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Tri-State says it will hit 80% goal. But how exactly?

by Allen Best

Tri-State Generation and Transmission last week promised to deliver what Colorado wants, an 80% reduction in carbon emissions by 2030. As for how it will deliver on that pledge, it remains a bit of a mystery.

Less coal production, obviously. More wind and solar, ditto. And, as has been highlighted in recent filings, more transmission to get electricity from renewable sources to its 16 member co-operatives in Colorado.

But how exactly?

For that, a more definitive answer will likely have to wait until Dec. 1 and perhaps beyond. That's when Tri-State is scheduled to deliver an electric resource plan to state regulators. This plan is to explain in detail how it intends to procure electricity in coming years for its Colorado cooperatives. Colorado's co-ops together account for

about two-thirds of Tri-State's demand across a four-state area.

Tri-State is Colorado's second largest utility based on the amount of electricity it delivers in the state. In 2019 it delivered 38% as much electricity as compared to Xcel.

This electric resource plan will be a first for Tri-State. The utility has never been directly regulated by the Colorado Public Utilities Commission. SB 19-236, one of the many laws passed by Colorado legislators in 2019 to complement new economy wide carbon reduction targets adopted in the same session, makes it clear that the PUC has jurisdiction over Tri-State's resource planning activities. A September filing by the Colorado PUC staff asserted that the

Cutting power supply from Wyoming key to Tri-State attaining Colorado's goal for emissions reduction

"overriding concern" in evaluating Tri-State's plan is how the utility "can meet Colorado's emissions reduction cost effectively."

Foundational to Colorado's efforts to decarbonize its economy 50% by 2030, with even

deeper cuts by mid-century, is removing carbon emissions from the electrical sector and then using electricity for other uses now fulfilled by fossil fuels in the transportation, industrial, and building sectors.

The 2019 legislation laid out an explicit requirement of 80% emissions reductions of Xcel Energy, which had by then agreed to do

so. The state’s authority over other utilities, however, is more fuzzy.

In recent months, Will Toor, executive director of the Colorado Energy Office, has secured commitments from Platte River Power Authority, the wholesale provider for four municipalities along the Front Range, and also Colorado Springs Utilities. This commitment by Tri-State binds the overwhelming majority of Colorado electrical production to the emissions reductions identified by legislators.

A smaller utility, Holy Cross Energy, has adopted a more restrained goal of 70% by 2030 but is almost certain to hit that target within the next year.

Tri-State in January announced it would close a coal plant in New Mexico this year, which it did in September, and that it would have all the three units near Craig that it operates closed by 2030.

Still, Tri-State has a long, long way to go. Baseline modeling done by the utility in advance of its Dec. 1 filing showed a 34% reduction in Colorado in carbon dioxide emissions by 2030 as compared to a 2005 baseline.

Last week, after Tri-State’s announcement, Tri-Harder, a new coalition of Tri-State members, issued a statement. Speakers were cautious in their praise.

“Telluride can’t meet its carbon reduction goals unless Tri-State takes the lead on carbon reductions, so we’re thrilled with this news,” said Todd Brown, mayor pro-tem of Telluride. “I hope this means that Tri-State will invest in local, clean energy in our communities so that our local economies can benefit as well as the climate.”

With Colorado Gov. Jared Polis rubbing virtual elbows, video-conference style, Tri-State chief executive Duane Highley took questions about his utility’s pathway.

Highley said the utility will be adding thousands of megawatts of new generating capacity in wind and solar and expects to be at 50% renewables across its entire system by 2023; in 2019 it was about 30%, about the same as Xcel.

But what will it do about imported power into Colorado? Tri-State imports power to meet needs of Colorado consumers from the Laramie River Station at Wheatland, Wyo., and from the Springerville 3 plant in Arizona. Tri-State is a minority owner in both plants.

Highley said that Tri-State will diminish the power from the Wyoming plant over time, but did not give a time line.

The PUC staff report in September pointed out that aside from natural-gas generation, almost all the other carbon dioxide emissions in 2030 are from these out-of-state coal units.

“According to Tri-State, there are no provisions for modification or early termination” of the contracts” and Tri-State “has not analyzed such an action. The staff report went on to say that the resource planning review before the PUC “may include clear evidence that for Tri-State to meet





For Tri-State to reduce its emissions 80% by 2030 within Colorado, it will have to rely far less on imported power from the Laramie River Station, of which Tri-State is a minority owner. Tri-State CEO Duane Highley says the plan is to reduce imported power from the plant near Wheatland, Wyo., but there is no plan to eliminate the imports. 2008 photo/Allen Best

its cumulative Colorado GHG reduction obligations, it cannot continue to serve Colorado load (demand) using those out-of-state resources.”

Tri-State, in an Oct. 2 filing, said it is developing several scenarios as part of its planning. “These scenarios will address the social cost of carbon on a system-wide basis, as well as specified carbon reduction goals in the state of Colorado,” the filing said. “These scenarios include aggressive levels of renewable energy additions and energy storage, allow for demand-side management, limit thermal additions, allow for retirement of existing resources, and incorporate either base or low-load forecast.”

What its load—the demand for its electricity—will be could be impacted by changes in the oil-and-gas sector, as Tri-State is a major supplier to oil-and-gas fields, but also the potential for existing

cooperatives to leave or transition to partial requirements, Tri-State says.

In other words, there are a lot of uncertainties about just how much electricity Tri-State will need.

Another electric resource planning process will commence in 2023, not long after the current one is settled.

Electric resource plans are wonky but rigorous things. Xcel Energy and Black Hills are required to file them. In addition to the filings of the utilities, laying out their plans and answering questions, intervening parties, including environmental groups, independent power producers, and the Office of Consumer Counsel, chip in statements, sometimes lengthy. Printing out all the filings in some of these cases can cost you a box of paper. The plans can drag on for years. Like painting the Golden Gate

Bridge, the job is completed and then begins from the other side again.

The Tri-State filing will be a first for the utility itself. It will also be the first time for any resource plan since state legislators adopted the suite of energy laws in 2019. None was more expansive than SB 19-236, which reauthorized existence of the PUC but also delivered new criteria for how commissioners are to evaluate plans by utilities.

One example: The lengthy bill—it runs 64 pages—specifies that the commission must establish the cost of carbon dioxide emissions produced by electric generation resources, starting at not less than \$46 per ton. The rate must be escalated based on the work by the federal interagency working group. This is called the social cost of carbon.

The PUC commissioners, at their weekly meeting on Nov. 12, ruled that Tri-State must use cost escalators in the models it submits for future electrical generation on Dec. 1.

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Necessarily, the Colorado PUC will be examining Tri-State’s four-state operating system. Already, there are questions.

Reacting to Tri-State’s 80% announcement, Eric Frankowski, director of the Western Clean Energy Campaign, warned against any attempt to make this “an accounting exercise by shipping its expensive, dirty coal to its members outside of Colorado.”

Western Resource Advocates will also be watching carefully how Tri-State explains its accounting of greenhouse gas emissions in the review process.

Gwen Farnsworth, WRA’s senior energy policy advisor, says Tri-State’s

Tri-State the focus of two items nationally

Tri-State Generation and Transmission is the focus of two new pieces of work.

The Institute for Energy Economics and Financial Analysis this week published a 17-page report, “With Long-Term Fossil Commitments, Colorado Electricity Wholesaler is Alienating Cost-Conscious Co-ops.”

The report substantially views Tri-State through the lens of La Plata Electric and United Power, two members attempting to break-away from United Power to pursue greener and, they believe, lower-priced pastures.

[See report here.](#)

The Daily Yonder also had mention of Tri-State in the context of a larger story about rural electrical cooperatives and their generation and transmission associations.

The story also describes Tri-State in a dim light, portraying it as being stuck on coal. It makes brief note the debt owed by G&Ts for their primarily coal plant infrastructure and notes a proposal by Washington Gov. Jay Inslee to use devices such as debt forgiveness, coal-debt refinancing and credit-asset swaps to hasten retirement of coal plants. The story also notes a conundrum of co-ops with their democratic underpinnings.

“Just as easily as co-ops can do the right thing, they can also do the wrong thing,” says Kristen Taddonio, a director of Mountain Parks Electric. See “[Rural Electric Cooperatives on a Bumpy Road to Renewable Energy.](#)”

announcement puts it at a better starting point for the electric resource plan in December as compared to the data provided by the utility earlier this year. That process before the PUC, she added, “provides a

rigorous, evidence-based process to review Tri-State's plan and emissions reductions claims.”

Tri-State’s cases will be different from the filing by Xcel Energy next March 1 in that the PUC has clear authority over setting rates in the case of Xcel. Tri-State sought oversight by the Federal Energy Regulatory Commission because it operates in four states.

One important area is that of transmission. Transmission has been constructed in a piecemeal fashion in Colorado over the decades. This new push for rapid development of renewable generation calls for a more unified and systematic approach to thinking about both new resources and transmission, instead of considering them separately.

Transmission was also the subject of Highley’s second significant announcement last week. He said Tri-State and four other power providers have sent letters committing to



Duane Highley

evaluate expansion of the Southwest Power Pool’s regional transmission organization, or RTO, into the West. The other utilities are Basin Electric Power Cooperative, Deseret Power Electric Cooperative, the Municipal Energy Agency of Nebraska, and the Western Area Power Administration.

In essence, Tri-State has assembled buddies to challenge the more dominant idea in Colorado that the most logical way to realize benefits of managed markets will be to join with the California and other utilities in the West. Like Tri-State, generation and transmission associations, the one larger and the other much smaller, MEAN is a public power provider of many Colorado towns and cities.

For a deeper dive on RTOs and EIMs and other wonky stuff considered by utilities crucial to achieve deep penetration of renewables electricity, see [Lower electricity bills in Colorado](#), and also [Why Colorado needs an RTO](#).

Tri-State and WAPA — the distributor of electricity generated by federal dams in the West— in September 2019 announced they were forming an energy imbalance market with the aid of the Arkansas-based Southwest Power Pool. Xcel Energy and three partners—Platte River Power, Black Hills Energy, and Colorado Springs Utilities— three months later said they were doing the same but with the aid of CAISO, the California-created operator.

Creation of these imbalance markets is seen as a low-risk, low-reward investment in coordinating supplies, especially low-cost renewables, to meet demands. Highley has said that Tri-State can earn back its investment within three years. The far greater benefits will be found in an RTO.

A recent study by Vibrant Clean Energy found that a regional transmission organization, whether operated by SPP or by CAISO, could greatly benefit Colorado consumers, but concluded that the somewhat greater benefits were to be found with the alliance with California.

Asked about that study, Highley disagreed with the conclusion about CAISO but also said that whatever the regional alignment, there will be benefits of integrated transmission and scheduling to share wind, solar, and other resources across broader regions.

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Cañon City and its hogback-hugging Skyline Drive. Photo/VistaWorks

A tale of two cities and their differing franchise votes

by Allen Best

Beyond both being in Colorado and along the state's Front Range, Boulder and Cañon City could not be more different. The differences go back to the state's founding.

Cañon City had the choice of getting the state penitentiary or the state university. It chose the former, so Boulder got the latter.

In both cities, a franchise vote with the existing utility provider was on the ballot on Nov. 2. This time, they went in different directions once again. The fulcrum in both cases was cost, if the formula was more complex in the case of Boulder.

Boulder voters, after exploring municipalization for a decade, agreed to a new 20-year franchise agreement with Xcel Energy. Xcel had continued to supply the city's residents with electricity after the last franchise agreement lapsed in 2010.

The new agreement garnered 56% voter approval. Even some strong supporters of the effort to municipalize had agreed that the effort by the city to create its own utility had taken too long and cost too much money, more than \$20 million, with many millions more expected. They attributed this to the power of Xcel to block the effort.

Boulder's effort had been driven primarily by the belief that a city utility could more rapidly embrace renewables and effect the changes needed to create a new utility model. In short, climate change was the driver, although proponents also argued that creation of a city utility would save consumers in the long run. Consumers just weren't willing to wait long enough.

Going forward, Boulder will have several off-ramps if Xcel stumbles on the path toward decarbonization of its electrical supply. The city will also retain its place in the legal standings, if you will, should that be the case. Also, Xcel agreed to a process intended to advance microgrids and other elements, although critics describe that as toothless. Undergrounding of electrical lines

in Boulder will not commence anew as a result of the new franchise agreement.

Cañon City is Colorado's yin to Boulder's yang. Located along the Arkansas River in south-central Colorado, it has become more conservative politically even as Boulder has shifted progressive. In the November election, 69% of votes in Fremont County—where Cañon City is located—went for Donald Trump, who got 21% of votes in Boulder County

Economically, they walk on opposite sides of the street, too. The statewide median income in Colorado in 2018 was \$68,811.

Boulder County stood a shoulder above (and Boulder itself likely even more) at \$78,642. Fremont County was at waist level at \$46,296.

Cañon City also went in the opposite direction of Boulder in the matter of its franchise. There were differences, of course. Boulder turned its back on municipalization in accepting a new franchise.

In Cañon, about 65% of voters rejected a franchise agreement with Black Hills Energy, Colorado's second investor-owned electrical utility. The city council had approved it, but the city charter also required voter approval.

Unlike in Boulder, decarbonization and reinvention was not overtly among the topic points. Some people in Cañon City do care about decarbonizing electricity, says Emily Tracy, the leader of a group called Cañon City's Energy Future, which she put together in January 2018. But the cost of electricity was the fulcrum and, she believes, a reflection of how the community feels about Black Hills.

The old franchise agreement with Black Hills expired in 2017. Tracy and other members of Cañon City's Energy Future

persuaded council members to put off a new agreement but failed in their bid to have a community dialogue.

"The power industry, the electric industry, are so different than they used to be, and we simply want the city to explore its options," she says.

In stories in the Pueblo Chieftain and Cañon City Daily Record, city officials said they had evaluated options before seeking to get voter approval of the franchise.

Partially in play was the effort underway in nearby Pueblo to break away from Black Hills and form a municipal utility. The

thought was that if Pueblo voters approved that effort, Canon City could piggyback to the new utility. The proposal lost by a lopsided May vote after a campaign that featured \$1.5 million in advertising and other outreach by a pro-Black Hills group.

Black Hills rates are among the highest in Colorado. Tracy illustrates by citing those she pays to Xcel Energy

in Breckenridge, where she has a second home.

"I pay 77% more for a kilowatt-hour of electricity for my house in Cañon City than I do to Xcel in Breckenridge," she says.

Opponents of the franchise renewal were heavily outspent in the campaign. Records that Tracy's group got from the city clerk showed \$41,584 in spending by Power Cañon City, the pro-Black Hills group, through mid-October. Tracy's group spent less than \$5,000, counting in-kind contributions. Tracy suspects that Black Hills didn't entirely take the vote seriously.

Now it's back to the drawing board for the Cañon City Council. Tracy hopes for

"You take a poor community like Cañon City or Pueblo, then add in the fact that we're paying the highest electricity rates in the state, and there's no doubt it has an impact on families, businesses and attempts to do economic development."

Emily Tracy

Cañon City's Energy Future

more transparent discussion about the options.

But it's all about the money.

"You take a poor community like Cañon City or Pueblo, then add in the fact that we're paying the highest electricity rates in the state, and there's no doubt it has an impact on families, businesses and attempts to do economic development," says Tracy.

Frances Koncilja, a former member of the Colorado Public Utilities Commission has offered her legal assistance to Cañon City's Energy Future.

As for why Cañon City wanted the state prison instead of the state university in the early years of Colorado's statehood, keep in mind the times. Crime did pay for Cañon City in the 19th century, when few people had or needed college degrees. It was well into the 20th century before this shift toward greater education began.

Regional roundup

Arizona adds storage requirement to the must-do list of utilities

PHOENIX – In some ways, Arizona seems to be following in the steps of Colorado and other states with a new standard adopted by the Arizona Corporate Commission, the agency that regulates investor owned utilities.

The new standard requires electric utilities in Arizona to reduce carbon emissions 50% by 2030 and 75% by 2040 before reaching complete decarbonization by mid-century.

But Arizona has also broken new ground in several areas, including a policy lever to drive the deployment of more than 200 megawatts of customer-owned or leased energy storage systems by 2035. That's the equivalent of 40,000 home battery storage systems.

It's the first of its kind in the United States, says Ellen Zuckerman, co-director, of Southwest Energy Efficiency Project's utility program.

The new energy efficiency standard puts efficiency on an equal footing with the investments utilities make in other energy resources. It requires efficiency investments be "prudent" as other utility investments are required to demonstrate.

There's a component of Just Transition in the new standards. They require that integrated resource planning process include provisions for favorable siting for renewable energy in fossil fuel impacted communities.

"This is an important signal that the Commission takes just and equitable transition seriously as the overall transition to clean energy is instituted," says Zuckerman. She also points out that the rules were adopted by a commission comprised of three Republicans and one Democrat.



Ellen Zuckerman

Solar projects move ahead in northwest New Mexico as coal retirements near

FARMINGTON, N.M. – A company hoping to develop more than 1,300 megawatts of solar in northwestern New Mexico has reported clearing milestones to enable to it do so.

The Farmington Daily Times reports that Photosol US, a subsidiary of a French company, has been working to develop 600 megawatts of solar with 300 megawatts of storage at the San Juan Generating Station



A coal train near Bill, Wyo., in 2011 waits its turn to go south. Photo/Allen Best

and another 360 megawatts of solar nearby plus 400 megawatts at the Navajo Mine. A project representative projected that solar farms will become operational between 2022 and 2024.

Two of the units at San Juan Generating Station were retired in 2017, and the remaining two are expected to be closed unless a new owner figures out how to keep them operating.

PNM, New Mexico's largest utility and the primary owner of San Juan Generating Station, will sell the plant to the city of Farmington, a minority owner. Farmington then plans to transfer the plant to Enchant Energy.

Enchant Energy plans a carbon-capture and sequestration project, putting carbon dioxide exhausts into a pipeline for use in the Permian oil basin of Texas and eastern New Mexico. The U.S. Department of Energy has agreed to provide a \$25.4 million boost, but the entire project carries with it a \$1.4

billion price tag, an op/ed in the Albuquerque Journal points out. The federal agency provided \$250 million to a previous carbon-capture plant in Texas that was shut down. It is among several major subsidies for carbon capture projects involving coal plants.

Peabody says it intends to stick around Wyoming, but economist skeptical

GILETTE, Wyo. – Arch Resources, the second biggest operator of coal mines in Wyoming's Powder River Basin, plans to get out. Peabody Energy, the largest, says it plans to continue to make itself at home.

Don't necessarily believe it, a University of Wyoming energy economist tells WyoFile.

"I don't think they're going to hang around that long," Rod Godby speculated in an interview with WyoFile's Dustin Bleizeffer. "The question is just timing: What's the best

time to divest? You don't want to look like a motivated seller. And this is the Powder River Basin today.”

Bleizeffer reports that Peabody's third-quarter report showed a 39% decline in revenue from July through September. This reflected declining revenues of \$215 million from the company's U.S. operations of mines that deliver coal to power plants. It has three major mines in Wyoming, all south of Gillett.

Arch Resources plans its exit after a court ruling that upheld the Federal Trade Commission's opposition to merging Arch and Peabody operations in the West. That affects operations of Colorado's Twentymile Mine, near Steamboat Springs.

Arch's Black Thunder Mine and Peabody's adjacent North Antelope Rochelle mine, the two largest coal mines in the nation, account for two-thirds of production in the Powder River Basin.

[See the full Wyofile story.](#)

San Francisco bans new natural gas lines for buildings as of June

SAN FRANCISCO – Supervisors of San Francisco have banned natural gas lines for new buildings beginning in January. The ban affects more than 54,000 houses and 32 million square feet of commercial space that are planned, the San Francisco Chronicle reported.

Nearby Berkeley launched the movement to ban natural gas in 2019. Since then, 39 jurisdictions have joined it as well as several others. While there are health and safety advantages in replacing use of natural gas in buildings with electricity, the primary driver has been reduced greenhouse gas emissions. Natural gas is the second-largest source of emissions in San Francisco. No jurisdictions in Colorado have banned natural gas. To thwart such a possibility, the Colorado Oil and Gas Association had

planned to put a proposal before voters that would ban just local actions. But an agreement was reached to pull it back. However, Arizona, Tennessee, Oklahoma, and Louisiana all passed such laws prohibiting local governments from adopting electrification measures or natural gas bans.

Clash between rooftop solar in Utah and desire of utility for big solar farms

SALT LAKE CITY – Rocky Mountain Power, the primary electrical utility in Utah, has been moving to renewables. But it plans to get most of that electricity from utility-scale projects and by tapping the surplus generated by California.

At issue is a ruling by the state's Public Service Company that the solar industry fears will result in a significant contraction. The state commission lowered the credit the utility awards its customers for the excess electricity they generate from rooftop panels and exports onto the grid.

The 350 megawatts generated on Utah roofs pales in comparison with the 7,000 megawatts the company plans to get by 2023 from solar farms now under development, according to Ryan Evans, executive director of the Utah Solar Energy Association. Evans [tells the Salt Lake Tribune](#) that only 2% of Rocky Mountain Power's customers in Utah have roof-top solar, leaving plenty of room for growth.

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Regarding Platte River's 100% renewables goal

by Steve Andrews

Big Pivots reported on Nov. 2 that Platte River Power Authority—supplying Fort Collins, Longmont, Loveland and Estes Park—has a backup plan for getting to 100% renewables by 2030 given uncertainties beyond 90%+. Good on them for using their reality glasses.

While I have been a solar supporter since naming my energy consultancy “Solar Spectra” back in 1980, and working at NREL in 1981, I’ve also been a skeptic of 100% renewables plans. 75% renewables—no problem. 80%—harder but doable. 90%—really challenging, given what we have to work with today.

Over 90%? As Samuel Goldwyn once riffed with a pre-Yogi Yogi-ism: “include me out...” at least today, and at the utility scale.

But let’s not make “perfect” the enemy of “really good.” Even approaching 90% would be impressive, especially for a power provider that historically generated 60%-65% of its power from coal.

Today, emerging utility-scale battery storage is typically used to meet partial loads over the course of two- to four-hour periods. It’s a peak-shaving tool, especially useful during hot afternoons on sunny summer days. Overnight storage plus the following cloudy day?

I haven’t seen anyone make a cost-effective case for it yet. And extra storage for a 3-day period during July 2014, when solar was at 40% of maximum over that period, it was still hot (cooling), and it was *not* windy?

Or storage for a 6-day period during October 2018 when solar was at 35% of maximum? Forget about it Herman, without some back-up, the ball game’s over.

Question is, *when* will there be storage technology to cost-effectively beat the price of some stand-by gas generation? I don’t know. But I’m dialed into local weather patterns, having recorded daily wind and solar data in our part of Colorado for the better part of a decade.

I know no combination that will get us to 100% by 2030, based on today’s technologies. It seems likely to me that we will need natural gas generation for backup for well over a decade, and perhaps two decades, until new technology catches up with the 100% mandate to make it workable.

Indeed, our off-grid house in Westcliffe (solar/wind combo house) still has a propane-fired generator to kick in for the second cloudy/snowy day during the November-April time frame. The generator isn’t used often, but without it our home’s electricity system would simply shut down (even though, energy nerd that I am, I clear the snow off our PV panels once the snow ends).

Unfortunately, buying more battery storage *today* to cover multiple days for our off-grid 100% RE-powered house would make zero economic sense.

So let’s be open-minded as we move as fast as we can toward a strong majority of electric generation from renewables. For the next decade or two or three, we’ll need backup generation beyond just batteries.

Steve Andrews is a retired energy consultant living in south-central Colorado.

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Reflections in wake of East Troublesome

by Andrew Miller

We live in a time of changed climate, as was evidenced by the East Troublesome firestorm (See Big Pivots, Nov. 2) that all but engulfed the Three Lakes region of Colorado on Oct. 21.

Many have told me stories about that evening, all with common threads. The nightmarish roar coming from the west sounding like an oncoming freight train. Dark skies illuminating oddly orange colored trees. Lake Granby's turbid surface reflecting the fiery colors of the oncoming fire storm.

Walls of flame chasing evacuees down county roads toward U.S. 34 and the route south to safety. Hurricane force winds knocking people down and moving cars off track. An atmosphere which appeared to be on fire.

Smoke fueled clouds above the fire Wednesday evening towered like thunderheads—high enough to have lenticular cloud caps which normally occur at altitudes of 40,000 feet.

A similar fire storm started during the Pine Gulch fire north of Grand Junction this summer. This type of event is all too common in California. The East Troublesome firestorm may be the first recorded at our high altitude.

The warmer climate means our forests will continue to be at risk for fires like this. Only weather conditions, luck, and efforts from heroic firefighters kept the fire from wrapping south of Lake Granby over Winter Park Highlands and into the Fraser Valley.

As we rebuild, we also need to rethink. The small town of Greensburg, Kan., may offer us some guidance.

Several years ago, I visited this western Kansas farm community. Greensburg was all but wiped off the map by an EF5 tornado in 2007. Considering 95% of the town literally disappeared in the 250 mph maelstrom, mercifully just 11 lives were lost. Our local blessing—largely because of the heroism of our first responders—was the loss of only two local citizens.

Greensburg was rebuilt with tornado “proof” construction, supplied by almost entirely by green energy.

Perhaps we can consider rebuilding in the Three Lakes in a similar resilient fashion.



A nearly treeless Greensburg, Kan., in 2015. Photo/Allen Best

A good first step would be for the Grand County Commissioners and the Grand Lake Town Trustees to consider ordinances making it so homeowner associations cannot disallow stucco and steel siding construction techniques. These two building materials provide a cost-effective method to resist fires (and woodpeckers).

All local governments, including the town board on which I serve in Fraser, should do the same. We could also model Winter Park's ongoing, partially town funded

efforts to remove dead trees from our communities. We need to seriously examine how close trees and shrubs are to existing structures.

Admittedly, in many cases, the fire storm which engulfed the Three Lakes burned through most any construction system known to exist short of a concrete bunker.

Once again, we confront a dilemma which has obvious answers. How do we fix a problem before it creates disaster and tragedy? Do we invest in fire resistant exterior finishes for our homes? Do we invest in creating healthy forests and well-watered meadows before a firestorm engulfs us again?

Are we smart enough rectify the poor decisions of the past?

I believe we are. It's time to roll up our sleeves and get to work.

Andrew Miller builds houses in the Icebox of the Nation, otherwise known as Fraser, where he is also a town trustee.

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