUC commissioner Megan Gilman) since 2017. Clubine has been telling customers that the payback on solar systems with the existing rate structure is 8 to 10 years. With the revisions, the payback would lengthen to 21 to 22 years.

Bryan Hannegan, the chief executive of Holy Cross, said that Holy Cross is looking into the future about how to recover the costs of operating the grid. Of the utility's current rate, 10.5 cents per kilowatt-hour, about 3.5 cents pays for electricity. The rest goes to operating and maintaining the grid. Holy Cross, he said, needs to recover its costs.

In the same article, Kruger said that Holy Cross is "solving a problem that's a decade off."

The cooperative is taking comments until April 30 with plans of instituting the new rate structure in September.

Other electrical cooperatives are paying close attention to the Holy Cross story.

## **Buckets of federal funds available to cooperatives for solar & other projects**

To explain how the Inflation Reduction Act has changed the financial landscape for electrical cooperatives, Andrew Berke used the example of a \$10 million solar project when he spoke at the annual meeting of Tri-State Generation and Transmission.

Berke is administrator of the Rural Utility Service, which came into existence in 1936 as the Rural Electrification Administration. He told his listeners that they had likely heard the IRA described as the largest investment in clean energy ever. "That's certainly true. What you don't always hear them say is that it is the largest investment in rural electrification since the 1930s."

The law, partly due to lobbying by Tri-State, has \$9.7 billion specifically for electrical cooperatives. But the agency has a mission to

pull the trigger on \$25 billion to \$30 billion of work before a 2031 deadline. "We have to reduce greenhouse gas emissions by also raising the amount of energy we produce through clean, renewable and non-carbon assets. And we are investing in rural America."

Now about that \$10 million solar project. A distribution cooperative can get up to a 25% grant from the RUS. Then there's the equivalent of a tax break in terms of direct tax payment from the Department of Treasury that can be 30% —or more.

"All of a sudden, that \$10 million solar array costs you \$4.5 million," he said.

## **Four-megawatt solar array to break ground in Yampa Valley. How many more as the coal era ends by 2030?**

The coal era of Colorado's Yampa Valley has already started winding down. To what extent will solar take its place?

The Steamboat Pilot reports a ground-breaking in May for a four-megawatt solar project in Craig, the largest yet in the Yampa Valley. It will cover 20 acres.

That volume of generation is best characterized as a solar "garden." Mike Kruger, the chief executive of Colorado Solar and Storage, told the paper that utility-scale solar is defined as 20 megawatts or larger, which needs about 100 acres. Colorado already has more than a dozen utility-scale solar projects, mostly along the Front Range.

Kruger noted that the existing transmission lines and other infrastructure in the Yampa Valley, because of the existing two coal-burning units at Hayden and the three units at Craig, make



**Andrew Berke**



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it attractive as a place for developing renewable generation. “You would not need to build a lot of additional transmission lines,” he said.

Solar is on a major upswing in Colorado. Xcel Energy, operator of the two Hayden units and partial owner of two units at Craig, invited solar developers to submit bids. It received more than 1,000 offers for all types of projects across Colorado by the March 1 deadline.

Some of those bids may have been for solar projects in Routt County, where Steamboat Springs is located. Alan Goldich, a county planner, told the Pilot that the planning staff heard from at least several potential developers wanting to understand the regulations Routt County has. Their inquiries caused the planning officials to launch an update of regulations that better address utility-scale solar proposals.

Utility-scale solar is allowed in the agricultural and forestry zoned areas in Routt

County, which represents about 98% of county zoning. Those standards, however, do not adequately address the impacts to wildlife, roads, water quality, maintenance of revegetation, and displacement of current uses.

“Routt County got a lot of increased interest with some conversations with some developers,” Goldich told the Pilot’s Suzie Romig. “The closing of the Craig and Hayden stations will open up a lot of capacity on the high-transmission lines.”

Routt expects to get its revised regulations across the finish line by this summer.

In neighboring Moffat County, Candace Miller also reports an uptick in interest, although no proposals yet. “I have not received any applications nor approved any permits,” for renewable generation, she said. A one-person staff, she also plans to look into revising regulations to govern utility scale solar, too.





## Fenberg bill is being vigorously opposed, but could it actually be falling short?

by Allen Best

Xcel Energy's high and wide sails will almost certainly be trimmed by Colorado legislators. SB23-291, the bill crafted in response to spiking natural gas prices this winter, will impose small steps to protect consumer interests.

What this bill won't do is make Colorado's largest utility as innovative in this energy transition as it is successful in generating profits for its investors.

The company reported \$727 million in profits from its Colorado operations in 2022. Investors in the company's eight-state operating region earned yields of more than 9%.

Customers were chilled even more during this winter of uncommon cold by natural gas prices that pole-vaulted 75%. Xcel and other utilities protested that they were merely passing along costs.

State legislators leveraged the unhappiness into an investigation of long-standing complaints. Critics have long contended that investor-owned

utilities enjoy an uneven playing field at the Colorado Public Utilities Commission, the state agency governing Xcel, Black Hills Energy, and other investor-owned utilities.

The bill's most important provision would allow the PUC to "consider requiring each investor-owned electric utility to bear a percentage of its total fuel costs in order to incentivize the utility to find efficiencies and reduce fuel waste." In other words, it puts the company's own skin in the game. It might heighten accountability.

Senate President Steve Fenberg, a Democrat from

Boulder, who headed the select committee, said the proposal would not dramatically alter the compact between monopoly energy utilities and consumers. Utilities enjoy monopolies in their service territories, assuring a steady stream of revenues – and profits. State regulators must oversee reliability, affordability and, in recent years, pollution reduction. Fenberg told Senate Finance Committee members that the changes amount to "tweaks" to the regulatory compact.

This bill has disappointed some consumer advocates but stretches hard to achieve a goal of key environmental groups by challenging the expansion of natural gas.

At the committee hearing, Robert Kenney, the president of Xcel's Colorado division, warned of unintended consequences. Others summoned by the company from Grand Junction to Pueblo to Greeley described a dark picture of hindered economic development or worse. State Sen. Barbara Kirkmeyer, a Republican from Weld County, as she had in the committee hearings in March, challenged Fenberg repeatedly, asking him what this would accomplish to lower consumer bills. Instead of immediate results, he pointed to long-term savings.

Many said that that this bill endangers Xcel's access to capital to do good things such as its developing emerging hydrogen and geothermal resources. This argument was thin. What more reliable income stream could Wall Street want than that of a monopoly responsible for essential goods and services?



The natural gas elements have provoked the noisiest opposition. The PUC and Colorado Energy Office would be required to study implications of existing policy that allows utilities to bill existing customers of natural gas lines to pay for expansion of gas lines to new homes and buildings.

Defenders of the policy compared this to extensions of water, sewer, and electric lines, which are also socialized. True. But for Colorado to achieve its mid-century emission reduction goals, it cannot continue expanding natural gas lines to tens of thousands of new homes each year. Meera Fickling of Western Resource Advocates told legislators that gas lines laid in 2023 won't be paid off until 2080. We need to be more strategic in our investments, she said.

We have alternatives. Electric-powered air-source heat pumps can heat water and buildings in temperatures of down to 22 below zero. They can also cool buildings. Their higher upfront cost will be recouped decades before the mortgage is paid. For new construction, it should be a no-brainer.

Natural gas is also threatened by a provision that would require state regulators to apply a discount rate that, in its long-term consequence, might make natural-gas generation for electricity less economically attractive. Xcel has major plans for natural gas plants.

Energy visionary Amory Lovins decades ago said that consumers don't care about the energy itself, only the service it delivers. They want their beer cold. It's just not generating electrons that matters. As we decarbonize, demand-side

management and the more wonkish programming of satisfying needs will become far more important.

Xcel has shown it can build big wind and solar projects, as it once built big coal plants. This comports with the regulatory compact that allows the company to reap substantial profits with small risk. To its credit, Xcel is also working on new battery technology, hydrogen, and other wrinkles of the energy transition.

But in the customer-interface area, Xcel has been unremarkable. I remember a rare reprimand from the PUC commissioners several years ago when reviewing an Xcel demand-management program at Denver's Central Park neighborhood. Boulder was to be a demonstration project for innovation. So far, I've heard nothing.

Critics say the incentive motive of these investor-owned utilities blinds them to more creative solutions. Companies wanting to earn profits usually must innovate. Monopolies have less incentive to innovate, because they don't face competition. This bill won't change that.

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