

# POLLUTION FROM VEHICLES AND BUILDINGS: THE NEXT FRONTIER FOR WRA'S CLEAN ENERGY PROGRAM

Since 2018, Western Resource Advocates has worked to transition electricity production—one of the largest sources of greenhouse gas pollution in the Interior West—to clean, zero-carbon resources. Through our Climate Fix initiative, we set a goal to cut the power sector's annual carbon dioxide emissions by at least 94 million tons (45% below 2016 levels) by 2030, and we have focused on the region's eight biggest utilities.

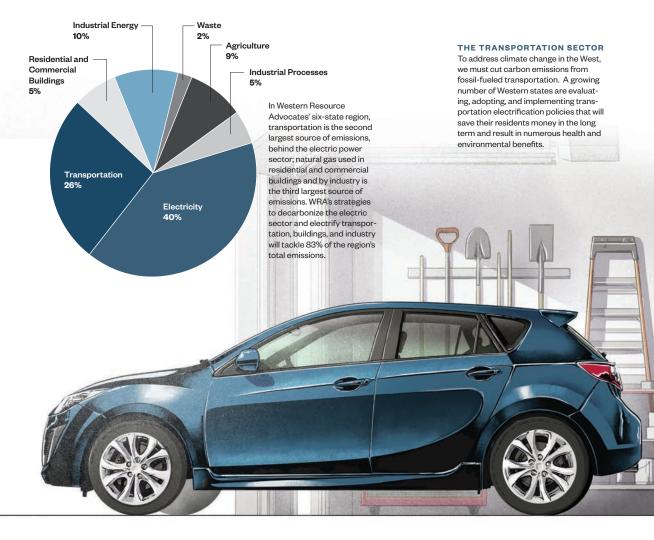
Nearly three years into the Climate Fix, and with your support, we have made significant progress toward reaching our emission reduction goals. To date, our work has put us on track to secure 67 million tons of annual carbon dioxide reductions from the region's utilities by 2030. We aim to continue working with those utilities to achieve commitments for even deeper reductions in carbon pollution. But to fully address climate change in our region,

we need to double down on the next big challenges in fighting climate change: greenhouse gas emissions from vehicles and buildings.

Powering our vehicles and homes with clean electricity in the years ahead will be a critical component of achieving the carbon emission reductions by 2050 that science tells us are needed to avoid the worst impacts of climate change. Efficient heat-pump systems and electric cooktops would replace gas furnaces and stoves, and cars would run on battery power from electricity generated by carbon-free resources.

Over the next few years, WRA plans to amplify its climate change work through efforts to shift the Interior West toward transportation and building electrification, while also modernizing the grid to deliver ever larger amounts of clean electricity to power the economy.

In 2016, transportation sector emissions in the United States surpassed



those from the electric utility sector for the first time. But a growing number of states-including Colorado, Arizona, Nevada, and New Mexico-are taking action. These states are working toward adopting and implementing transportation electrification policies that will save their residents money in the long term, help ensure cleaner and healthier air quality, and reduce the carbon pollution that drives climate change.

State governments can help expand the adoption of electric vehicles through strategies that create incentives for vehicles and charging infrastructure and require utilities and automakers to provide the vehicles and charging stations. States also can help accelerate EV adoption by making vehicle charging less expensive and increasing the availability of public and at-home charging. WRA is working to ensure those state efforts maximize the emission reductions of transportation electrification while delivering the most savings to ratepayers and providing equal opportunities for low-income communities to access the benefits of electric vehicles.

We also must address the fossil fuel pollution that comes from homes and buildings. Homes and other buildings account for about 12% of all greenhouse gas emissions in the United States. Gas-fueled furnaces, water heaters, and gas stoves also create harmful indoor air pollution and cost consumers more money over time. Electric heat pumps and cooktops can make a big difference.

But the way electric utility rates are currently designed can pose problems when planning for increased demand from electrified buildings. WRA is working to implement innovative solutions in rate design, including creating time-of-use rates that charge ratepayers lower prices for using electricity at offpeak times and that provide incentives for energy efficiency.

## THE BUILDING SECTOR

LIFETIME OF MAJOR APPLIANCES

13 Years

Across the U.S. economy, carbon dioxide pollution from natural gas-which is used in power plants, homes and businesses, and industry-has now surpassed emissions from coal. In the Interior West, gas and other fossil fuels are used to heat about 77% of all homes—the highest proportion in the nation. Transitioning homes and office buildings to electric power instead of gas is critical to meeting the climate challenge.

Gas Furnace

Gas Water Heater

Passenger Car

### THE ELECTRICITY SECTOR

While transportation and building electrification are important, we need clean electricity to power those vehicles, homes, and offices. In the Interior West, fossil-fueled power generation remains the largest source of the greenhouse gas emissions that drive climate change. WRA is continuing its work to accelerate a transition to clean energy generation for use in our vehicles. buildings, and industry.

23 Years

15-20 Years

### **OPPORTUNITIES AHEAD FOR** CLEAN ENERGY IN THE WEST

This year, Western Resource Advocates is working to advance building and transportation electrification across the Interior West, with both regulatory and legislative efforts. With your help, we'll see these initiatives through and help reduce the carbon emissions in our region that contribute to climate change.

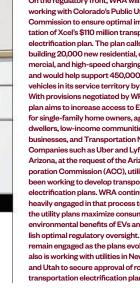




In Colorado, WRA has been working with our coalition partners to develop legislation to help reduce emissions in the building sector, in keeping with the goals of last vear's HB 1261 law, which set economy-wide emissions reduction targets. To encourage transportation electrification, WRA in Nevada has helped craft a bill to require NV Energy to make substantial investments to expand electric vehicle charging infrastructure across the state. The bill complements Nevada Gov. Steve Sisolak's current efforts toward having the state adopt Clean Cars standards. It includes provisions that would help ensure that low-income communities in Nevada have access to EV infrastructure. Both the Colorado and Nevada legislative sessions begin in February.



On the regulatory front, WRA will be working with Colorado's Public Utilities Commission to ensure optimal implementation of Xcel's \$110 million transportation electrification plan. The plan calls for building 20,000 new residential, commercial, and high-speed charging stations and would help support 450,000 electric vehicles in its service territory by 2030. With provisions negotiated by WRA, the plan aims to increase access to EV charging for single-family home owners, apartment dwellers, low-income communities, small businesses, and Transportation Network Companies such as Uber and Lyft. In Arizona, at the request of the Arizona Corporation Commission (ACC), utilities have been working to develop transportation electrification plans. WRA continues to be heavily engaged in that process to ensure the utility plans maximize consumer and environmental benefits of EVs and establish optimal regulatory oversight, WRA will remain engaged as the plans evolve. WRA also is working with utilities in New Mexico and Utah to secure approval of robust transportation electrification plans.





## The David Robertson Pathfinder Internship

David Robertson fell in love with Colorado in the 1950s. He met his wife, Janet, as her rock-climbing instructor, and they married in 1956. Together, they climbed all 54 of Colorado's 14ers and backpacked extensively in the West and Alaska. In 1969, David and three others were the first to ski the 110-mile journey across glaciers from Skagway to Juneau.

David dedicated himself to protecting the West and was one of WRA's first board members; he served on WRA's Board of Directors on two separate occasions and was selected as the organization's first "Volunteer of the Year."

David loved the mountains. He especially loved how they bonded people together and provided sanctuary for him and others. David was also aware that not everyone had the opportunity to explore the outdoors as he had.

David passed away in 2019, but his legacy lives on. In honor of David's passion for Colorado and his dedication to conservation, WRA is partnering with Janet and the Robertson family to offer the David Robertson Pathfinder Internship to share the wonders of the mountains and the West with a

new generation of young professionals gaining experience in the conservation field.

WRA is especially excited about this partnership to support individuals who have not traditionally been included in conservation. Pursuing an inclusive and diverse organization not only is the right thing to do but also improves conservation outcomes for us all. The David Robertson Pathfinder Internship is a step in creating a more diverse, equitable, and inclusive conservation workforce that represents all people.

Pathfinder Internships will be awarded annually through 2022 and beyond as we raise additional funds. The positions will be full-time paid summer internships and may be eligible for a housing stipend in their host city.

The internships will be formally announced later this winter. If you are interested in supporting interns or fellows at WRA, contact Vice President of Development Theresa Bushman at theresa.bushman@westernresources.org. To stay up to date on all opportunities to work with WRA, sign up for our Job and Internship email alerts at www.westernresourceadvocates.org/jobs.

## COLLABORATING FOR CONSERVATION WITH COLORADO'S BOARDS AND COMMISSIONS

Some of the most important decisions about our land, air, water, and climate are made by state, regional, and local boards and commissions tasked with protecting and managing natural resources. Since Western Resource Advocates does most of its work at those levels, it is important for us to keep in touch with the respective boards and commissions.

We talked to two WRA team members—Healthy Rivers Program Strategic Engagement Manager Orla Bannan and Western Lands Policy Fellow Jason Swann—who work closely with boards and commissions in Colorado about why their interaction with those organizations is critical to our conservation goals.

Field Notes: Orla, first tell us about the boards you engage with and the decisions they make.

Oria: I work with state, regional, and local boards that are tasked with protecting and managing Colorado's water resources to support water conservation and address water scarcity issues in a sustainable way for all constituents. The boards address a wide range of water issues across Colorado, including the Colorado River and its tributaries, urban water conservation and efficiency, water supply and storage, river recreation, and endangered species.

Many of the boards have the capacity to provide grants or loans to a wide range of water-related projects, including agriculture, environment and recreation, conservation and land use, water storage and supply, education, and innovation.

FN: Jason, your work has focused on expanding the pool of people who are interested in serving these critical bodies by helping them find training, WRA is dedicated to helping make sure those boards and commissions are diverse and that people who serve are supported and confident in their positions. What have you learned about how WRA can help support that work? And how will the effort contribute to connecting local diverse communities to more opportunities to engage in environmental stewardship?

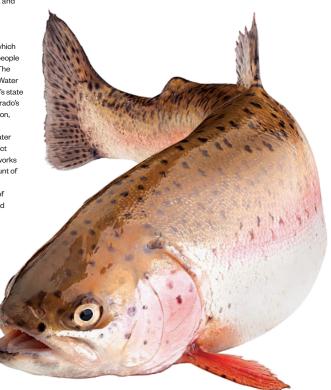
Jason: By creating board and commission orientation and training, WRA can be intentional about recruiting and connecting communities of diverse identities with collaborators and partners. That effort instills confidence and helps build trust as we work to solve some of our most pressing environmental issues across the West.

FN: Orla, how do decisions about water-related projects impact our region and our communities?

Orla: Climate change is driving increased water scarcity throughout the West. Increased temperatures are impacting the timing and amount of runoff from the snowpack into rivers and increasing water demands of people and plants. State, regional, and local water boards can help us manage a decreasing supply with drought planning, watershed protection, and greater conservation.

The boards help to set policy, support legislation, and decide which projects are funded, impacting people across Colorado and the West. The responsibilities of the Colorado Water Conservation Board—Colorado's state board-include protecting Colorado's streams and lakes, flood mitigation, watershed protection, stream restoration, drought planning, water supply planning, and water project financing. The state board also works to protect and manage the amount of water allocated to the state of Colorado through a framework of agreements with other states and federal agencies.

"State, regional, and local water boards can help us manage a decreasing supply with drought planning, watershed protection, and greater conservation."









## WILDLIFE DON'T RECOGNIZE STATE BOUNDARIES

Colorado Parks and Wildlife District Manager Kevin Madler says a highway crossing on Colorado's Highway 285 around mile marker 146 has helped reduce the number of car crashes involving mule deer, especially in the fall during the rut, or mating season.

"I would always have a few large bucks struck by automobiles, as the deer are very active and traveling throughout the entire day," Madler told WRA. "Since the high fence crossing structure has been built, collisions with large mature bucks have not been an issue."

While the crossings on 285 and elsewhere in the West are an important step, the West's sweeping wildlife corridors are under threat from the growing and related challenges posed by population growth and climate change. In fact, the West is losing natural areas at an alarming rate—one football field of land was lost every 1.65 minutes between 2001 and 2017, according to a study by Conservation Science Partners.

Habitat loss and fragmentation are making it increasingly difficult for wild-life to maintain the migration patterns that are essential to their survival, especially for big game species that must be able to move safely across large land-

prehensive law directing multiple state agencies to identify wildlife corridors and establish plans to protect them. Also in 2019, Colorado Gov. Jared Polis issued an executive order to locate high traffic areas where wildlife corridors cross highways and instruct the Colorado Department of Transportation to incorporate wildlife crossing structures into future highway planning processes.

But state, tribal, and national borders don't mean anything to wild-life. A major wildlife corridor runs between northern New Mexico and southern Colorado. Both states have identified the upper Rio Grande and upper San Juan basin areas as critical, and potentially threatened, migration routes for big game species like mule deer, elk, and pronghorn. So New Mexico is working with Colorado on a regional approach to wild-life protection.

WRA helped shape the Colorado executive order and continues to support ways the two states can work together to protect wildlife across the region. This year, Western Resource Advocates will be engaging closely with New Mexico and Colorado state

### Opposite Page:

Wildlife crossings help improve safety for drivers and animals, including these elk on a highway in Colorado's Rocky Mountain National Park.

## "HABITAT LOSS AND FRAGMENTATION ARE MAKING IT INCREASINGLY DIFFICULT FOR WILDLIFE TO MAINTAIN THE MIGRATION PATTERNS THAT ARE ESSENTIAL TO THEIR SURVIVAL..."

scapes. Climate change is fundamentally altering landscapes and habitats, shifting migration patterns and forcing some animals to relocate for survival.

Western Resource Advocates is working to combat those threats and permanently protect and connect half of our Western lands so that they support thriving wildlife populations, robust local outdoor economies, and unparalleled opportunities to enjoy the West's natural beauty.

One way we hope to achieve that goal is by encouraging state and local governments to identify and protect wildlife corridors.

In 2019, New Mexico Gov. Michelle Lujan Grisham signed into law the Wildlife Corridors Act, the first comwildlife management agencies to begin implementing recently created policies to protect wildlife corridors and reduce barriers to wildlife migration. In addition, the Western Lands team is working with lawmakers in Nevada to develop state-level policies to protect wildlife migration corridors and winter ranges and expects action in the near future.

"Western states are stepping up and leading to safeguard our natural resources and wildlife by protecting and connecting habitat," said Andre Miller, Western Resource Advocates' lands policy analyst. "We look forward to continued partnerships with our Western land and wildlife managers to carry through on state-level measures."





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