TESTIMONY OF RANDALL LUTHI
CHIEF ENERGY ADVISOR - GOVERNOR MARK GORDON
PROVIDED TO THE HOUSE NATURAL RESOURCES SUBCOMMITTEE
ON ENERGY AND MINERAL RESOURCES

Good Morning Chairman Stauber, Vice Chairman Hunt and Ranking Member Ocasio-Cortez,

Thank you for the opportunity to meet with you today. I greatly appreciate the chance to talk with you about the importance of coal to Wyoming, our nation and its role in addressing energy security, and economic and environmental issues of today. The purpose of today's hearing is to examine the Biden Administration's record on federal coal leasing. From an overall energy and economic view, it is my belief that the record is disappointing, at best, and misses an opportunity to provide the nation with an all-of-the-above energy approach that will benefit all Americans. The most glaring defect with federal coal leasing under this Administration is that there is not any leasing. In Wyoming, the last federal coal lease was offered in 2012, long before the current administration. However, this Administration has done nothing to correct that problem.

The policy on coal leasing, which appears to be no coal leasing, is only part of the misguided effort to eliminate one of the most reliable, abundant, low-cost energy sources for US consumers.

Coal is a vital energy and economic boost to Wyoming and the United States

Wyoming is unique in that a large portion of its land and minerals are owned and administered by the federal government. Approximately 48 percent of the surface land is federally managed and about 67 percent of the mineral estate is federally managed. Of all the coal that is owned and leased by the federal government, more than 80 percent of the federally owned coal is produced in the Powder River Basin annually. Due to the nature of the federal ownership it would make it nearly impossible for any operator to continue operations in the future if coal leasing does not resume. Even then, it takes an average of 10 - 12 years for a coal lease to go through the evaluation process and put up for sale by the Bureau of Land Management. The reinstated moratorium further delays the process.

Wyoming produced 244.3 million tons of coal in 2022, and this was not enough to meet contracted demand as producers lost an estimated 60 million tons of production because of the inability to transport coal to customers. The state lost between $90-$100 million in revenue. The point is that federal coal from Wyoming, while it certainly has decreased over the past few years, is still very much in demand.

The federal coal leasing program, when implemented, works well. There is no need for a coal moratorium. Wyoming is the top low sulfur compliance coal producing state in the nation with the vast majority of this production coming from federally leased coal. In 2021, the financial contribution from this coal to state and local governments in the form of taxes, royalties and fees was nearly $480 million. Wyoming and the federal government each received approximately

$127 million from royalties paid by coal companies. Since 2003, approximately $4.5 billion has been paid in bonus bids to the federal and state governments. These funds are split between the federal and state governments. Wyoming coal mines also contribute far above what is used in Wyoming to fund the Abandoned Mine Land Fund and for Black Lung compensation. Wyoming's share of bonus bids, rents and royalties is used to fund K-12 schools, community colleges, state and local governments, highways and roads, and the University of Wyoming. With the rural nature of Wyoming and small population, this funding is necessary to maintain our very way of life.

The coal industry employs over 5,100 individuals in Wyoming directly with a payroll of nearly $500 million, and more than 2,000 contractors. The average coal mining job pays more than $83,000 annually, well above the state average. And every coal mining job supports another 2-3 jobs in the service and supply industry. The financial return on federal coal is obvious for Wyoming, and is fair by any reasonable measure. Since Wyoming accounts for 85 percent of all federal coal production, it is clear that taxpayers have received a fair return and excellent value from the BLM Federal Coal Leasing Program in terms of revenue and jobs. Again, the idea that the American public is somehow being "shortchanged" is simply untrue. Instead, Wyoming and the American public are truly being shortchanged by the lack of leasing opportunities.

The BLM Federal Coal Lease Program created a great return for those who directly benefit from mining, royalties and bonus bids, like we do in Wyoming. It also provides value for those across America who rely on affordable electricity. According to the Energy Information Administration, in 2022, coal provided approximately 19.5 percent of the nation's electricity and about 34 percent of the world's electricity. It is also important to note that fossil fuels still provide 60 percent of the nation's electricity. This is 24-hour dispatchable power. Renewable energy sources continue to increase, supplying 22 percent of the nation's electricity. This includes significant wind development in Wyoming.

Recent winter storms brought to light the importance of having well-balanced energy sources for electricity. I note concerns from regional transmission organizations and even from the Chairman of Federal Energy Regulatory Commission that the rapid closure of fossil fuel power plants are putting various portions of the grid in danger since the demand for energy is still outpacing the ability of renewable sources to produce consistent, continual power.

Wyoming embraces an all-of-the-above energy strategy. We recognize the need and value in having a diverse energy production portfolio. This strategy also recognizes the continued need for coal produced from Wyoming mines. The compliance coal produced in Wyoming is available to power the nation's baseload thermal energy production for decades to come. Even under the most aggressive energy transition predictions, the need for thermal coal baseload power will continue well into the 2040 to 2050 timeframe.

I have yet to see a credible projection that the US and the world are going to use less energy in the future. Without a broad based strategy for energy sources, the demand may very well

outpace the supply. The need for the nation's security and economy will demand that electricity remain reliable and affordable, requiring the use of coal-fired power.

The current Administration has a record of inaction on vital Wyoming projects.

The Office of Surface Mining, Reclamation and Enforcement (OSMRE) Deputy Director Ms. Glenda H. Owens testified to this committee on May 16, 2023 that "the proposed FY 2024 budget focuses on funding OSMRE's core mission responsibilities and supporting the highest priority efforts and activities." As noted in the discussion above, coal is and will continue to be needed now and into the future as the country balances its energy needs. The continued approval of mining the nation's coal reserves to ensure reliability and affordability of electricity is one of the core functions of the OSMRE. However, OSMRE does not appear to be providing these core activities in a timely and prioritized manner.

Wyoming continues to see permitting approval delays at the federal level. Mines in the state are currently waiting for two federal mine plan approvals. For example, as outlined in Governor Gordon's letter dated April 25, 2023 to Secretary of Interior Haaland, Wyoming continues to experience extended delays in the approval of Federal Mine Plans from the OSMRE.

The state primacy program approved the Black Butte mine plan amendment on January 15, 2021 for 9.2 million tons of coal recovery. This is not a new lease, it is coal that was purchased under an earlier lease. It is coal adjacent to coal currently being mined. Mining operations will cease without the Right of Entry Letter. The OSMRE has held the plan in review since January 15, 2021 without issuance of the required Right of Entry Letter. During this time period, OSMRE has continually requested more information for completion of their review and approval. At this point, the coal within the proposed Federal Mine Plan has been through three NEPA reviews, e.g. BLM Resource Management Plan, the BLM Coal Leasing Action and associated Record of Decision, and OSMRE Regional Federal Mine Plan NEPA and two technical adequacy reviews, e.g. State of Wyoming Technical Completeness, and OSMRE Federal Mine Plan Technical Review and has been public noticed three times. Based on this level of scrutiny, the only reasonable conclusion that can be drawn, is that the delayed processing of Federal Mine Plans appears to be deliberate.

The other delayed mine amendment approval is the Antelope Coal Mine and the West Antelope II South Lease that contains 56 million tons of reserves.

Another example concerns the disposal of old wind turbines. Like all equipment, wind turbine blades must be replaced from time to time during the life of a wind farm. To date, many of these turbines end up in municipal or county landfills taking up valuable and needed space. These large blades dramatically shorten the life of these landfills. To address the issue, in 2020, the Wyoming legislature passed a law allowing the Wyoming Department of Environmental Quality (DEQ) to permit the permanent placement of turbine blades in the final pit void at coal mines as part of the reclamation process. The Wyoming Environmental Quality Council approved rules for

how and when the blades and towers could be used as fill. Those rules were signed by Governor Gordon on April 29, 2021.

The DEQ then sought an Amendment to the State Plan to implement the program. That Amendment was submitted to OSMRE on June 4, 2021. OSMRE acknowledged receipt on June 14, 2021. Due to the number of blades that were being replaced at that time, there was and remains a sense of urgency of getting the program started. DEQ requested that a response be given by August 1, 2021. OSMRE published the proposed amendment in the Federal Register on August 4, 2021. They did not receive any public comments.

Two years later there is still no response. This is a program that would benefit the wind industry, Wyoming coal communities, the coal industry, the overflowing county and municipal landfills. Once again, I can only conclude the inaction is deliberate and part of the Department of Interior's unannounced "no coal policy."

Beyond specific project examples, there appears to be a continued pattern of delay and added bureaucracy when it comes to coal leasing and management. Bureau of Land Management proposals such as the Coal Leasing Moratorium, continued review of federal coal royalties, proposals to limit or eliminate coal leasing within defined federal mineral coal reserves have not been based on technical, scientific, or economic data.

Actions by OSMRE further risk access to the nation's needed coal reserves. In Wyoming, with an approved primacy program, OSMRE's role should be limited to oversight through a limited audit program, research requested by the states, and technical assistance at the request of the states. Wyoming has a thorough and comprehensive regime for the review of permit applications and amendments for coal mines. This is done concurrently with review by the OSMRE Regional Offices in Casper and Denver. However, we have found that OSMRE in Washington is re-reviewing these permit actions, and questioning regional decisions after the state and regional reviews are complete. This lack of confidence and trust even within the OSMRE is, at best, concerning.

The actions of the BLM and OSMRE have only served to lend credibility to the conclusion that the delays occurring with leasing and accessing the nation's coal reserves are not based on the best technical science, required rules and regulations, nor the administrative process. Rather, they appear based on an anti-coal agenda, regardless of the energy security, economic and environmental benefits.

<u>The Administration is missing an opportunity to meet its climate goals.</u>

Wyoming is an energy state and we export about 93 percent of the energy we produce. We are listening to our customers and understand that in addition to reliable, affordable energy, they want to see emission reductions. Governor Mark Gordon was one of the first governors to speak of a net-zero carbon emissions goal. However, changes in Wyoming energy are going to be on our terms. We embrace technologies like Carbon Capture, Utilization and Storage (CCUS).

Some of Wyoming, and the nation's coal-fired power plants are ideal for CO_2 capture. As the Governor has often indicated, burning coal is not the issue, the release of CO_2 is the issue. If the true goal is to reduce or eliminate CO_2 emissions into the atmosphere, then CO_2 should be the target. The reduction of CO_2 can be achieved and coal can continue to provide reliable, low cost energy through the deployment of CCUS.

Advances in carbon capture and storage technologies make coal even more environmentally beneficial. The Administration has recognized that CCUS is a commercially available technology for the mitigation of carbon dioxide emissions from coal-fired power plants and could capture 90 percent of the CO_2 from these facilities while reducing other criteria pollutants. Continuing the leasing and use of coal for electricity generation with CCUS will mitigate the potential for impacts to the climate and the environment.

The State of Wyoming is a leader in advancing CCUS and is moving forward to do so commercially. Wyoming has enacted legislation related to CCUS projects – e.g., Wyoming law defines who owns the pore space, a critical aspect of such projects. Wyoming is also one of the only states with existing CCUS-related infrastructure, such as carbon dioxide (CO_2) pipelines and extensive expertise based on hosting the largest operating CCUS project in the world with ExxonMobil's Shute Creek facility.

- Wyoming is the only state in the nation to enact a law that creates a low-carbon/CCUS-based standard for coal-fired power plants that are regulated as public utilities. The law – H.B. 200 – is related to prior legislative enactments related to Wyoming's coal fleet (e.g., S.F. 159).
- Wyoming is one of two states to be granted primacy from the U.S. Environmental Protection Agency (EPA) for implementation of the CO_2 injection regulations under the Class VI of the Safe Drinking Water Act's Underground Injection Control program.
- An international leader in many aspects of CCUS technology. Researchers at UW are currently funded by the U.S. Department of Energy (DOE) to advance a potential large-scale integrated CO_2 storage project near Gillette, Wyoming, known as the Wyoming CarbonSAFE project.
- Several years ago, geologic assessments were conducted at another site. The University of Wyoming is negotiating with the Department of Energy on another award focused on designing and partially constructing a CO_2 storage hub in southwest Wyoming.
- Wyoming is home to the Integrated Test Center, where researchers test the capture and use of CO_2 sourced from a coal-fired power plant.

Wyoming is moving forward with deployment of CCUS and it is the best approach to drastically reduce emissions from federal coal, rather than eliminating an important source of energy.

It is also important to note that the Department of Energy researchers at the National Energy Technology Laboratory assessed various types of coal in the United States. Subbituminous Powder River Basin coal, largely produced in Wyoming, is among the lowest in terms of global

warming impacts. It would make sense to allow the exportation of such coal to replace other coal use around the world.

This Administration appears to have a disjointed, inconsistent approach to meeting their goals, such as reducing greenhouse gasses from fossil fuels. On one hand, there are grants available for limited development of CO_2 capture and storage, as identified above, but at the same time regulations such as the Ozone Transport Rule and the Clean Power Plan either unnecessarily cripple the coal-fired utilities or do not give them enough time or incentives to make these projects realistically achievable.

This Administration does little to promote other uses of coal.

Wyoming coal is a prolific resource and we are continuously supporting the evaluation of other opportunities beyond its use as fuel. The continued lack of action in promoting a coal leasing program hampers the creation of new coal related industries. Coal is an excellent feedstock to produce many materials and other products needed and of national-security value. For example, Wyoming federal coal seams are currently being evaluated as a source for rare earth elements and critical minerals needed for energy technologies, such as wind turbines and batteries.

In fact, the Department of Energy is investing in identifying rare earth elements and critical minerals associated with Wyoming federal coal in the CORE-CM program (Carbon Ore, Rare Earths and Critical Minerals). A federal coal moratorium would result in the stranding of potential CORE-CM assets just when the United States needs access to the widest variety of geologic materials to build a robust domestic supply chain. Materials in or associated with coal could be used for advanced technology industries such as battery production, solar panel production, and aerospace technologies (among other advanced manufacturing sectors). The lack of an active federal coal leasing program puts these nascent industries in jeopardy.

Wyoming is well suited to launch a new industry related to novel approaches to coal consumption as the infrastructure and skilled workforce exist that could potentially be transitioned to other energy related industries centered around the critical minerals and carbon-based products supply chains. These complex supply chains offer the opportunity for jobs related to extraction, processing, and manufacturing.

Since its inception in July 2016, the Carbon Engineering Initiative at the University of Wyoming, School of Energy Resources has focused upon identifying the feasibility and proving pathways to manufacture value-added high-carbon content products from coal. The State of Wyoming has spent more than $30 million investing in this program with the goal of creating high paying manufacturing jobs in the nation's largest coal community: Campbell County, Wyoming. If this program creates jobs in coal country Wyoming, it will translate to jobs in coal country across the US and the world.

Products under development include, but are not limited to, components for asphalt for roads and roofing materials, building materials (bricks, foam, drywall, pavers, aggregate for roads and

other products), graphene oxide, soil amendments that can be used in reclamation, and polymer products (decking material) and carbon membranes for water purification. Graphite, a major component of batteries of electric vehicles, is also being studied as a by-product of coal.

The life cycle of these products, especially the greenhouse gas footprint, is being considered throughout this initiative. For example, coal char bricks are chemically cured, resulting in energy savings during production compared to traditional bricks. These coal char bricks are less expensive to produce and are half the weight of a clay brick, which helps with transportation costs and potentially transportation fuel consumption. Why halt this promising innovation with a lack of a coal leasing strategy?

Coal can also be a source of one of the Administration's favorite fuels – hydrogen. Meeting the Administration's goals for hydrogen production using only electrolysis and curtailed renewable energy is not feasible in the proposed time frames. Gasification of coal with CO_2 capture and storage is a lower-cost pathway to meeting the demand for low-carbon hydrogen from the industrial, power, and transportation sectors. This is a well demonstrated option for hydrogen production as coal gasification presently provides around 18 percent of the total hydrogen in the world, and is the second-largest and most cost-effective way of producing hydrogen.

Gasification is the only commercial, large-scale option for converting solids into gasses, and the cleanest conversion technology for solid fuels. Hydrogen produced from coal-based gasification has recently been shown to be competitive with production from natural gas provided the cost of natural gas remains above US$4/MMBtu, and the reliability of gasification-based processes can be demonstrated to be high. The cost of producing hydrogen from coal could be reduced by 25–50 percent, even with the capture and sequestration of CO_2.

The costs of hydrogen production for natural gas and coal/biomass are much lower than for electrolysis (which presently has only a 4 percent market share) due to the production volume, which is much higher for hydrogen from fossil fuels, and the mature state of the technology.

In summary, the current and potential uses of coal are most promising, both in economic and environmental terms. This innovation could be vital to Wyoming's economy. The Administration should embrace the leasing and production of coal, and not bury this valuable asset by keeping it in the ground. Coal is not dead, but the current federal policies are attempting to build the casket.

Finally, I acknowledge that much of the above information came from a variety of sources, including, but not limited to, comments or research materials from Wyoming-based agencies provided in various rule-making procedures. Those sources include the Wyoming Energy Authority, the School of Energy Resources at the University of Wyoming, the Department of Environmental Quality and the Wyoming Mining Association.

Thank you again for the opportunity to supply the subcommittee with this information.

Governor's letter of April 25th on Black Butte Mine is attached.

April 25, 2023

The Honorable Deb Haaland
Secretary, Department of the Interior
1849 C Street, NW
Washington, DC 20240

VIA EMAIL

Dear Secretary Haaland,

I seek your assistance in getting the approval of a mine plan amendment for the Black Butte Mine near Rock Springs, Wyoming. In 2019, Black Butte submitted their application for their amendment to the existing mine plan in order to continue to mine coal for the Jim Bridger Power Plant. The State program approved the mine plan amendment on January 15, 2021 for 9.2 million tons of coal recovery. The Office of Surface Mining, Reclamation and Enforcement (OSMRE) held the plan in review since January 15, 2021 without issuance of a required Right of Entry Letter. During that time, the OSMRE has continually requested more information for completion of their review and approval, and apparently have deliberately delayed processing the application. It is my understanding that the mine has received conflicting requests for additional information and is unable to get clarification on what is actually required. After several reviews/approvals by the Office of the Solicitor, the approval appears to have stalled. At this time, the coal within the proposed federal mine plan amendment has been through three NEPA reviews. All of which are complete. (The BLM Regional Resource Management Plan, The BLM Coal Leasing Action and associated Record of Decision, and OSMRE's Federal Mine Plan Review).

This approval and the coal being recovered in the public interest is required under the Federal Mineral Leasing Act (FMLA). This facility also has significant economic benefits for the region. The mine employs approximately 145 people, many of whom are union workers. Noting how urgent it is that we address climate change, it is encouraging that PacifiCorp is currently processing responses to their Request for Proposals to build carbon capture facilities on units 3 and 4 of the plant. Approving the mine plan will support carbon capture and eventually sequestration efforts and further Wyoming's long-term net negative carbon emissions reduction effort. Further delay only puts at risk our best chance to off-set carbon emissions, which continue elsewhere in the world unabated.

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My office has directly contacted the Acting Director of OSMRE and Deputy Secretary Beaudreau concerning the status of the mine amendment twice in the last few weeks. I have yet to receive any kind of a response. Simply put, the silence is deafening. A mine plan amendment should not require duplicative environmental reviews, nor should the regulatory agency simply ignore requests from the State of Wyoming.

Madame Secretary, this is a matter of importance to me and many electric consumers in Wyoming, Idaho and the Pacific Northwest. Furthermore, if we are to avoid climate catastrophe, it is imperative that we move expeditiously to not only reduce carbon emissions, but to be diligent in removing excess carbon dioxide in our atmosphere as soon as possible. Then carbon capture and sequestration are critical to those efforts. I ask you to review this matter, so this plan approval can move forward without further delay. Should you have any questions, do not hesitate to contact Randall Luthi of my staff at 307-777-7520 or at randall.luthi@wyo.gov.

Thank you for your assistance.

Sincerely,

Mark Gordon
Governor

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