March 2024 | Vol.50 • No.1

Down to Earth

NEWS FROM THE MONTANA ENVIRONMENTAL INFORMATION CENTER

The Invisible Air Pollution Next Door

pg. 8

MEIC

Victory at Rosebud Coal Mine

Petitioning the Public Service Commission

MEPA Group Moves Ahead

In This Issue

Cover photo: The CHS Refinery in Laurel is one of several refineries in Montana emitting invisible pollution. Photo by Earthworks.

MEIC is a nonprofit environmental advocate whose purpose is to protect Montana's clean and healthful environment.

Mailing:
P.O. Box 1184
Helena, MT
59624

Offices:
107 W. Lawrence St.
Helena, MT

225 W. Front St.
Missoula, MT

Contact:
406-443-2520
meic@meic.org
www.meic.org

From a Board Member

by Neal Ullman

The impacts and evidence of climate change continue to grow. **MEIC**'s work to bring change is more important than ever, and reducing emissions is a key part of that. **MEIC** continues to protect access to clean energy options and fight against dirty fossil fuels. Federal funding from the bipartisan infrastructure law (BIL) and Inflation Reduction Act (IRA) will help us speed the transition from fossil fuels to clean energy and head off the worst effects of climate change. Luckily, we know clean energy technologies can work in Montana because they already are!

If you've ever met me, you know I'm into clean transportation. As a proud owner of both fully-electric and plug-in hybrid electric vehicles, I sometimes forget how to use the gas pump! I leave my home every morning with a full charge and simply plug in when I get home. We've taken our electric car on camping trips in Glacier and Yellowstone National Parks, and have driven to Oregon to visit family and friends.

Does owning an electric car in Montana have its limitations and require extra planning? Of course. But tax credits from the IRA can make buying an electric vehicle more affordable for many Montanans and can also help with adding a home charging system and upgrading your home's circuit panel. More fast-charging locations will start popping up soon thanks to BIL funding for the National Electric Vehicle Infrastructure Program going through the Montana Department of Transportation.

In addition, electric school buses, transit buses, and street sweepers are working across Montana. In some cases, electric school buses in Havre and Bigfork were the only buses that could operate at -30° F to -40° F temperatures. Helping to protect the health of students and bus drivers by reducing harmful emissions that can lead to respiratory illness, these electric vehicles are growing in popularity thanks to funds from the BIL for EPA's Clean School Bus Program. Another 41 electric school buses were awarded to seven school districts in Montana last month with more funding opportunities on the way!

What good is an electric vehicle if the energy that powers it comes from fossil fuels? In Montana, we're lucky to have abundant, carbon-free energy from hydro, wind, and solar. My electricity comes from the solar panels on my house and the hydro dams on the Missouri. Montanans living in electric cooperative territory in western Montana do even better with energy that's nearly 97% carbon free!

But more can be done! Tax credits for solar panels on your home can help you generate clean energy for your home. The newest solar farm near Dillon was a significant addition for Montana, and wind power during last month's cold snap kept running even as Colstrip Unit 4 failed for undisclosed reasons (see article on pg. 12).

If you're wondering if these new technologies can work for your community, home, or business, just look around Montana or ask the knowledgeable staff at **MEIC** – we all need to act before climate change becomes even worse.

Neal Ullman has advocated for Montana's environment both in Congress and alongside MEIC's lobby team as a lobbyist for Montana Conservation Voters. As a congressional staffer, he defended the Clean Water Rule and the Clean Air Act. Neal works tirelessly to address climate change, expand clean energy, and protect Montana's streams and rivers.

A Hard-Fought Victory for Clean Water at the Rosebud Mine

by Derf Johnson

More than a decade of dogged advocacy and laser-focused persistence has paid off: The Montana Supreme Court found in favor of **MEIC** and our partners on a number of important, precedent-setting claims in regard to the permitting of a coal mine expansion in southeastern Montana – the Rosebud Coal Mine. The precedent set by the case will hopefully cause the Montana Department of Environmental Quality (DEQ) to hit the "reset" button on coal mine permitting here in the Big Sky State and assure that water quality adjacent to coal mines is protected, as required by state and federal law. A thanks is in order, as **MEIC** would not have achieved this victory without the excellent legal representation of our attorneys: Shiloh Hernandez (formerly with WELC and now with Earthjustice), Walt Morris, and Roger Sullivan.

The Rosebud Coal Mine is the sole supplier of coal for the Colstrip coal-fired power plant. Coal is mined at Rosebud, trucked to a conveyor, and then sent to the plant where it is burned. Before Units 1 and 2 retired in 2022, Colstrip was capable of burning a railcar's worth of coal every five minutes. While one-third of the energy production capacity of the plant no longer operates, the Colstrip plant still consumes an enormous amount of coal (6 million tons annually) and billows almost 11 million tons of greenhouse gas pollutants into our atmosphere each year. It is by far the largest greenhouse gas polluter in Montana and one of the largest in the western United States.

Over several decades, the Rosebud mine has stripped an area the size of the City of Billings, with enormous ramifications for the water quality and quantity in the area. Ultimately, the Montana Supreme Court found that DEQ and the Board of Environmental Review (BER) did not adequately consider the coal mine's impact to water resources, including "cumulative" impacts from the mine and the length of time pollution would be allowed to occur. The court also found that the BER hearings examiner improperly refused to consider evidence presented by conservation groups.

The water quality protections afforded by the rule are particularly critical for Montana; in such an arid state, water will exponentially increase in value as our climate warms. This is particularly true in southeastern Montana, where the stream in question (Armells Creek) has been hammered by decades of coal strip mining. As noted by the court, since 2006, "DEQ has designated the stream as impaired and failing to achieve water quality standards for supporting growth and propagation of aquatic life." Now, in issuing coal mine permits, DEQ must consider whether the cumulative hydrologic impacts will cause "material damage" to area waters, which includes violation of water quality standards. DEQ ignored this duty when it approved the expansion of the Rosebud strip mine that DEQ itself found would extend the creek's water quality impairment for "tens to hundreds of years."

The Montana Supreme Court has remanded the matter to DEQ to consider the cumulative impacts of the permit amendment on area waters, including an analysis of prolonged pollution that will emanate from the mine expansion. While this process will be important for protecting what's left of Armells Creek, there is also far more work to be done on coal mine expansions and the protection of our water (see article on pg. 14). The precedent set by this case will hopefully require that not only are state and federal laws followed, but that clean water remains a priority for the Montana DEQ.

Protect the Smith

Sign the mineral withdrawal petition

The Smith River is one of Montana's most beloved rivers. It is a lifeblood for southwest Montana, providing major, irreplaceable cultural, ecological, and economic benefits. Proposed industrial-scale mining in the headwaters of the Smith River drainage threatens serious environmental damage and perpetually polluted waters that will forever change the character and nature of this iconic river. Now, there's a chance to help protect the Smith River for present and future generations.

The U.S. Forest Service could proceed with an administrative "mineral withdrawal" on certain federal public lands in the Smith River watershed. This withdrawal would prevent mining activity in this area and protect this cherished resource, while still allowing for traditional uses of these public lands. A mineral withdrawal in this watershed has been publicly endorsed by the Fort Belknap Indian Community and the Confederated Salish and Kootenai Tribes.

Sign the petition asking the Forest Service to protect the Smith River by proceeding with an administrative mineral withdrawal.

Sign the petition!

Scan the QR code with your camera, or visit www.meic.org/action-center.

Businesses, Health, and Conservation Groups Say PSC Must Consider Climate

by Nick Fitzmaurice

On Feb. 28, **MEIC** filed a formal petition with the Montana Public Service Commission (PSC), in partnership with businesses, organizations, and energy leaders from across Montana, requesting the PSC adopt a rule requiring consideration of climate change in its regulation of Montana utilities. Such consideration would bring its decisions in line with its constitutional mandate to maintain and improve a clean and healthful environment for present and future generations. **MEIC** is one of about 40 official petitioning organizations and businesses in this filing alongside Bridger Bowl, Montana University System student governments, Blackfoot Brewing, health professionals, and others. **MEIC** worked closely with partners at Gallatin Valley Sunrise, Families for a Livable Climate, Western Environmental Law Center, and Earthjustice to organize this effort.

The Montana Constitution guarantees all citizens the right to a clean and healthful environment. The ruling from last summer's historic *Held v. State of Montana* youth climate trial confirmed that this constitutional right includes the right to a healthy climate. A primary outcome of this trial was that the District Court threw out laws recently enacted in the 2023 Legislative Session that attempted to limit the ability of state agencies to consider climate impacts in reviews under the Montana Environmental Policy Act (MEPA). The judge found not only that such limitations are unconstitutional, but that state agencies are required to analyze climate impacts for major projects. While the Montana Public Service Commission (PSC) is explicitly exempted from MEPA, it is not exempt from complying with the Constitution.

The Helena district court declared that, under Art. II, Sec. 3 of the Montana Constitution, Montanans "have a fundamental constitutional right to a clean and healthful environment, which includes climate as part of the environmental life-support system." (*Held* Order, p. 102, ¶ 7). The court also found that Art. IX, Sec. 1 of the Montana Constitution places "an affirmative duty upon the government to take active steps to realize this

right." (*Held* Order, p. 96, ¶ 45) Critically, the court determined that "Montana's climate, environment, and natural resources are unconstitutionally degraded and depleted due to the current atmospheric concentration of GHGs and climate change." (*Held* Order, p. 98, ¶ 50). (You can read the full *Held* decision on **MEIC**'s website: www.meic.org/held-v-montana)

The PSC is an elected body charged with ensuring that "ratepayers" (i.e. utility customers) have continued access to utility services that are affordable, reliable, and in the public interest. Five commissioners represent PSC districts across the state, serving as the last line of defense in protecting utility customers from monopolies, as well as creating opportunities for Montana to take advantage of its enormous, low-cost renewable energy potential. This rulemaking request is an opportunity for the PSC to protect ratepayers from the profit-seeking and environmentally destructive actions of monopoly utilities such as NorthWestern Energy, while seizing the opportunities of renewable energy resources in Montana. As residential customers' electricity rates rise dramatically, NorthWestern continues to invest in expensive fossil fuel infrastructure, which will take decades to pay off, continuing to drive up rates. Meanwhile, fossil fuel combustion is responsible for the majority of the greenhouse gas emissions both in Montana and globally, disrupting the delicate balance of Earth's climate systems. In this rulemaking request, the PSC has the opportunity to comply with its constitutional duty and prevent climate harms from utilities such as NorthWestern.

The list of joint petitioners covers a broad representation of Montanans as a reflection of the pervasive impacts of climate change. The PSC can protect present and future generations, guaranteeing equity in its decisions regarding Montana's energy system and making decisions that protect the most vulnerable from the harms of the fossil fuel industry.

Montanans have the right to petition the PSC to request the adoption of new or amended rules. This rulemaking petition asks the PSC to include consideration of the economic, social, and environmental implications its regulatory decisions have on the climate. In light of *Held*, the PSC must update its rules and practices to comply with Montanans' Constitutional right to a clean and healthful environment – including a healthy climate.

This filing kicks off an up to 60-day window wherein the PSC can decide whether to take up the petition and initiate rulemaking, or deny the request in writing. In this window, the PSC will likely accept input from the public and has the option to hold a public hearing in order to hear from concerned Montana residents and the petitioners on the importance of adopting the proposed rules. At a minimum, there will be an opportunity for public participation at the PSC's weekly business meeting when this decision is put on the agenda. You can provide your own public comments during one of these meetings at the PSC's offices in person in Helena or remotely. You can also submit written comments via email to pschelp@mt.gov.

Notably, accepting the rulemaking petition would not adopt the rules, but would be the first step of the process. The PSC would then kick off a rulemaking process, including another round of public participation opportunities and an additional deliberation period. If the PSC denies the rulemaking request, it would be acting in violation of its obligation to abide by Montana's Constitution, and the fundamental right to a clean and healthful environment.

Join MEIC at two Supreme Court hearings this spring.

Join us in court as our attorneys argue our cases for the Smith River and a healthy climate:

- Our Smith River mine case will be heard Friday, March 29, at 10:00 a.m. in the Dennison Theatre (formerly called the Missoula Theatre) on the campus of University of Montana in Missoula, with an introduction to the oral argument beginning at 9:30 a.m.

- The second case against DEQ over its approval of NorthWestern Energy's Laurel gas plant will be heard on Earth Day, Monday, April 22, at 10:30 a.m. in the Strand Union Building, Ballroom A on the campus of Montana State University in Bozeman.

New Imaging Reveals Invisible Pollution at Refineries and in the Home

by Nick Fitzmaurice & Katy Spence

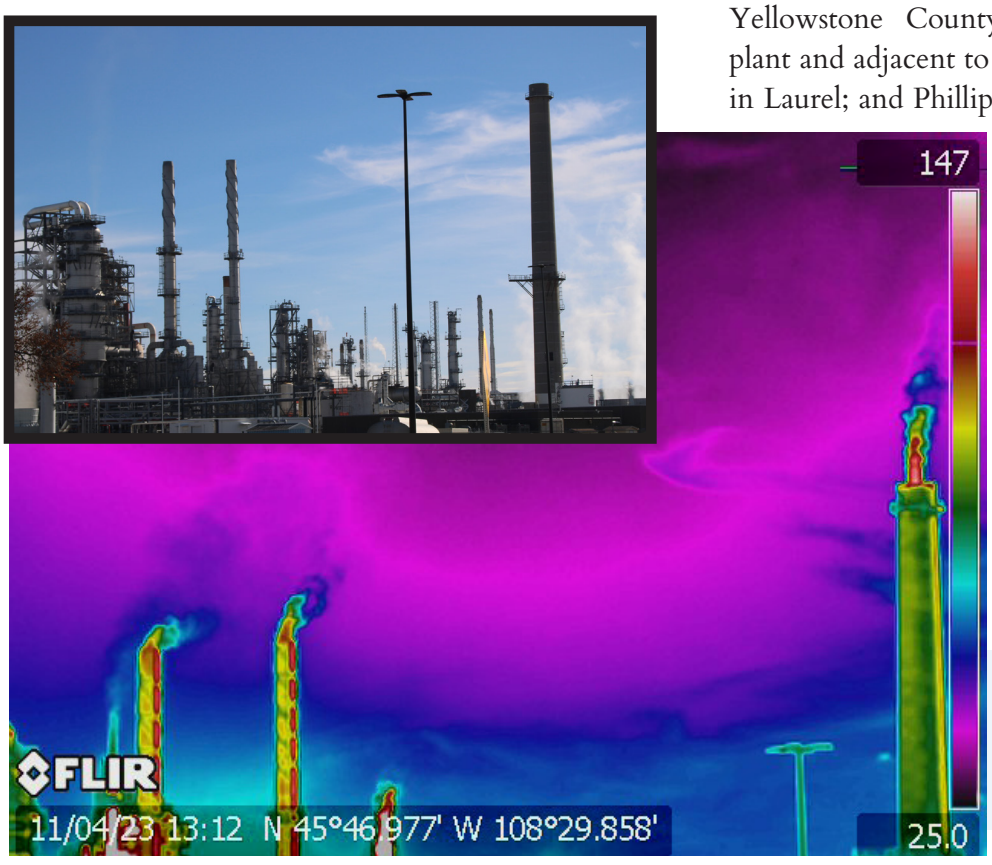
What would you do if you discovered invisible pollution pouring out of the refinery next door, or right out of the gas stove in your home? Unfortunately, that's exactly what is happening, and **MEIC** staff has seen it with our own eyes.

Leaky Refineries

The oil and gas industry is riddled with pervasive methane leaks, from fracking fuels out of the earth, to transporting them via pipelines, to storing them in above and underground tanks, to processing them at petroleum refineries. In November, the **MEIC** team got to see this undocumented pollution with help from our friends at Earthworks and a special, very expensive camera.

The Forward Looking InfraRed (FLIR) camera uses technology capable of detecting volatile organic compounds (VOCs), including known carcinogens such as benzene, and greenhouse gases such as methane. This camera was specially attuned to methane and similar VOCs, explicitly excluding visual capture of carbon dioxide (CO_2) emissions. The FLIR camera captures the unique signature of VOC infrared radiation to identify emissions from incomplete flaring, gas leaks on pipelines and storage tanks, routine oil and gas processing operations, faulty equipment, accidents, and intentional releases by operators. Earthworks' FLIR camera is specially equipped with a telephoto lens that documents this pollution that is otherwise invisible to the human eye.

Derf Johnson and Nick Fitzmaurice traveled to Billings with Earthworks' Andrew Klooster and Bonnie Gestring to see for themselves the invisible pollution emanating from three refineries located on the banks of the Yellowstone River in and immediately around Billings: the Par Montana Refinery, located in Lockwood directly opposite a residential community on a bluff overlooking the Yellowstone; CHS Refinery located just upstream of NorthWestern's proposed Yellowstone County Generating Station methane plant and adjacent to a nearby residential community in Laurel; and Phillips 66 Refinery, located directly in downtown Billings.



The FLIR camera captures invisible emissions from the Phillips 66 Refinery in Billings. Images by Earthworks.

This FLIR imaging shows that pollution is present, but the quantitative volume and exact composition are unknown – the Montana Department of Environmental Quality (DEQ) does not measure or account for these invisible emissions. Yet, DEQ just renewed Phillips 66's air quality permit in 2023. That's

like approving a highway expansion without checking a map to see what environments and communities will be paved over.

Methane gas is over 80 times more potent than CO_2 at trapping heat in the atmosphere over a 20-year period, while the impacts of methane on human health are significant and well-documented. In January, the Environmental Protection Agency dubbed methane a "super pollutant" and proposed a new rule to reduce wasteful methane emissions from oil and gas operations. These rules follow a previous set of methane regulations that the agency finalized in December of last year.

VOCs are well-documented to cause eye, nose, and throat irritation; headaches, loss of coordination and nausea; and damage to the liver, kidney, and central nervous system. Some are suspected or known to cause cancer in humans and animals.

Methane Gas in the Home

The Clean Air Act is an essential federal policy that regulates all sources of outdoor air emissions. However, there is no Clean Air Act for indoor emissions, leaving indoor air quality largely unregulated and often more polluted than air outside the home. Toxic emissions emanate from leaking gas lines and appliances, lingering with poor ventilation – even your scented candles can contribute to unhealthy indoor air quality. The health impacts are magnified by the fact that we sleep and spend a lot of waking hours in our homes.

Specifically, there is well-documented information on the pollution and associated health risks from gas stoves – even when turned off – including higher risks of childhood asthma. Beyond Toxics, an Oregon-based nonprofit, used a similar FLIR camera in conjunction with quantitative air quality monitors to capture this pollution leakage from indoor gas stoves in residential homes.

Significantly, Beyond Toxics found that 82% of homes registered chronically hazardous levels of nitrogen dioxide as a result of methane combustion, a serious risk for vulnerable populations. Nitrogen dioxide and an assortment of VOCs were documented as being produced by gas stoves and then spreading beyond the kitchen throughout homes, including in dining rooms, ground floor rooms, and upper floors.

Beyond Toxics used a FLIR camera to document emissions from indoor gas stoves, like this one at the moment of ignition.

In almost all cases, built-in stove ventilation was inadequate to protect occupants from these emissions.

What Can You Do?

As we learn more about the dangers of methane and related VOCs, it's clear that we need to take steps to address the associated climate and health risks.

At the state level, we need to push DEQ for more stringent monitoring of these emissions at petroleum refineries, taking measures to hold the refineries accountable for the pollution they're pumping into the air. Refineries must regularly renew their air quality permits, and **MEIC** will let you know when it's time to speak up.

In your home, transition away from gas cooking and heating appliances if you are able. Some members of the **MEIC** team have used induction stoves in their homes and highly recommend them as an efficient and high-performance cooking alternative. Don't forget to research state and federal incentives for electrifying your home, such as an up to $840 rebate on the purchase of a new electric stove, cooktop, range, or oven as part of the Inflation Reduction Act's Home Electrification and Appliance Rebate Program. Montana DEQ will administer this program, slated to roll out sometime this year.

If you are unable to invest in a new appliance at this time, Beyond Toxics recommends increasing ventilation to help dissipate toxic emissions, and a counter-top induction hotplate can be an effective and affordable short-term alternative to using your gas range stove.

NorthWestern Plows Ahead with Boondoggle Gas Plant

by Anne Hedges

The January winter storm proved that NorthWestern Energy has dedicated linemen and on-the-ground employees; unfortunately, not everyone working for NorthWestern is so dedicated to their customers. Instead of protecting customers from unaffordable increases in electric bills, NorthWestern executives are plowing ahead with two fossil fuel projects that will increase customers' bills without providing the reliability that customers need (see article on pg. 12).

Despite failing to obtain approval to build its large industrial facility on property near Laurel that is zoned as agricultural, NorthWestern is nearly finished in building a methane gas power plant and is now daring anyone to try and stop it. For years, the City of Laurel and Yellowstone County both refused to force NorthWestern to obtain approval before building the plant. Both claimed the other had the authority to change the zoning. Finally, Earthjustice, on behalf of local residents known as the Thiel Road Coalition, Northern Plains Resource Council, and **MEIC**, sued in order to get a court decision that clarified who was responsible for changing the zoning. On Feb. 5, the court ruled that the County is responsible for the zone change.

The Yellowstone County and City of Laurel City/County Planning Board held a hearing on Dec. 20 regarding changing the local land use plan to create a 1,000-acre industrial zone to accommodate NorthWestern's gas plant and numerous undefined major industrial operations along the banks of the Yellowstone River. The Planning Board postponed its decision to mid-January when faced with strong community objections, but the rescheduled hearing met the same fate. Unfortunately, it seems clear that Yellowstone County intends to do everything in its power to accommodate whatever NorthWestern requests, and a zone change feels inevitable regardless of the serious concerns of existing landowners in the area.

It's unthinkable that the citizens of Laurel would be ignored so many times in their quest to be heard. It's another in a long line of questionable decisions from NorthWestern executives, who continue to mislead the public, rake in millions of dollars every year, and fail to guide the company toward the modern energy era. If the value of NorthWestern's stock is any indication, the utility is not on a good path for customers or investors; the stock has lost 40% of its value over the last four years.

MEIC is also challenging the state's permit for the gas plant based upon the Department of Environmental Quality's (DEQ) failure to consider the climate impacts of the methane-burning plant. The district court agreed that DEQ should have considered climate change in its air permitting process. However, after the 2023 Legislature changed the law to prohibit state agencies from considering climate change when issuing permits, the judge maintained the decision that the state was required to consider climate impacts, but he allowed the utility to continue building the gas plant while DEQ conducted the proper review. Almost a year later, DEQ has yet to conduct that review. The district court decision is now on appeal to the Montana Supreme Court.

Finally, NorthWestern still needs permission from the Montana Public Service Commission (PSC) to charge customers for the gas plant. NorthWestern has requested permission twice, **MEIC** has objected twice, and NorthWestern has withdrawn its request twice. Unfortunately, the PSC decision in the rate case allows NorthWestern to return once more using a novel, unrelated process that allows it to submit a request to seek cost recovery whenever it wants. **MEIC** will be ready to go when this docket starts, and will push back on NorthWestern's false narrative that only methane gas can provide the reliability that customers demand. For NorthWestern, facts don't seem to matter and it has yet to explain why gas has failed to be a reliable resource during the most extreme weather events.

Turn Off That Leaky Pipeline:
Methane Gas No Cleaner Than Coal

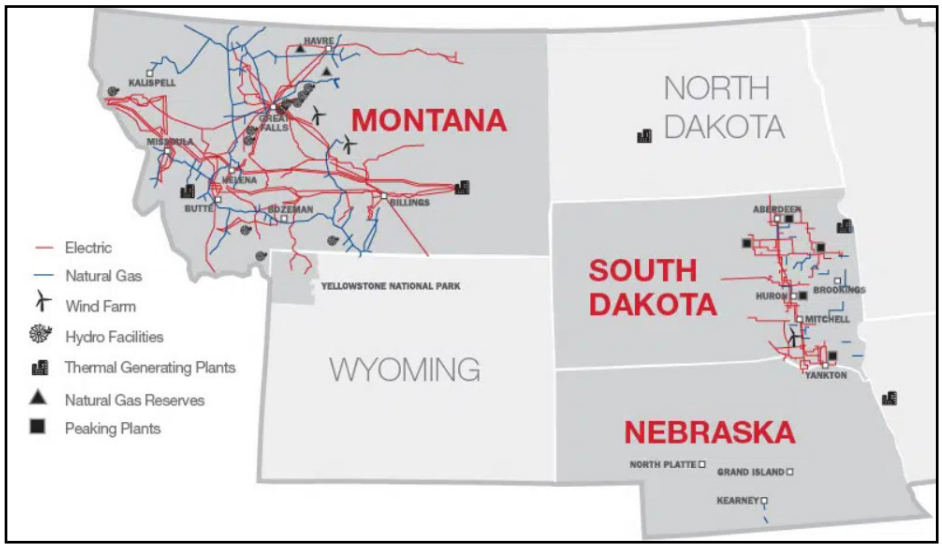
by Nick Fitzmaurice

NorthWestern Energy is a combined electric and gas utility, operating as the monopoly energy provider throughout most of Montana. Electricity is generated at power plants throughout the state, delivered efficiently to customers at nearly the speed of light over conducting wires that make up a complex transmission and distribution system. Methane gas, on the other hand, is a fuel with its own mass that is burned to generate electricity and also for the end uses of space heating and cooking. While there are still ample opportunities to bolster electric power line infrastructure to improve both capacity and efficiency, delivering methane gas to utility customers is far less efficient, with real environmental and public health damages throughout transmission and distribution pipeline systems.

Methane gas has long been touted as a "bridge fuel" in the energy transition as coal electricity generation is phased out and replaced with renewables. When methane gas is burned in "perfect combustion," the products are heat energy, water, and carbon dioxide (CO_2). CO_2 emissions from perfect methane combustion are much lower than the CO_2 released from burning coal to extract the same amount of energy, thus the claim that methane can replace coal in electricity generation to drastically reduce greenhouse gas emissions. However, methane itself is a potent greenhouse gas, and when released into the atmosphere it has over 80 times the climate warming potential of CO_2 over a 20-year period. Perfect combustion alone is an erroneous assumption, with methane and other harmful byproducts resulting from imperfect methane combustion in homes and power plants. Meanwhile, leakage throughout NorthWestern's pipeline system dumps methane straight into the atmosphere without capturing any of its energy benefits. A recent analysis by the Rocky Mountain Institute (RMI) demonstrates that climate impacts of methane gas may reach parity with coal when methane leaks at just a 0.2% rate.

In 2022, NorthWestern Energy reported that its methane gas pipeline system contains approximately 9.6 leaks per 100 miles. Operating 9,934 miles of transmission and distribution pipelines, that would indicate 954 leakage points throughout NorthWestern's methane gas pipeline system (see map from NorthWestern below). While the total volume lost through these leaks is unknown, this leak rate explicitly excludes the 200 million cubic feet of methane gas (4,000 tons) lost annually due to excavation damages. In 2022, NorthWestern reported transporting approximately 81.8 billion cubic feet of methane gas (over 1.6 million tons), meaning it had an over 0.24% leakage rate from excavation damages outside of the company's control alone. Indeterminate emissions from the 954 leaks throughout NorthWestern's system would only increase that leakage rate.

NorthWestern's leakage rate of *at least* 0.24% from excavation damage already exceeds the 0.2% threshold put forth by RMI. While there are different ways to calculate this parity point, one thing is clear: NorthWestern's methane gas is NO BETTER THAN COAL. Mitigating climate change requires abandoning all fossil fuels, including methane, and replacing them with carbon-free renewable energy resources, while electrifying our homes and businesses. Methane gas is not a climate solution, and the "bridge fuel" narrative belongs in the dustbin of history.

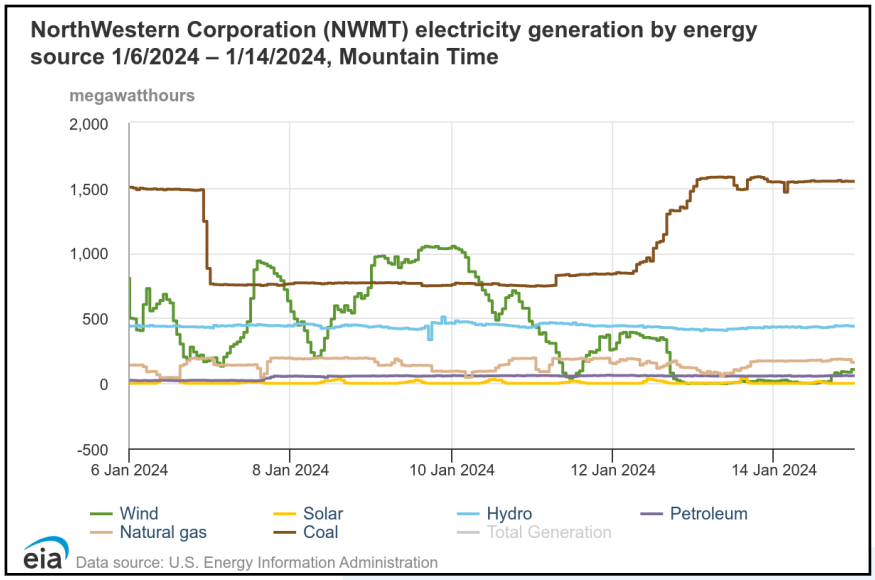


Poor Planning and Misguided Investments Put NorthWestern Customers at Risk

by Nick Fitzmaurice

A version of this article originally ran as an op-ed in news publications across the state.

In early January, the Northwest faced extremely cold temperatures. With seasonal extremes come peaks in energy demand as heaters work harder to keep homes and businesses safe and warm. NorthWestern Energy, Montana's primary electricity supplier, attempted to address this peak demand with a news release and pandering media coverage. However, there is more to the story.



Wind out-performed coal for several of this winter's coldest days.

NorthWestern once again twisted the facts to the public, using this cold weather event to claim that Montana needs expensive coal and methane thermal resources for extreme conditions like these. This is far from the truth. In fact, coal and methane generation sources are the true Achilles' heel of reliability in extreme cold. As the cold front descended on Montana, one of the Colstrip plant's two units went down on Sunday, Jan. 7, not coming fully back online until early Saturday, Jan. 13, when the higher demand for energy was already upon us. Temperatures dropped below freezing on Jan. 10 and did not reach above-freezing levels again until Jan. 21, remaining in the deep negatives for several days between Jan. 11 and 15. Based on NorthWestern's own forecasts, it knew well in advance that more power would be needed starting Jan. 10.

Methane gas has proven no more reliable than coal. NorthWestern constantly claims that more gas generation is necessary to provide power during these extreme weather events. However, instead of operating at full capacity during these peak times, the data show that during the two most recent cold snaps, NorthWestern's gas plants significantly underperformed. This is not uncommon for gas plants during extreme weather events. On Jan. 9, the Union of Concerned Scientists published "Gas Malfunction: Calling into Question the Reliability of Gas Power Plants," a report which highlighted reliability challenges for methane gas in extreme conditions. Methane gas' unreliability was the main cause of the 2021 rolling blackout in Texas as Winter Storm Uri knocked out most of the gas generation backups on the system. Last year's Winter Storm Elliott brought rolling blackouts to the East Coast, where gas plants made up the majority of power plant outages. The concerns of the report were again confirmed in the January event when Washington State faced a methane gas shortage as a major storage facility was forced to shut down during the winter storm.

NorthWestern has been sounding the alarm on a capacity shortage in Montana, using this claim to justify construction of the expensive Yellowstone County Generating Station methane plant and its impending acquisition of more of the Colstrip plant, which will drive rates up even further. However, the availability of "24/7 on-demand generation" from coal and methane plants is a well-documented myth. Perpetuating that myth puts money into NorthWestern shareholders' pockets as ratepayers foot the bill for the utility's risky investments and pay ever-increasing rates (such as the 28% rate increase NorthWestern was just granted).

We stumbled through this winter storm, and luckily our lights and heat stayed on. But customers need more than luck. Customers need a robust, reliable,

and affordable energy system.

If we want to ensure reliable electricity in Montana, particularly in the most extreme conditions, we must look to renewables and bolster Montana's transmission network as part of a more advanced grid management system that allows utilities to optimally and cost-effectively share power across the West. Winds soared as the cold front rolled in on Wednesday, exceeding coal and gas generation that day to meet nearly half of NorthWestern's electricity demand with excess generation to export. Paired with short- and long-term storage, excess generation could be captured and dispatched once winds die down. Demand-side management can also be deployed to shift non-essential energy consumption away from peak periods, further reducing the strain put on the grid by these extreme weather events.

Montana's abundant and cost-effective wind resource can be harnessed to meet energy demands both within the state and across the West. During this cold weather event, NorthWestern indicated the volatility of prices on the energy market, but the utility will soon have more market options to keep prices down. NorthWestern is currently a part of the Western Energy Imbalance Market, a regional energy market that allows utilities to purchase electricity to meet demand in real time (traded up to an hour ahead). It was because of its participation in this market that NorthWestern was able to buy out-of-state power during this cold weather event, keeping the lights on in Montana with mostly solar electricity from the Southwest. Real-time regional transactions can be clunky and challenging to optimize, particularly

story continues on pg. 26

The Truth about NorthWestern's Carbon-Free Generation

In a recent Montana PBS special, the CEO of Montana's monopoly utility, NorthWestern Energy, expressed frustration that the company doesn't get more credit for its carbon-free energy resources. While it is true that more than half of the utility's electricity comes from carbon-free resources, NorthWestern's contribution to those sources is negligible. Almost all of these resources are either contracted (many of which NorthWestern is required to enter into under the federal Public Utility Regulatory Policies Act [PURPA] of 1978) or hydro that NorthWestern bought from PPL Montana at an inflated price following the dissolution of the Montana Power Company as a result of deregulation. None of these have been built on NorthWestern's initiative.

The largest wind resource in NorthWestern's portfolio, the Judith Gap Wind Farm, which supplied over 6% of the utility's delivered electricity in 2022, is on a contract set to expire in 2026. Unlike most of NorthWestern's wind and solar resources, this contract is not required under PURPA. Rather than announcing plans to renew this contract, NorthWestern instead plans to acquire further ownership in the Colstrip coal plant that same year, citing a dubious "capacity shortage" in its portfolio. Having built almost no clean energy infrastructure of its own, the company is doubling down on investments in additional fossil fuel resources such as the proposal Yellowstone County Generating Station (YCGS) methane plant near Laurel and this impending Colstrip acquisition.

Meanwhile, NorthWestern is celebrating its backhanded agreement with Missoula County and the Cities of Bozeman and Missoula to implement a "Green Power Program." The Green Power Program allows participating customers to pay a premium for clean power generated at a dedicated renewable energy facility for the program. This is a win for the local governments who have worked tirelessly over the last several years to budge the utility into clean energy development, and it will help those communities reach their clean energy goals. Unfortunately, the program is capped for an initial project of no more than 50 megawatts (MW) of capacity, paling in comparison to capacities at the YCGS and in the additional ownership of Colstrip. Judith Gap was built in 2005 and has 135 MW capacity, with wind turbine technology advancing substantially over the last 20 years to generate more power at cheaper costs (the largest wind farm in the U.S. is 1,550 MW). NorthWestern should not be celebrated for charging utility customers more for clean electricity that it could be building on its own initiative as a more affordable alternative to its fossil fuel resources. As the largest utility in Montana, NorthWestern can and should do more to build out significant clean energy generation capacity, and the path forward is clear.

The Inevitable Wind-down of Montana's Coal Mines

by Derf Johnson

Montana is part of a region in the United States known as the Powder River Basin, currently the largest coal-producing region in the country. Over the past 50 years, coal mining corporations have stripped hundreds of millions of tons of coal from the ground in Montana and Wyoming, which was ultimately sent to coal-fired boilers across the country and the world for electricity production… and billions of tons of carbon emissions. Zeroing in on the state of Montana, coal production peaked in 2014 at 44 million tons of coal. This past year (2023), however, Montana will have mined approximately 28 million tons of coal, a roughly 2.5% reduction from 2022, and a 36% reduction from its peak in 2014.

Why such a dramatic reduction? Cheaper and cleaner energy sources are dominating the mix of new power production facilities, and coal is surely and steadily being phased out. Case in point, coal produced over 50% of electricity generation in 2008 in the U.S. Data from October 2023 pegs the current share at 19% and declining. Meanwhile, the combination of clean and renewable wind and solar production exceeds coal-fired power production at the national level.

Montana is also experiencing the retirement of coal fired and growth of renewable energy. With the retirement of coal-fired units here in Montana and across the country – Colstrip Units 1 and 2 in 2022 (700 megawatts), closure of the Lewis and Clark Station in 2021 (50 megawatts), the 2025 retirement of Washington's Centralia plant (730 megawatts), and the impending closure of some large coal-fired plants in the Great Lakes area within the decade – it is virtually guaranteed that Montana will be mining far less coal in the next 10 years. Recent data from NorthWestern Energy further articulates this transition: wind and solar production now exceed NorthWestern's production from coal-fired sources.

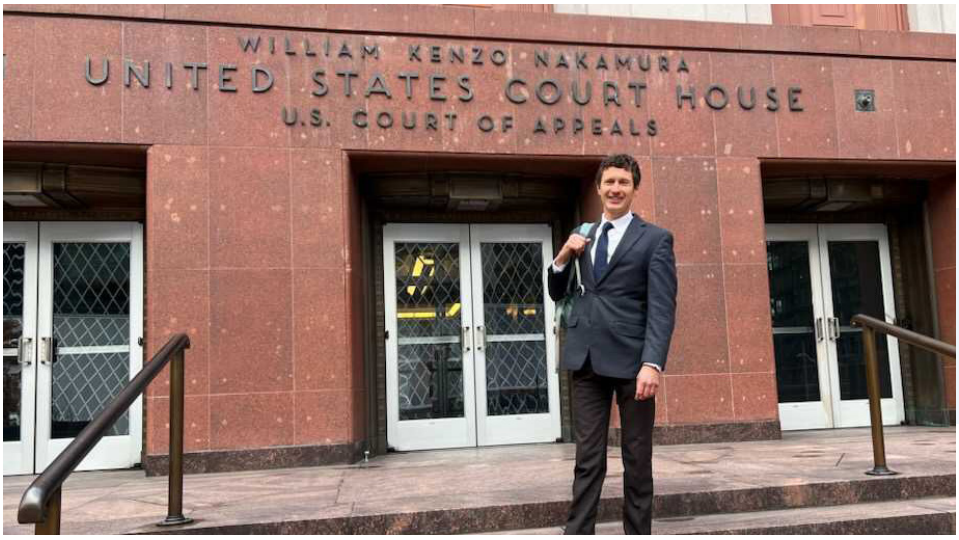
There are still four operating coal mines in Montana with various coal production levels. The Spring Creek Coal Mine is Montana's largest by production, producing over 10 million tons annually. The Rosebud Coal Mine exclusively serves the Colstrip coal-fired power facility and produces approximately 6-7 million tons annually. The Bull Mountain Coal Mine near Roundup is Montana's only underground coal mine and produces approximately 6-7 million tons annually, which is primarily shipped overseas. Finally, the Absaloka Coal Mine in southeastern Montana produces approximately 1-2 million tons annually.

As Montana's coal-fired power production continues to decline (along with its associated carbon emissions), **MEIC** is intent on assuring that our water and air are protected and that the land is adequately reclaimed. This includes lobbying at the Montana Legislature, holding the U.S. Office of Surface Mining (OSM) accountable, activating our membership for critical comment periods and hearings, and going to court to enforce the law.

OSM Rejects Two Montana Laws, Two More in Review

In agreeing to administer the permitting and regulation of Montana's coal mines back in 1980, the Montana DEQ entered into a relationship of "cooperative federalism" with the federal government, in which Montana makes the permitting decisions, but the program must be as stringent as the federal program and any changes in the program are subject to federal review and approval by OSM. In summer 2023, two laws were submitted by DEQ to OSM for approval. The first law (**SB 328**, Sen. Duane Ankney, R-Colstrip) passed in the 2021 legislative session and would have dramatically weakened the bonding regulations for reclamation of coal mines, which **MEIC** opposed. The second law (**SB 201**, Sen. Duane Ankey, R-Colstrip) passed in 2019 and would have required that coal mining corporations bond for its workers' pensions in the event of bankruptcy, which **MEIC** supported. In the fall of this year, both of these changes were rejected by OSM on a number of grounds.

This is significant, as the OSM is also considering two major changes from the 2023 Legislative Session that would dramatically weaken coal mining regulations



MEIC was represented by Earthjustice in the Rosebud Coal Mine victory. Thanks to Shiloh Hernandez for his continued work and support! Photo by Derf Johnson.

and citizen oversight. **HB 576** (Rep. Rhonda Knudsen, R-Culbertson) would dramatically weaken Montana's water protections for coal mines. Additionally, **SB 392** (Sen. Steve Fitzpatrick, R-Great Falls) would prevent citizen oversight of coal mines by exposing citizens and organizations to the expensive legal fees of coal mine corporate attorneys if they challenge permitting actions. **MEIC** vehemently opposed both of these bills. Recently, OSM indicated that it has made a final decision on the two laws, which is now in the approval process by its Director. As of this writing, we do not know whether OSM has approved or denied these laws. However, with any hope, OSM will not cave to political pressure and will deny these obviously problematic laws and assure that clean water and folks that are impacted by coal mines are adequately protected.

Rosebud Coal Mine: MEIC Wins at the 9th Circuit

With approval from OSM and DEQ, the Rosebud coal mine is currently expanding into a very large area known as Area F. For years, **MEIC** has been challenging this expansion, on the grounds that the expansion would destroy critical water resources, impact endangered pallid sturgeon, and grease the skids for millions of additional tons of carbon pollution. Back in fall 2022, a federal judge in Billings agreed with our concerns and ordered the government to redo its analysis. Meanwhile, Western Rosebud Mining (WRM) appealed an aspect of the judge's decision, primarily dealing with the ability for **MEIC** to demonstrate standing. Thankfully, the 9th Circuit panel rejected WRM's appeal outright in the fall, meaning that we will continue to pursue our concerns regarding the Area F expansion to the Rosebud Mine once OSM's new analysis is released.

Bull Mountain: DEQ's Water "Replacement" Plan for Coal Mine Heard in Billings

The Bull Mountain Coal Mine practices a form of underground mining known as long-wall, in which massive, sweeping machinery works in panels to steadily eat away at the face of the coal seam in a methodical fashion. The net effect to the surface is devastating, and the Bull Mountains have suffered from large cracks and subsidence as the ground caves into the mine void. Additionally, the operation undermines springs, which then are dewatered due to the void created underneath them. If water resources are impacted or dewatered, such as springs, the Surface Mining Control Reclamation Act (SMCRA) requires that DEQ develop a plan for adequate replacement water. Unfortunately, DEQ has failed to do this at the Bull Mountain Mine, which is especially concerning due to the limited water resources in the area and the critical importance of water for agricultural operations. In February, **MEIC** had a hearing in District Court in Billings on its work to improve the water replacement plan for the Bull Mountains and to hold both DEQ and Signal Peak (the owner/operator of the Bull Mountain Coal mine) accountable. A decision will be released within the next several months.

MONTANA'S ENERGY TRANSITION

by Nick Fitzmaurice

In our previous issue of *Down to Earth*, I introduced the concept of the energy transition as we decarbonize local and global energy systems to address the climate crisis. This transition includes numerous interrelated components. Previously, I tackled electrification, and in Part 2 of Montana's Energy Transition, I will be diving into electricity decarbonization. Look for future installments of Montana's Energy Transition in our subsequent *Down to Earth* publications, when I will dive into demand-side management (DSM), efficiency measures, transmission infrastructure expansion, power sharing across the West, and other pieces of the energy transition!

Upgrading to Renewables

To truly decarbonize Montana's energy system, fossil fuel power plants must be thoughtfully retired and replaced with renewable electricity generation. Then, as electrification eliminates direct fossil fuel combustion for energy, the electricity we consume will contain no direct greenhouse gas emissions. The longer utilities wait to decarbonize generation portfolios, the more financial risk they will incur with fossil fuel assets. Securitization, enabled by a bill from the 2021 Montana Legislature, offers a viable financing mechanism for utilities to refinance debt on stranded generation assets, easing the economic impact of shuttering fossil fuel plants. Unfortunately, the financial burden faced by utilities and ultimately passed on to ratepayers will only increase the longer utilities drag out this transition.

Where fossil fuel plants are retired, it is important to invest in the affected communities. Recently, the state legislatures of Colorado and Michigan created the "Just Transition Office" and the "Office of Worker & Community Economic Transition," respectively. A similar office could be created within the Montana Department of Labor and Industry to guide the economic and community transitions in fossil fuel-dependent communities across the state. Already, the Colstrip Impacts Foundation offers grants for economic development, workforce retraining, and community adaptation in the Colstrip community. Puget Sound Energy has invested $10 million into this fund, and Avista Energy has donated $3 million for transition. The other Colstrip owners have not invested in community transition. This funding, along with $4.7 million in federal dollars from the Partnership for Opportunity and Workforce and Economic Revitalization (POWER) Initiative to retrain affected workers, remains largely untouched by the Colstrip community.

Replacing fossil fuel generation infrastructure requires a monumental buildout of renewable generation infrastructure and associated grid integration technologies. Montana's greatest renewable energy potential is in our untapped wind resource, and the state also has extensive opportunity to build out both distributed rooftop and utility-scale solar. In 2022, wind and solar produced more electricity for NorthWestern Energy customers than NorthWestern's share of the Colstrip power plant, and current buildout of these renewable resources has only scratched the surface of what is possible. Additionally, existing dams can be upgraded to increase their generation capacity, such as the recent upgrades at the Ryan Dam near Great Falls. Unlike coal and methane gas generation plants whose operations can be scaled to follow demand variations, renewables are dependent on the real-time availability of wind, solar, and hydrological processes (though dams provide relatively stable electricity supply). Integrating this renewable-powered grid with short- and long-term energy storage solutions such as electric batteries and pumped hydro (elevating water to store energy using the potential energy of gravity) can capture energy when it is available, ensuring electricity is reliably dispatched when Montanans need it.

In addition to utility-scale renewable electricity generation, the clean electricity grid of the near future will integrate numerous decentralized components and advanced technologies for optimal functionality. At the

PART 2: DECARBONIZING ENERGY

grid level, operators must accept the end of a decades-old large-scale centralized generation asset paradigm. It is completely feasible to reliably run the electric grid on variable renewable resources, but it will require new practices and more advanced systems. A major example of this shift is the idea of grid "inertia," where the mass of large spinning turbines at centralized power plants provide stability to the grid. These resources are "grid forming," because they establish the voltage and frequency of oscillating electricity on the grid, while variable renewables are traditionally "grid following," dependent on a pre-established voltage and frequency to seamlessly feed electricity into the grid. However, grid-forming inverters are an available technology that enable reliable control of low-inertia power systems based solely on renewables. This technology is already well-integrated into isolated island grids such as on the Hawaiian islands.

Distributed energy resources (DERs) such as rooftop solar can further contribute to energy supply, while also bolstering efficiencies on the grid. When electricity is generated near where it is consumed, transmission losses associated with transporting electricity long distances are virtually eliminated. DERs are devices that consume or produce electricity, potentially also encompassing electric vehicles, smart thermostats, and home batteries. Innovations such as Virtual Power Plants (VPPs), as piloted in several applications across the country, can harness DERs to turn the conventional electricity grid on its head through this more flexible and resilient electricity supply. VPPs rely on decentralized DERs, utilizing a network of batteries (such as residential electric vehicles and battery walls) to store electricity when it is abundant. Advanced software and control systems then dispatch electricity when and where it is needed.

Another huge benefit of renewable electricity generation is that it does not require fuel; while coal and methane gas plants consume constant fuel supplies (constantly polluting) to maintain operations, renewables simply require initial construction then natural processes maintain steady power generation. Therefore, not only does the energy transition eliminate the costs of fuels (passed to ratepayers), but this transition enables additional load reduction by eliminating the energy needed for fossil fuel extraction, processing, and transportation.

Transitioning our massively interconnected electric system that spans the entire continental U.S. and can never be shut "off" poses real challenges along the way as we move from the established system to the end-state fully-renewable system. Realistically, this process will unfold over the next several decades, with the intention of fully decarbonizing the energy system as soon as possible. How rapidly we can accomplish this transition is constrained by real technological deployment and project implementation bottlenecks, but there are ample opportunities for acceleration. It is therefore imperative that we get to work. Both the current and end states are viable from a functional standpoint, so the real challenge of the energy transition isn't designing that final state, but ensuring functionality and reliability throughout the mid-transition.

Electric vehicles can act as local energy storage solutions in a Virtual Power Plant, which relies on decentralized, distributed energy resources.

MEPA Work Group Evaluating Bedrock Environmental Law

by Derf Johnson

Late last summer, the Montana Department of Environmental Quality (DEQ) announced a series of listening sessions and the future creation of a working group to evaluate different aspects of the Montana Environmental Policy Act (MEPA). MEPA is Montana's cornerstone environmental law that guarantees a "look before you leap" evaluation of major projects that could potentially impact Montana's environment. This past fall, folks from across Montana packed hearing rooms in Billings, Helena, and Missoula, as well as remotely, and provided comments on the importance of MEPA. If the listening sessions are any indication of Montana's sentiment on MEPA, then it's clear that Montanans want the bedrock law to be bolstered and strengthened, and that we clearly and unequivocally want DEQ to evaluate climate change as part of its duties under MEPA.

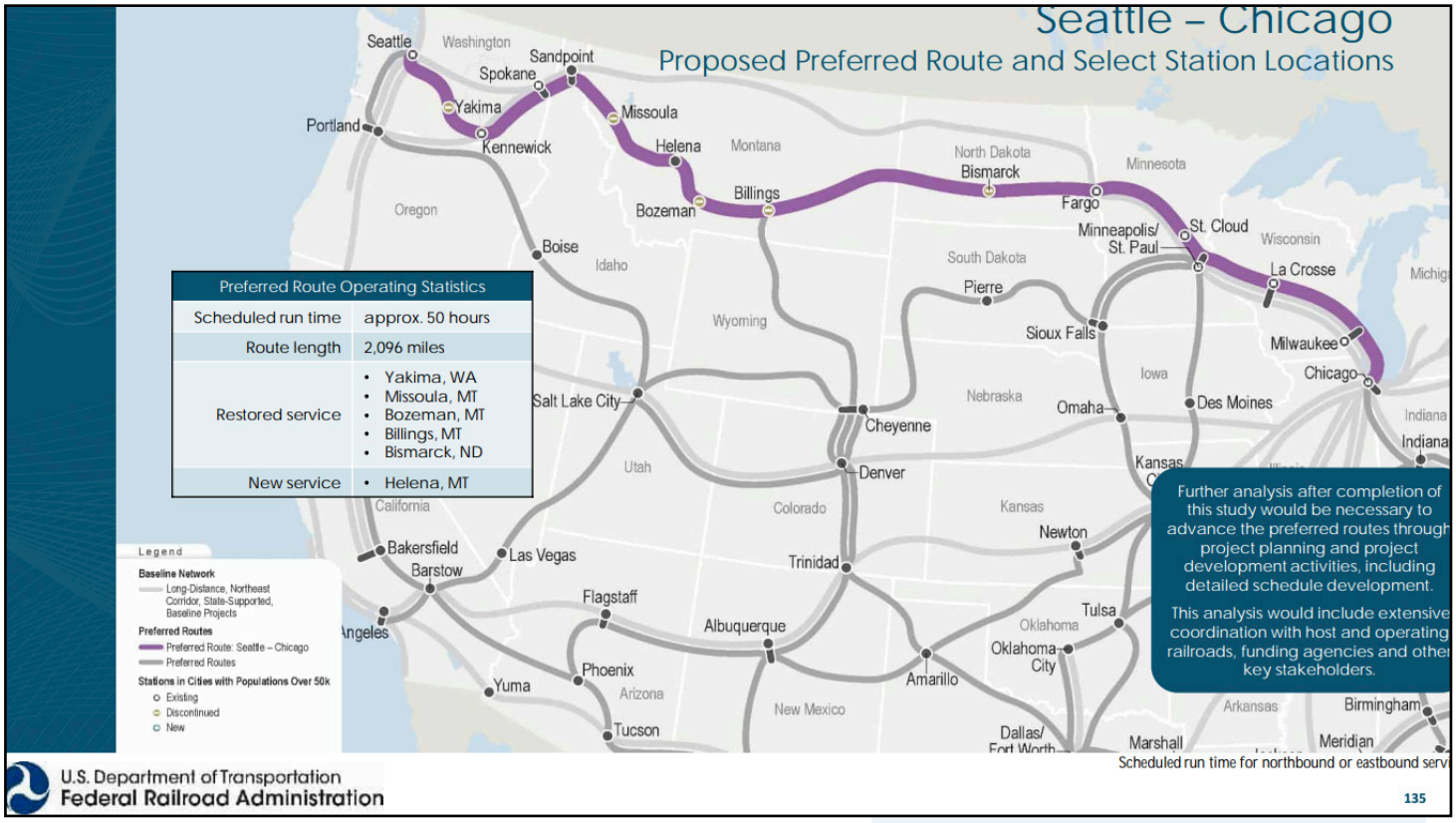
Now that the listening sessions have wrapped up, the DEQ has created a "MEPA Work Group" that is tasked with further discussing and evaluating MEPA and potentially offering recommendations on improving the process. The initial, organizing meeting for the Work Group occurred in January, and there are four scheduled for Feb. 26, March 18, April 29, and May 29. These meetings are open to the public, and the Work Group will also accept comments from the public at the end of every meeting. Additionally, three subgroups will also meet regularly and potentially offer recommendations to the full Work Group. These include the Public Engagement and Education Subgroup, the Climate Analysis Subgroup, and the Process and Applicability Subgroup. For more information, a calendar for the different meetings, and information on how you can participate as a member of the public, visit www.deq.mt.gov/about/MEPA.

In large part, the MEPA Work Group was a response by DEQ following the *Held v. State of Montana* case, a District Court case brought by Montana youth. In that case, the judge ultimately struck down a number of unconstitutional laws prohibiting a robust MEPA process and the evaluation of climate change, and ordered that the DEQ must consider climate change impacts in its MEPA review in order to satisfy requirements under Montana's constitutional right to a clean and healthful environment. Notably, the case is now appealed to the Montana Supreme Court, but the court declined to "stay" the district court ruling, meaning that the DEQ is currently required to consider climate change impacts as part of its analysis.

It is incredibly important that members of the Work Group — including **MEIC** Deputy Director Derf Johnson — and DEQ hear from the public about the important environmental and public participation requirements that MEPA provides. It will also be important for DEQ to hear from the public that it needs to consider the serious consequences of climate change in its permitting actions and that it can do so (and is legally required to do so) today. For more information on the MEPA Work Group process, contact Derf Johnson: djohnson@MEIC.org.

Hundreds of people turned out for the MEPA hearings during the fall, including these high school climate activists in Helena. Photo by Anne Hedges.

The Montana Route That Could



Passenger rail could play a key role in decarbonizing transportation in Montana and across the U.S.

by Nick Fitzmaurice

Do you love trains? Then you won't want to miss this! In December, the Biden Administration awarded more than $15 million to develop and improve passenger rail in Montana, part of $8 billion from the Infrastructure Investment and Jobs Act awarded for rail projects across the country. About $14.9 million is going toward upgrading passenger rail infrastructure on Amtrak's Empire Builder line through northern Montana, with $500,000 awarded to the Big Sky Passenger Rail Authority (BSPRA) to continue planning for the revival of an alternative Chicago-to-Seattle Amtrak route through southern Montana. This route previously ran from 1971 to 1979. This 2,200-mile North Coast Hiawatha route, running near the I-90 corridor, was the longest route identified for rail expansion or revival in the federal program. With only one Amtrak route currently in the state, revival of the North Coast Hiawatha route could connect the Montana cities of Missoula, Helena, Bozeman, and Billings as the only public transportation option connecting Western and Southeastern Montana.

While only a step in a process that will take years, this federal funding is a big win for the effort to bolster and revitalize Montana passenger rail. Upon receiving the $500,000 award, BSPRA's board president Dave Strohmaier told Montana Free Press, "It's now almost certain that the Federal Railroad Administration will recommend that Congress restore the North Coast Hiawatha route." This was confirmed in February when the Northern Hiawatha route was selected as one of 15 long-distance routes tapped for restoration by the federal government.

BSPRA was established in 2020 by a joint resolution of 12 Montana counties with broad governmental powers to develop and operate rail services under a 1993 Montana law, seeking the reestablishment of safe, reliable, and sustainable passenger rail service across southern Montana.

The Legislative "Off-Season:"
Interim Committee Update

by Nick Fitzmaurice, Derf Johnson, & Anne Hedges

The legislative interim committees are in full swing as they tackle studies and start thinking about legislation for the 2025 session. We have yet to see any significant ideas emerge regarding energy and climate, but rest assured there are many months between now and when the committees have to finalize their legislative proposals. For the time being, there are productive bipartisan discussions occurring regarding the protection of Montana's environment, the energy system, the need for improvements, and the need to protect consumers. Whether these amount to anything is to be determined.

The **Energy and Telecommunications Interim Committee (ETIC)** has had a number of meetings in recent months. At each meeting, it hears from the beleaguered Montana Public Service Commission (PSC) to receive updates on happenings at the PSC. The PSC has recently come under fire for two reasons. First, there is concern over its approval of debilitating increases in electricity rates for NorthWestern Energy's residential and business customers.

The other issue was uncovered by the legislative **Audit Committee** in its recent audit of the PSC, which found large ethical lapses and concern by staff that the PSC lacks ethical integrity. The PSC is a critical component of a fair and equitable energy system in which its role is to rigorously oversee profit-driven monopoly utilities to ensure that they do not gouge consumers. The PSC is supposed to play interference and protect customers, but anyone who has watched the PSC in the last five years understands that it does the monopoly utility's bidding to the detriment of residential customers and small businesses, all while exhibiting childish infighting and dysfunction. It seems that even the PSC President James Brown wants to jump ship, as he filed to run for the position of State Auditor instead of seeking another term on the PSC.

ETIC is also analyzing resource adequacy and regionalization of the energy system. Both topics have led to robust committee discussions and very thoughtful and informative presentations from more mature utilities in other states. NorthWestern's presentation focused on the need for more coal and gas due to the spike in power demand during the January cold snap. It was clear that NorthWestern's lobbyist was relying on talking points and didn't actually know why half of the Colstrip plant was offline during the first couple of days of the cold snap. Other, more mature utilities gave presentations on their efforts to invest in Montana wind energy resources that will benefit their customers, increase reliability, help them reach decarbonization goals, and benefit Montana communities with new revenue streams. The next ETIC meeting will be March 14 and 15.

The **Select Committee on Energy Resource Planning and Acquisition (SCERPA)** is the interim legislative committee that NorthWestern Energy lobbied to create after the PSC adopted rules that the utility opposed. The PSC rules comply with a law passed by the 2019 legislature that requires increased transparency and analysis in utility resource planning and acquisition of new generation resources. Between the time when the 2019 bill passed and the first SCERPA meeting, the PSC and NorthWestern Energy heard from hundreds of Montanans about how inadequate and misguided NorthWestern's latest resource plan is. Considering its latest plan was developed under the old rules, and the updated rules haven't been utilized in resource planning, **MEIC** believes NorthWestern's proposal to analyze how to change the law was premature. It seems that most on the SCERPA committee agree. Even NorthWestern's representative on the committee said the utility obviously needs to improve its process after the public pummeling the utility received over its most recent plan.

The SCERPA committee should wrap up its process in the next few months with a draft that will be sent on to ETIC. The current proposals for legislation are minor; the most substantial revision is a proposal to implement an independent evaluator to oversee NorthWestern's resource planning process in order to

ensure it is transparent and properly executed. There seems to be broad support for an independent evaluator, and the previous meeting involved discussion on whether that independent evaluator be administered by the Montana Department of Environmental Quality's (DEQ) Energy Section, the Montana Consumer Council, or by the utility itself with oversight from the PSC. Consensus was reached that the evaluator would be selected and administered by DEQ, but other points of contention remained around public participation in the planning process and the PSC's timeframe for reviewing draft plans. The next meeting of SCERPA will be on March 25, where the committee will further refine the bill draft.

The **Environmental Quality Council (EQC)** has been meeting regularly for the past year on a range of matters important to **MEIC**, including mining regulations, water quality, and agency rulemaking. At the January meeting, the EQC discussed a number of coal mining issues, including the recent rejection by OSM of changes to the Montana DEQ's coal program (see article on pg. 14). The EQC has also heard testimony on "critical mineral" resources, which are minerals designated by the federal government as being essential or important for national security and the clean energy transition. Such a designation could potentially lead to certain proposed projects receiving a limited or truncated federal review. Unfortunately, this idea may be pursued at the state level due to heavy industry lobbying and inflated arguments over the value and need for particular minerals. We will certainly be watching this space closely. The next EQC meeting is on March 13 and 14 in Helena. You can attend most of these meetings in person or watch online through the legislative services website: www.leg.mt.gov

DEQ Climate Planning Falls Short

by Nick Fitzmaurice

The Montana Department of Environmental Quality (DEQ) received a federal planning grant this fall of $3 million as the Governor's designated lead agency to implement the U.S. Environmental Protection Agency's (EPA) Climate Pollution Reduction Grant (CPRG) program. In February, DEQ released a draft of 10 priority measures to be included in Montana's Priority Climate Action Plan (PCAP). The final PCAP was due March 1, and measures included in the plan are eligible for grants in the second phase of CPRG funding, distributing $4.6 billion nationally for implementation projects. Although projects must be included in the PCAP to be eligible for grant funding, DEQ will develop a Comprehensive Climate Action Plan this summer as part of the CPRG program. A status report is due to the EPA in 2027.

In Montana, CPRG implementation is largely underwhelming as the Governor's office is limiting DEQ to only reduce greenhouse gas emissions through "nonregulatory" projects and voluntary measures, making it virtually impossible for funds awarded in Montana to directly focus on fossil fuels and replacing them with utility-scale renewables. DEQ held a virtual public meeting in February as part of a public input process for the draft priority measures.

Although far from comprehensive for Montana decarbonization, these draft measures were mostly good-faith efforts at emissions reductions. **MEIC** and many others pushed back on the Industrial & Power Sector "Colstrip Carbon Conversion Project," an expensive, energy-intensive, and technologically unproven carbon capture retrofit at the Colstrip Power Plant that would prove detrimental to climate action in Montana. However, other measures such as Healthy, Sustainable Schools (energy efficiency programs, on-site renewables); Clean, Reliable Transportation (zero-emission vehicle fleets for schools); High Performance Homes & Businesses (energy efficiency programs); and Investments in Electric Grid Technology (improving transmission connectivity and efficiency to more effectively manage and share renewable energy across a regionally integrated grid) were all supported.

HOW SHORT-TERM RENTALS CAN DRIVE SPRAWL

by Ann Schwend

Montana is suffering from an acute housing supply-and-demand imbalance that is driving up home prices and pricing out many Montana residents. One of the primary factors is that in-migration of new residents is outpacing the availability of housing units. The tight market is driving up home prices as well as increasing rental costs. A variety of factors contribute to this imbalance, such as labor and supply shortages, zoning restrictions, longer permitting times, water supply challenges, and a lack of suitable building locations. But there is far more to the story on Montana's housing crunch, its implications for our residents, and how we can develop creative, workable solutions.

In 2022, Gov. Greg Gianforte convened a Housing Task Force charged with providing policy recommendations "to increase the supply of affordable, attainable workforce housing." In response, the task force developed two separate reports of recommendations, but primarily concluded that the state should focus on approaches to increase housing supply through regulatory and zoning reforms as well as increased training for construction tradespeople. Unfortunately, none of the recommendations focused specifically on the need for a diversity of home types (multifamily and multi-use) or on affordability, and seemed to target large, single-family home developments.

In response to the task force reports, several bills in the 2023 Montana Legislature focused policy efforts on the supply side of Montana's housing crisis, removing or reducing standards. While moving through the permitting process more quickly may resolve some immediate housing needs, the legislation often came at the expense of constitutional protections such as the right to participate and the right to a clean and healthful environment. Further, while these approaches may build more homes, neither method ensures that a diversity of home types, styles, and price ranges are primary considerations. In fact, recent data from Headwaters Economics indicates that more than 50% of the homes built in the last few years are single-family residences built on large lots outside of city services, which are not typically affordable for many Montanans and come with a host of additional environmental impacts resulting from sprawl. Case in point, 41% of these homes were constructed on lots larger than 10 acres, resulting in the conversion of over 1 million acres of previously undeveloped land since 2000. Although representatives of the building industry routinely raised the issue of affordability and the housing crisis, without specific affordability criteria and environmental protections built into policy recommendations, it may be easier to build homes, but not necessarily beneficial for the public, the land, or those who need housing.

Another factor that impacts available housing stock is the conversion of existing homes into short term rentals (STRs) or vacation properties. Montana is now in a position of having to accommodate more people in less space, and it is likely that short term rentals are taking affordable housing options out of the market for Montana residents. The Montana real estate market is becoming extremely popular for both homeowners and investors. Savvy investors and wealthy homeowners can often afford to own multiple properties, especially if they are moving from more expensive markets. Unfortunately, many of these second (or third) homes are not occupied full time. Some are vacation homes that are reserved only for the homeowners, but others are vacation rentals available for short term periods (less than 30 days). These empty homes occupy space that could serve as (or at one time did) homes for people who live and work in the community. Vacation properties are great for investors, but not so great for folks that

need a place to live year-round. Absentee ownership also has an impact on the dynamics and demographics of a neighborhood and the social fabric of communities.

In Montana, STRs have been in the spotlight over the last few years, with many communities trying to decide how to regulate their location and usage. During the 2023 Legislature, **MEIC** worked with Sen. Denise Hayman (D-Bozeman) to sponsor **SB 517**. The purpose of SB 517 was to better understand and mitigate the impacts of STRs on local housing markets. The intent of the bill was to collect a graduated fee (tax) on vacation rentals. After exempting owner-occupied primary properties, the first five units under a single ownership would be charged 1% of gross receipts, 2% on the next five units, and if an investor (or equity firm) owned more than 10 units the state would collect 3% on the gross receipts of all qualified properties.

During the bill drafting process, we uncovered that Montana does not require a statewide registration to track ownership, location, number of rental nights, or other important data on these types of properties. Each property does apply for a public accommodation license with the Department of Public Health and Human Services, but each city is responsible for developing their own local registration requirements and collecting local taxes or fees if they so choose. When the Department of Revenue (DOR) prepared the fiscal note for the bill, it could only make assumptions on how much revenue would be generated, because ownership of STRs is not clear. The 4% lodging tax that is collected from renters by the online hosting platforms is aggregated by each county and remitted to the DOR without specific details. DOR had to base assumptions on the 4% lodging tax, of which STRs account for 25% of the revenue generated by the accommodations market statewide ($38,318,000). The fiscal note estimated that an average 2% graduated fee would generate $9,580,000 in 2024, and $10,299,000 in 2025, increasing annually. The intent was for the revenue to be deposited into the Housing Montana Fund and made available as grants for affordable housing projects, with the condition that they be served by municipal services.

You may be asking why **MEIC** cares about short term rental units and housing? In part, removing available rental units drives demand for new builds, which, as identified by a report from Headwaters Economics, are often associated with sprawl and a host of environmental problems, such as climate impacts, displacing wildlife, and polluting our water. **MEIC** also wants to assure that Montana's housing infrastructure is equitable and just for all residents.

Unfortunately, SB 517 did not make it out of the Senate Tax Committee, but Montana would certainly benefit from the ideas and concepts put forth in the legislation. At a very basic level, requiring a statewide registration system that tracks ownership, location, and rental history would inform the ongoing conversation. STRs are a great option for many vacationers, but we need to assure that the impacts to full time community members are addressed.

Happy Trails to Ann Schwend!

We're saying so long to our friend Ann Schwend! Over the past few years, the **MEIC** staff and our board have had the privilege to work with Ann, our outgoing Sustainable Communities Policy Director. Ann took on and created an entirely new program at **MEIC**, with a focus on making community growth and land use more environmentally sensitive, climate friendly, and equitable. We wish Ann luck in her next career, and hope she gets to spend some extra time with her emerging cadre of grandkids and some time spent up at the cabin!

Moving Forward Without Nuclear Energy

by Nick Fitzmaurice

As the climate crisis worsens and timelines for drastic transformations shrink, many advocates, in their search for significant, rapid emissions reduction solutions, have been turning recently to nuclear energy. While promises from the nuclear industry and its allies are alluring, as we've learned more about nuclear energy, we have to conclude that it's not a viable path to rapidly and affordably meet Montana's carbon-free energy needs and address the climate crisis.

Nick Fitzmaurice speaks to a group in Bozeman about the failed promises of "next-gen" nuclear generation. Photo by Anne Hedges.

The Roadblocks for Nuclear

As we've written about previously, small modular reactors (SMRs) are relatively new reactor designs that are touted as simpler, cheaper to operate, and safer than traditional pressurized water reactors. However, most of the hype surrounding SMRs is theoretical at this point, with only three SMRs ostensibly in operation globally (in Russia, China, and India). Little information is available on these facilities, while the U.S. Nuclear Regulatory Commission (NRC) approved its first SMR design for use in the U.S. only last year. Unfortunately, that approved SMR was NuScale's project for Utah, which was canceled this fall due to runaway costs. Once again, nuclear has failed to live up to the hype.

While we're interested in the benefits of this technology, it's clear from this NuScale example that SMR technology has not escaped the ailments of previous nuclear energy technologies as exceedingly expensive, proving too expensive for any realistic near-term development. Current nuclear projects receive heavy subsidies from the Department of Energy and utility ratepayers that drastically exceed proportional subsidies to other energy sources. Nuclear could not compete in a competitive market against other carbon-free energy sources.

The last thing we need in Montana is for a failed nuclear project to saddle ratepayers with even higher electricity rates to pay for a facility that never generates electricity. If companies can somehow manage to drive down costs, these projects also suffer from runaway timelines and would not be viable for utility use for at least a decade, if not several. Given the need for rapid, affordable energy decarbonization and the immediate availability of alternative, affordable clean energy in wind and solar, nuclear does not foot the bill for addressing the climate crisis. Of course, this doesn't even mention the traditional environmental and safety concerns posed by nuclear, such as the continued glaring issue of no long-term waste repository solution for spent radioactive nuclear fuel or uranium deposits that all-too-often are located near indigenous communities and mined without regard for impacts.

This winter, **MEIC** held a series of events discussing nuclear energy, SMRs, the context for nuclear energy in Montana, and alternative options for decarbonizing energy that are viable now. Our series began with a webinar featuring David Schlissel of the Institute for Energy Economics and Financial Analysis. David has been following and researching the development of nuclear energy for decades, and told our attendees his conclusions about "next-gen" nuclear energy:

1. The US nuclear industry has repeatedly been unable to meet estimated costs and schedules.
2. None of the SMR designs currently being marketed have been built.
3. None of these designs (apart from NuScale's) have been licensed in the US or Canada.
4. Some proposals have exotic designs that have never been tried or have failed in the past.
5. SMRs are not good tools for fighting climate change – they're too expensive and take too long to build.

Finally, David cited the recent cancellation of NuScale's Utah SMR project, announced in November after failing to secure enough customers to sign on for its service since the project was years overdue and billions of dollars over budget.

Meanwhile, there are readily available solutions that can ensure our lights stay on reliably and electricity remains affordable and is generated from clean and renewable energy sources.

With this foundation, Anne Hedges and I took off around the state to talk with Montanans about the plain facts of nuclear and what other solutions could fill our need for reliable, affordable energy.

The Alternative Solutions

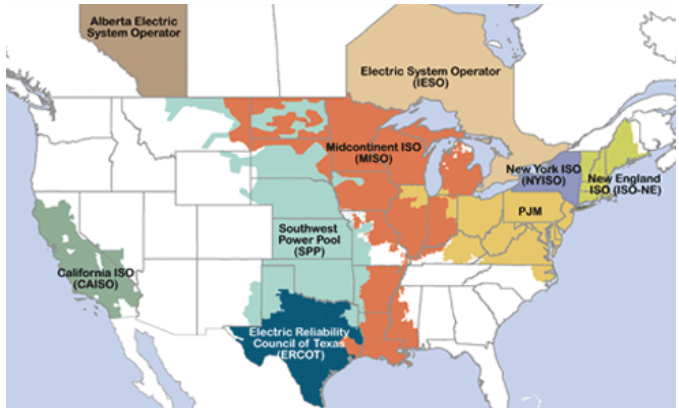
While it is important to explore all options for a clean and affordable energy transition, the writing is on the wall for nuclear energy and the billions of investment dollars diverted from where it can truly make an impact in the energy transition.A large part of the equation is, of course, existing technology for wind and solar electricity generation paired with storage.

However, as we discussed in our events, available technologies go beyond renewables themselves to opportunities for transmission expansion and upgrades, energy efficiency and demand-side management investments, and advanced regional power-sharing markets. The 21st century grid can and must be managed in a more connected, efficient, and dynamic manner.

Renewable wind and solar energy are variable by nature, but this does not mean they are unreliable. When half of the Colstrip coal-fired power plant went down on Jan. 7 before a record-setting cold snap, winds soared and exceeded coal and gas generation to meet nearly half of NorthWestern Energy's electricity demand with excess generation to export. We have barely tapped Montana's abundant and cost-effective wind resource, which can be harnessed and paired with short- and long-duration storage systems to meet energy demands while capturing excess generation to dispatch once the winds die down. Bolstering Montana's transmission network as part of a more advanced grid management system would then allow utilities to optimally and cost-effectively share power as it is available across the West (see article on pg. 16).

Energy markets unlock the benefits of an energy system that covers a greater geographic area than the weather. Winds often precede and follow weather events as a storm moves across a region, while solar availability varies based on regional cloud cover and time of day. Tapping into a larger region for energy generation through a market allows for these regional variabilities to complement one another in a reciprocal sharing of power resources. NorthWestern is currently a participant in the Western Energy Imbalance Market (EIM), having already realized over $74 million in economic benefits since joining the market in mid-2021. EIM is limited in functionality, only allowing energy trading for the next hour of a utility's need, but **MEIC** hopes NorthWestern will soon join the Energy Day Ahead Market (EDAM) to expand on those benefits and stabilize market prices.

The final market evolution would be the creation of a West-wide Regional Transmission Organization (RTO), notably missing in the map of RTOs below. Read more about the benefits of energy markets and how we can bolster our electric grid to more effectively and affordably meet demand in record-setting events in the article on pg. 12.



Welcome, Shannon James!

Hello! I'm thrilled to be joining the team as **MEIC**'s Climate and Campaigns Organizer. My roots in Montana cultivated a profound experiential bond with the natural world, shaping me into the environmental steward I am today. My personal journey has highlighted the pressing need to address the climate crisis, emphasizing the importance of collective action for positive change.

I earned my BS in Natural Resource Conservation and a minor in Climate Change Studies from the University of Montana. Post-graduation, I ventured along the west coast, engaging in teaching, research, and skiing. Following a rewarding year teaching science in Hong Kong, I felt a calling to further my education, leading me to recently complete my MS in Environmental Studies from the University of Montana. I am genuinely grateful for the opportunity to contribute to **MEIC**'s remarkable efforts in safeguarding the landscapes that bring me immense joy. In my free time, you'll find me frolicking in the mountains with my partner and dog.

NWE Risk *(continued from pg. 13)*

when entire regions face temperature extremes, but NorthWestern will soon have the opportunity to join the Energy Day Ahead Market (EDAM), a regional market that enables more optimal power trading based on forecasts from a day in advance. Joining EDAM would significantly grow NorthWestern's geographic diversity of resources to draw upon. By locking in transactions a day in advance, generation resources can be more optimally dispatched across a region to meet demand in these extreme conditions, stabilizing prices while allowing real-time markets to account for small discrepancies in demand.

A more formally organized Regional Transmission Organization (RTO) would be the final market evolution in the West, designed and overseen by the states it encompasses to most optimally and cost-effectively coordinate power generation, transmission planning, and power sharing. Power is already traded across state lines, but the current system is clunky and inefficient, leading to exorbitant short-term energy prices during high-demand periods that are often misconstrued by NorthWestern as a reason to build more expensive generation infrastructure in Montana. These prices really indicate the need for more advanced market systems, such as the impending EDAM and eventual full-scale RTO.

Renewable wind and solar energy are variable by nature, but this does not mean they are not reliable. We must rethink how we manage our electricity grid to capture these low-cost, abundant resources and utilize them when they are needed. NorthWestern is behind the times, and its focus on expensive, unreliable gas and coal resources is woefully inadequate and misguided. We need our utility to pull its head out of the sand and start thinking seriously about the future of energy in Montana.

Hope Springs Early and Often

by Cari Kimball

As Montana enters something resembling spring, I'm feeling energized by the lengthening daylight hours and looking forward to those first glimpses of phlox and yellow bells that are bound to start popping up soon. Speaking of hope and renewal, I am also continually inspired by the dedication and passion of our community. I'm so grateful for each and every one of you who contributes to our mission and shares our immense love for Montana.

Reflecting on the past few months, I see how the morale-boosting effects of our 2023 wins spur us onward, especially as we look forward to some important Supreme Court arguments (see pg. 7 for details). The hearings this spring will serve as waypoints in years-long campaigns to protect the Smith River and a life-sustaining climate. They are reminders that **MEIC** has averted hundreds of millions of tons of greenhouse gas emissions, pumped the brakes on destructive mining projects, and advocated for policies that reduced toxic air and water pollution – not with one-off efforts, but through the cumulative impact of many people giving their time and talent to the cause. Montana's air and water are cleaner today because of the brilliance and dedication of **MEIC**'s community of supporters (and our board and staff!).

However, our work is far from over. Montana's early 2024 snowpack levels were at record-breaking lows. Maybe you share my trepidation about what "smoke season" will bring; I worry about the mental and respiratory health of our community if our options are to stay indoors or breathe unhealthy air. My anticipatory joy for yellowbell sightings bumps up against my anticipatory anxiety that abnormal warming will cause phenological mismatch for our pollinators and plants. What is a Montana spring without kiddos bounding through wildflowers and thriving landscapes? Our ponderosas drought- and heat-stressed into oblivion? My heart aches to imagine it.

Perhaps you've heard about (and plan to join!) **MEIC**'s Generation Dread book discussion gatherings this spring. I hope that, like me, you're finding the book to be validating. Author Britt Wray notes that

our grief and frustration in the face of climate change are reasonable emotional responses.

"There is nothing pathological about this pain. It is the unavoidable symptom of a very sick society… but it is precisely when we turn towards tough feelings… that we unlock our capacity for strength and resolve to act," Wray writes.

I've seen again and again, in the face of tough odds and emotions, your willingness to turn toward one another and toward action for a more clean and healthful Montana. Whether through speaking up at hearings, submitting comments online, donating to our cause, or simply sharing our story with your friends, family, and colleagues, you play a vital role in advancing our mission. Together, we have the power to make a difference.

So if you've been feeling dismay while reading the latest coverage of our warming planet, please also be heartened to know, as Britt Wray says, "Our distress is, at its heart, a sign of our connection to and love for this world." By tapping into that sense of shared humanity and empathy, we can find the resilience desperately needed to bring about just solutions to the climate crisis. Your steadfast support and resilience will be the engines powering our work for a brighter, more livable Montana.

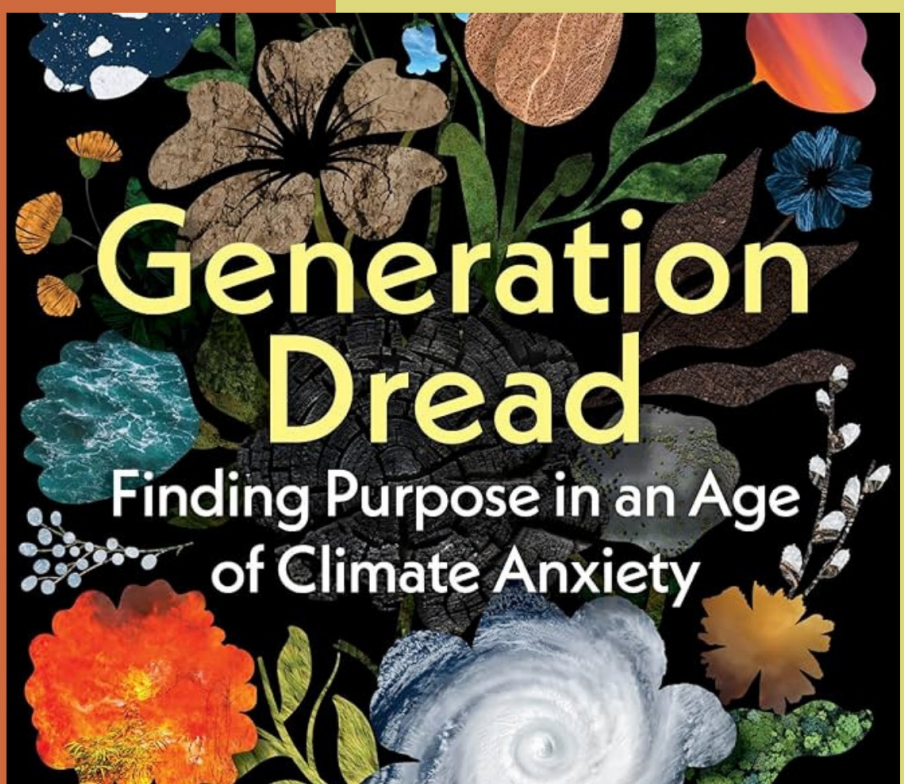
Thank you for your heartfelt commitment to our cause, and thank you for being part of our community.

MONTANA ENVIRONMENTAL
INFORMATION CENTER
P.O. Box 1184
Helena, MT 59624

CHANGE SERVICE REQUESTED

Nonprofit
Organization
U.S. Postage
PAID
Helena, MT
Permit No. 132

JOIN OUR SPRING BOOK DISCUSSION



MARCH 19, HELENA

MARCH 21, ONLINE

APRIL 18, BILLINGS

Learn more:
www.meic.org/events