Some of us in Wyoming have taken our time to recognize that a climate crisis exists in our state as elsewhere. We used to think climate problems were out there somewhere; now, we know better. The September 16, 2019, Wyoming Climate Forum in Laramie, "Our Climate Reality," drove home the point. Climate Expo participants included Citizens' Climate Lobby, Wyoming Climate Activists, Wyoming Food Coalition, The Center for Biological Diversity, the Western Watersheds Project, the Alliance for Renewable Energy, the UW Haub School and Ruckelshaus Institute for the Environment and Nature Resources, plus various businesses and organizations like Harmony Solar, Feeding Laramie Valley, the Wyoming Food for Thought Project, and others. The speakers were excellent, the food was delicious (and free!), the crowd at capacity. I rubbed shoulders with friends and acquaintances from Cheyenne, Laramie, Buford, and elsewhere.

Every attendee was handed a "Climate Choices Checklist" of recommendations, from "Limit Air Travel" to "Avoid Processed Food" to "Plant Trees" to "Avoid Synthetic Nitrogen Fertilizer" to "Eat Less Beef." All in all, 56 suggestions were offered. Surely we can adopt some if not many of these?

At the well-explained displays, attendees could pick up an array of materials on different aspects of the climate crisis and its impact on Wyoming. Among others I took home a UW Ruckelshaus publication on the Wyoming Open Spaces Initiative. It showed that voter concern about pollution of rivers, lakes, and steams increased from 18% in 2014 to 41% in 2018. The decline in numbers of big game animals showed similar vote concerns. That's an issue dear to my neighbors and me, since the hunters who traditionally harvested Pronghorn antelope on our lands have seen a precipitous decline of tags issued in 2019.

Another interesting publication is the Haub/Ruckelshous "Western Confluence" bi-annual publication that's free for the asking (<u>www.westernconfluence.org/susbcribe</u>). Its editorial addresses Wyoming coal production, which has been in decline since its 2008 peak production of more than 466 million tons. Back then, "dozens of mile-long coal trains left the Powder River Basin every day, headed for power plants in more than 30 states," writes the editor. But by 2016, "only 30 percent of US electricity came from coal," she adds. Wyoming coal production sunk "to less than 300 million."

This particular 41-page issue of Western confluence addresses the West's changing energy scenario. One article addresses the need for a "Just Transition for Fossil Fuel Workers." Another write-up explains how the Western grid could unleash Wyoming's wind energy.

A hundred miles north of my home, wind turbines spin in Glenrock, on land previously mined for coal. The site was repurposed by Rocky Mountain Power, a company located in Salt Lake City that serves parts of Wyoming. Wind energy boosts local economies and spurs job growth. According to the American Wind Energy Association, wind generation costs have dropped by nearly 70 percent in the past decade. The savings come largely from the development of more efficient wind turbines, which often tower hundreds of feet taller than their predecessors. Besides, tall turbines pose less of a threat to the flyways of raptors, birds that have perished by the dozens from colliding with turbine blades. Three years ago my Platte County neighbors and I were contacted by an energy company, EDF Renewable Development, Inc., whose headquarters are in California. EDF hopes to put wind turbines on a large tract of combined acreage, and so it offered us "Options to Lease" on our parcels. The company's quarterly payments are slated to increase substantially, should it be successful in its bid, whereupon "options" will change into full-fledged lease agreements.

However, the Casper Star Tribune's "Energy Journal" of August 19, 2019, finds a fly in the ointment of wind-energy production. Camille Erickson notes that some economists estimate that the state's stringent regulations and unusual wind-tax structures tend to discourage wind development. Before even beginning with the construction of turbines, wind developers must go through a maze of permits at county, state, and federal levels that typically takes years. Once wind facilities have been up and running for three years, companies must pay a \$1 per megawatt wind-generation tax, in addition to sales and property taxes. Energy experts point out that the tax has stifled Wyoming wind development.

"The permitting process has been egregious," Jonathan Naughton, engineer and director of the Wind Energy Research Center, is quoted as saying. "For Wyoming specifically, it hinders projects. Other states have proceeded to build wind energy much more than Wyoming has." To Naughton, the perennial discussion of additional wind taxes is enough to deter investment in the state. If we are not proactive, development will go someplace else, he says. According to the Center for Energy Economics and Public Policy, Wyoming lags behind New Mexico, Montana, and Colorado. Researchers estimate that wind development in Wyoming costs about 10 percent more than in New Mexico.

Do I hope EDF prevails? Of course I do, but I'm not holding my breath. At present, Wyoming legislators and the governor's office are moving at a snail's pace. True, Governor Gordon has acknowledged that climate change exists and that its causes may be human-made, which is more than his predecessor did; still, our state lacks decisive action that addresses what ails the future of humanity.