

Wyoming Outdoor Council

Spring 2014

FRONTLINE



Working to protect public lands and wildlife since 1967

Changing the Climate:

It's Time for Wyoming to
Start Leading the Way

Here's how...



47
Years

Let's Drive Innovation Now, While We Can Afford It



BY CHRIS MERRILL, ASSOCIATE DIRECTOR

On July 18, 2013, Detroit, Michigan—the cradle of the American auto industry—became the largest U.S. city to file for bankruptcy.

This was yet another reminder of the spectacular collapse of a city that used to be one of the most culturally and economically vibrant places in the world.

It was also a reminder of how profoundly the fortunes of a local economy can change.

Wyoming, at the moment, is doing very well. Our economy is thriving, driven largely by fossil fuel extraction and energy sales.

But history tells us (and many Wyomingites can attest) that we can be certain of only one thing: change will come. The current boom will not continue forever.

And unless we, as citizens and leaders, commit to driving innovation now—when times are good and we can afford it—we will likely struggle to replace those jobs and revenues when they disappear.

But at this moment in our great state's history, many of our elected officials are largely choosing—at least publicly—to reject the scientific consensus of human-caused climate change.

We believe this is exactly the wrong approach for this historical moment, because instead of driving innovation in Wyoming, it's stifling it.

Looking in the wrong direction

An interesting feature of history is that the gradual decline of Detroit began in the 1950s, concurrent with the invention of the silicon transistor and the birth of Silicon Valley in California.

Motor City's fall only accelerated during the 1970s and 80s—at the same time that the personal computer age was emerging in the United States and around the globe—and when other American cities such as Seattle, Atlanta, San Jose, Austin, and even Pittsburgh were adapting and growing into the thriving places that exist today.

There is a complex set of factors that led to Detroit's fall and the simultaneous rise of other cities. But well-known economist and researcher Enrico Moretti of the University of California, Berkeley, argues, persuasively, that the ultimate cause of Detroit's decline was complacency.

"The biggest failure of all, was the fact that at the time when [Detroit] had one of the biggest, most prosperous [economic] ecosystems in the world, it failed to reinvent itself and leverage that consistently into something new," Moretti said in 2012, in an interview with noted economist Russ Roberts of Stanford University's Hoover Institution. "When the demand for workers in the auto industry started collapsing, Detroit failed to find something

new. The technological frontier keeps evolving, and there's no technology that stays on the frontier forever."

The secret for a community, Moretti said, is to reinvent itself into new things.

"And I think this might be the most important difference between Detroit and Silicon Valley," he said. "Silicon Valley keeps reinventing itself. It used to be mostly hardware and silicon conductors in the 1970s and 1980s. Then it became mostly software. And then it became mostly internet. And now it's branching out into new things like nanotech and biotech. Nobody knows whether those technologies will succeed and will create jobs, but this is an ecosystem that keeps following what the frontier of technology is."

The people of Detroit failed to do this. And now, Moretti said, it's probably too late for that city to flourish in the same way it once did, because its robust economic network no longer exists, and so there is little left to be leveraged.

This lesson is well worth considering here in Wyoming. Our coal industry, for example, is at a crossroads. We need to do one of two things—either figure out how to use coal for energy that releases no (or significantly less) carbon dioxide into the atmosphere, or else drop coal combustion altogether and figure out how to produce cleaner energy in other ways.

Make no mistake: Wyoming is competing in a global market. Unless there is some important innovation or technological breakthrough for coal-based energy, the rest of the United States and other countries are likely to continue making decisions—and continue investing in their own research and development of alternative energy sources—all of which will likely diminish demand for coal, leaving the Wyoming coal industry without buyers.

And it's not just coal. We also need to cut down on greenhouse gas emissions from oil and natural gas operations too. Now is the time, for example, to require leak detection and repair, statewide, for all phases of natural gas development and delivery. Methane is an extraordinarily potent greenhouse gas, and capturing it would be better for consumers, businesses, and the environment.

Wyoming could be the Silicon Valley of energy innovation

James Powell, a geochemist who trained at MIT and who is the executive director of the National Physical Science Consortium, as well as a former member of the National Science Board, recently searched for all studies published in 2013 that mentioned "global warming," "global climate change," or "climate change," and found 10,885 peer-reviewed articles.

He found only two that rejected the idea that humans are responsible for climate change. He then extended his search further back in time.

"I have reviewed 25,182 scientific articles in peer-reviewed journals," Powell writes. "Only 26, about 1 in 1,000, in my judgment

reject anthropogenic global warming.... On the one side, we have a mountain of scientific evidence, on the other, ideology and arm-waving.”

Wyoming Governor Matt Mead has expressed his personal skepticism about the findings of modern climate science, saying on more than one occasion that he is “unconvinced that climate change is manmade.”

We respect the governor and his service. But we disagree with his view and the detrimental impact it has on policy decisions—decisions that help shape Wyoming’s economy today but risk limiting its potential for future generations.

We urge our leaders to secure Wyoming’s economy and quality of life both now and in the future by taking a different approach. One that creates a political and economic atmosphere that helps citizens, companies, entrepreneurs, and researchers leverage Wyoming’s capital and expertise to bring about the next generation of cleaner, better energy sources.

The urgency of addressing climate change is clear. We ask our leaders to embrace it as a challenge and an opportunity to innovate and reinvent our economy for whatever is coming next.

While the governor and the Legislature have directed funding to the University of Wyoming for the purposes of energy research, we believe that much more must be done.

Global energy demand continues to increase as billions of people are slowly rising out of abject poverty. If the problem of human-caused climate change is to be solved, it will likely happen by way of a major technological breakthrough (or a critical mass of small breakthroughs).

“Our politicians never really did look ahead ...for when coal wouldn’t be king,” said Sheriff Martin B. West of McDowell County, West Virginia. “Therefore, we’ve fallen flat on our face.”

There’s no reason why that innovation can’t happen here in Wyoming, where we are one of the leading producers of fossil fuels—and where we have the most to lose. We urge Wyoming’s leaders to be forward thinking, as they have on many other issues, and commit to making this state an energy research and innovation hub.

Wyoming has about \$6.5 billion in its Permanent Mineral Trust Fund, part of which is invested in equities. In another reserve account—often referred to as the state’s “rainy day” fund—Wyoming has nearly \$1.7 billion of cash equivalents that provide very small returns.

Given our state’s history of booms and busts, there is arguably some hard-won wisdom behind these efforts to save for the future.

But we contend that there is even greater wisdom in investing a significant portion of these savings in an effort to make Wyoming a center of energy research and innovation. The history of Detroit tells us that if we wait until that proverbial “rainy day” to put our reserves to work, it might well be too late. It might just keep raining until the funds run out.

Current state policies are sharply focused on maintaining the status quo. One of the primary goals of Governor Mead’s energy strategy, for example, is to expand and enhance production of traditional fossil fuels. While many policymakers agree that this is a worthy short-term goal, it does not focus sufficiently on building a foundation for a new economic future.

Given the history of fossil fuel and mineral busts in this state—when local communities have had to weather severe and long-lasting downturns and when people living paycheck to paycheck have been hit the hardest—it only makes sense for Wyoming’s citizens and leaders to seize the opportunity and work to break the boom-bust pattern.

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It starts by embracing science

Depending on how one calculates it, at least 65-80 percent of the revenue that funds Wyoming's government and services comes from mineral industry taxes and royalties, according to Wyoming State Senate Majority Leader Phil Nicholas, who spoke on the topic at a recent meeting of the Wyoming Infrastructure Authority in Laramie.

This reality likely explains why the 2014 Wyoming State Legislature and Governor Mead approved a last-minute budget footnote intended to block the adoption of the Next Generation Science Standards in Wyoming's schools—standards that were developed in 2013, and that are supported by most local and national scientific, engineering, and education organizations. Along with many other important lessons, these science standards teach that human activities contribute substantially to global climate change by generating and emitting greenhouse gases into the atmosphere.

Representative Matt Teeters from Lingle was one of the authors of the budget footnote, according to the *Casper Star-Tribune*.

"[The standards] handle global warming as settled science. There's all kind of social implications involved in that that I don't think would be good for Wyoming," he told the *Star-Tribune*.

He told the same news outlet that teaching global warming as a fact would wreck Wyoming's economy because the state is the nation's largest energy exporter, and that it would cause "other unwanted political" ramifications.

Many Wyoming educators and parents were outraged. The decision was also lampooned in the local and national media.

Notwithstanding the fact that none of Wyoming's political leaders are climate scientists—and we should keep this in mind when they opine on the hard work of more than 99.999 percent of the scientists focusing on the topic—this approach to the education of Wyoming's schoolchildren is both economically shortsighted and (remembering the lesson of Detroit) dangerously complacent.

Our leaders could learn, too, from the lesson of West Virginia, where many counties have already experienced their own coal busts, and some local leaders regret their state's failure to prepare for the new reality.

"Our politicians never really did look ahead in this county for when coal wouldn't be king," said a former coal miner, Sheriff Martin B. West of McDowell County, West Virginia, as quoted in the *New York Times*. "Therefore, we've fallen flat on our face."

We believe Wyoming has the capacity and the will to do better. We can start by encouraging science, creative problem solving, and energy tech innovation in any way we can, especially if we seek to ensure jobs and revenues in Wyoming's future.

Our state can invest much more significantly in the most promising research and we should set out to position the University of Wyoming as a global epicenter for cleaner energy research and development.

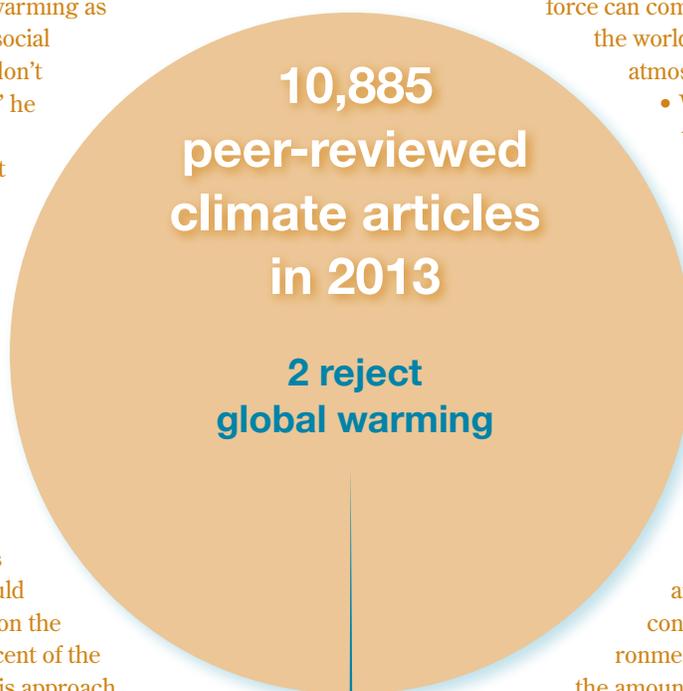
We should open our doors to innovators and the brightest entrepreneurs and thinkers in the field of new energy technology—and seek to develop the next generation of scientists and engineers right here in our own schools by emphasizing and implementing world-class science standards.

We should be doing everything we can to make this state attractive to scientists and creative problem-solvers from all fields before we find ourselves in a similar economic position as Detroit.

What we can do as citizens

- We can participate. We can show up to meetings when the governor and legislators come to town. We can consistently make the case for what Wyoming has to gain by embracing science and innovation. We can urge our elected officials to invest now for a future where Wyoming's economy and workforce can compete and thrive even as the world agrees to emit less carbon into the atmosphere.
- We can push for coal energy that is truly cleaner. If this turns out not to be possible, we can help our elected officials and decision makers plan for a future without coal production and consumption in Wyoming.
- We can consistently work to convince state and federal regulators that now is the time to require leak detection and repair, statewide, for all phases of natural gas development and delivery. Methane is an extraordinarily potent greenhouse gas, and capturing it would be better for consumers, businesses, and the environment. We can cut down drastically on the amount of methane that is unnecessarily released into the environment from Wyoming oil and gas projects.
- We can remind our friends, neighbors, and leaders that if we want to maintain our quality of life in Wyoming, the state must be able to compete in a global market—and not just in today's market, but in the one to come.

The lessons of the rise and fall of Detroit's economy (and West Virginia's coal country) can be applied here in Wyoming. We, as a statewide community, have an opportunity right now, if we choose to embrace it, to reinvent our economy and leverage our current prosperity to bring about future success. And we, as a global community, must address climate change. Wyoming can be a leader in this regard—and we can benefit from this leadership. We have an opportunity to innovate, evolve, and establish the frontier of energy technology. Let's seize it. 



We Need to Talk Plainly About Coal and Climate Change



BY RICHARD GARRETT, ENERGY POLICY ANALYST AND LEGISLATIVE ADVOCATE

Imagine yourself living next door to a person that without pause or relent makes the quiet enjoyment of your life, family, health, and welfare an everyday challenge. And yet you know that same neighbor is always available, 24/7/365 to help with your security, to make sure water gets to your house, to light the place up, and to warm or cool you when the weather changes.

In Wyoming, while we might not all live next door to such a neighbor, we all live in the same neighborhood. That neighbor is a coal-fired power plant.

I live in an electricity-powered house. And that electricity is generated from coal. I have to admit, it's pretty darn comfortable. Here is a partial roster of what coal does for me: My house is heated with coal. The water that makes its way to my faucet from the glaciers of the Wind River Mountains is pumped there with coal power. I enjoy music, television, the contents of my refrigerator, lights, smoke detectors, rechargeable mobile devices, and the general sense of security my family enjoys because of coal energy. Coal is a neighbor that I can always count on for so many things I depend upon, need, and want.

I can depend on that neighbor for other things too—darker things. I can count on skies that are not as blue as those I grew up enjoying. I can count on dangerous levels of mercury in fish in Wyoming's national parks. I know that the two children that I share my life with have a higher likelihood of asthma than I did. I can predict, too, that our life expectancies could be reduced by exposure to soot, ash, and the multitude of coal combustion byproducts.

In Wyoming, everyone is a neighbor. We are glad for this small community of people

in a big state. It's comforting to know that if the weather forces you off the road, in all likelihood a neighbor will scramble out of the next car that comes along, ready to help pull you out of the ditch, help you with your nerves, and do whatever it might take to get you safely back on your way.

Maybe it's this "everyone is a neighbor" mentality that helps make us so devoted to coal. It is tough not to consider coal a good neighbor when I scan the roster of all the benefits that coal-fired electricity brings to my home. But that doesn't mean we need to look away when coal is not a good neighbor.

I suppose we all could have kept looking away for a very long while—maybe even until the coal ran out—if there weren't one last thing that the "bad" neighbor coal was doing that we can't turn away from. That bad thing? Contributing to climate change.

There. I've said it. Two words. Climate. Change. Two words that when yoked together have a

meaning that most everyone can agree upon—for climate change is surely upon us. We see it here in Wyoming in the beetle-killed forests, higher up the mountain than would have been possible in the past. We see it in the intensifying drought cycles that have punctuated our lives more routinely and with greater depth than ever before. We also see it in shrinking glaciers all over the globe. In the accelerating pace of rising sea levels. In the declining Arctic sea ice and the shrinking of both Greenland and Antarctica. In ocean acidification. In the historic annual high average temperatures of the last decade. In the new normal of extreme storms that ravage the east coast of our country and places like the Philippines.

Seeing these indicators, and many more, most everyone agrees that the climate is changing.

What we don't agree upon in Wyoming is when those two words are preceded by

two other words—human induced. Those two words make all the difference. When we talk only about climate change, we can easily talk with one another. We can sympathize, share strategies, and ideas. We can, metaphorically, pull one another out of the ditch.

But when we (some of us) talk about human-induced climate change (a fact that 99.999 percent of the world's climate scientists agree upon)—well, *Katy bar the door*, since now we're talking badly about our otherwise good neighbor: coal.

But the fact is, climate change is coal's darkest side, and perhaps our darkest, too. With our needs, wants, amenities—my roster of the benefits of my electric house—we are slowly doing great damage to ourselves, if not to the planet upon which we float so precariously through space.

The Wyoming Outdoor Council proposes that we here in Wyoming begin to have a

“And we are not only talking. We're also listening. We know others in this state are listening as well.”

much more direct conversation about coal and climate change. We have some ideas about how we might work in this state to address it, while at the same time set Wyoming up for a brighter economic future. It's a necessary conversation that can't happen soon enough. And it's a conversation our leaders must earnestly engage in, too. And we are not only talking. We're also listening. We know others in this state are listening as well. We hope our leaders are ready to take the same approach.

The time has come for us to talk plainly with our longtime neighbor, coal, and be good neighbors to each other. Either that, or it's likely one of us will be priced out of the neighborhood. 

Celebrating Tom Bell's 90th and Remembering Steve Jones

GARY WILMOT, EXECUTIVE DIRECTOR



Tom Bell—our visionary founder and one of the great workhorses of western environmentalism who also founded High Country News—turned 90 this April.

Many of us, including staff, members, and friends, were blessed to be able to celebrate Tom's birthday with him and honor

all that he's done and sacrificed not only for our state, but also for our country.

Personally, I feel a great debt of gratitude to Tom for his life's work and for the tremendous privilege of knowing him. It's an honor to lead his council 47 years after he started it, and to share in his love of Wyoming and of the natural world.

As one member wrote in a birthday message to Tom this year: "You really have changed the course of Wyoming history for the better. And by setting up living, enduring forces for good at *High Country News* and the Wyoming Outdoor Council, your contributions to Wyoming and our country will keep on making things better for many years to come. Thanks, Tom!"

Anyone who knows Tom also knows that the single issue weighing most heavily on his mind and spirit today is climate change. Convincing the human race to step up and do everything we can to reduce greenhouse gas pollution has been a focus of his work for decades now.

The Wyoming Outdoor Council is committed to this same goal, and we're working hard to help point the way forward for Wyoming and the country. This *Frontline* is a small piece of that effort. We hope this publication helps to start shifting the conversation about climate change in ways that will lead to more productive outcomes in Wyoming than we've achieved so far. We're going to keep at it until we succeed. We hope, as time goes on, that more and more people in Wyoming will join in these constructive conversations.

On a sad note, our former longtime staff member and friend Steve Jones passed away on January 5, 2014. Steve was the Wyoming Outdoor Council's watershed protection program attorney from August 2001 to May 2012. In 2012 he left the Outdoor Council staff and moved to Jackson, Wyoming, to start a private law practice, where he remained a great ally and part of our family. Steve is deeply missed by many, including all of us in the Outdoor Council community.

There is a Facebook page to help remember and celebrate Steve's life. You can find it at the following link (you do not need a Facebook account to view the page): [facebook.com/rememberingstevejones](https://www.facebook.com/rememberingstevejones).

One of the last things Steve worked on for us was our Wyoming State Supreme Court lawsuit—which we filed with the Powder

River Basin Resource Council and others—to require companies to disclose the chemicals they inject underground during oil and gas development. Steve played an important role in this legal challenge.

We have since received a favorable decision in this lawsuit. Now, if companies wish to keep fracking chemicals a secret, they have the burden of proving that the chemicals meet the legal definition of a trade secret. This decision would have made Steve happy.

We believe the public has the right to know which chemicals are being injected underground during fracking. The Supreme Court's decision errs on the side of public disclosure, which we believe is the right decision.

Our position has long been that disclosure would help protect the people of Wyoming by allowing them to know which chemicals to look for in baseline water tests prior to fracking.

As many readers know, under 2010 regulations, Wyoming became the first state in the nation to require well operators to disclose the identities of chemicals that are mixed with water and sand and injected into the ground to break up rock during fracking.

But since the regulations were adopted, the Wyoming Oil and Gas Conservation Commission has approved more than 50 secrecy requests, shielding identifying information of more than 190 different chemicals currently used by Halliburton and other oil and gas service companies in fracking.

When it comes to fracking chemicals and the potential for harm to people and groundwater sources, we contend that the interests of public health and the public good far outweigh the interests of protecting companies' so-called trade secrets.

Groundwater belongs to the people of Wyoming. While water rights can be granted for its use, we all have an interest—and a responsibility—to ensure that groundwater is protected and kept clean not only for those of us living here today, but for the people who might need it after we're gone.

Thankfully, the court's recent ruling gives more weight to public disclosure and gives the Oil and Gas Commission good guidance in its future implementation of the rule. We're looking forward to the opportunity to achieve better transparency and advocate the public's right to know under this new guidance. And we are certain Steve Jones would be gratified to know this issue is now moving in a more positive direction.

Of course, there is a lot more going on at the Wyoming Outdoor Council—and it's impossible to include it all in our print publications. Please join us on Facebook (find us there and "like" us, and feel free to post your thoughts), sign up to get our e-communications, or follow our blog if you don't already. These are the best places to plug in to the latest updates, get the "rest of the

Wyoming Outdoor Council

Established in 1967, the Wyoming Outdoor Council is the state's oldest statewide conservation organization. Our mission is to protect Wyoming's environment and quality of life for future generations.

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story," and engage with our fun, vibrant, and growing community of friends, members, and supporters.

Lastly, as always, I'd ask you to please join me in renewing or increasing your membership this year. We can continue pursuing our mission—and Tom Bell's great legacy—only with your support. The role and importance of organizations such as ours continue to grow every year, and the support of our members has never been more important. We've also never had more potential to do such good and meaningful work.

Best,



Steve Jones, South Fork Lakes, the Wind River Range, 2009. Photo by Bruce Clawson, shared on the Facebook remembrance page for Steve.



Mark your calendars today to experience special places in the astonishing Red Desert!

Scott Copeland Images

“Run the Red” First Annual Trail Half Marathon
Saturday, May 31

Information and registration:
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Killpecker Sand Dunes Hike
Sunday, June 1 with John Mionczynski

Oregon Buttes Day Hike
Saturday, June 14

Continental Peak Hike
Sunday, June 15
with Wyoming Wilderness Association

Northern Red Desert Driving Tour
Friday, June 20
with John Mionczynski and Wyoming Assn. of Churches

Honeycomb Buttes Hike
Saturday, June 21 with John Mionczynski

Petroglyphs, Sand Dunes, and Volcanoes Tour
Sunday, July 6 with John Mionczynski

Steamboat Mountain and Red Lake Hike and Camp
Saturday, July 26–Sunday, July 27
with John Mionczynski

Northern Red Desert Driving Tours
Friday, August 1 and Saturday, August 2
with John Mionczynski and Wyoming Assn. of Churches

Whitehorse Creek and Oregon Buttes
Overnight Photography Workshop
Saturday, August 9–Sunday, August 10
with Kathy Lichtendahl