

WRITTEN TESTIMONY OF TODD PARFITT, DIRECTOR

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BEFORE

THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

HEARING ON:

“STATE REGULATORS’ PERSPECTIVES ON THE CLEAN POWER PLAN”

MARCH 11, 2015

Good Morning Chairman Inhofe, Ranking Member Boxer, and members of the Senate Environment and Public Works Committee. My name is Todd Parfitt. I am the Director of the Wyoming Department of Environmental Quality (WDEQ). I thank the committee for inviting the State of Wyoming to share its’ perspective on the Clean Power Plan. The State of Wyoming has provided extensive comments to the Environmental Protection Agency (EPA) on its proposed rule.

Wyoming is home to Yellowstone National Park, Devil’s Tower and many more beautiful places. Our citizens and visitors expect these places to have the best environmental stewardship. Wyoming’s abundant mineral resources provide its citizens and the state with the jobs and tax revenue necessary to thrive. In Wyoming, we manage our natural resources exceptionally well, providing for both environmental stewardship and energy production. As our governor, Matt Mead, has stated, “It is a false question to ask: Do we want energy production or environmental stewardship?” In Wyoming, we must and do have both.

To understand Wyoming’s perspective one would first benefit from knowing some key characteristics of the state. Wyoming is the 9th largest state covering 97,814 square miles, yet hosts the smallest population of any state, at approximately 584,000. Much of the state is still unsettled and consists of many rural communities with large distances in between. There are only nine (9) “cities” in Wyoming with populations greater than 10,000. More than half of the land in Wyoming is owned and managed by the federal government.

Wyoming is the number one exporting state of British thermal units (Btu’s) to the country, contributing 12.2% of all the Btu’s produced in the U.S. in 2012; the number one producer of coal representing 40% of the nation’s coal production and delivering to power plants in 32 states. Wyoming is fifth in production of natural gas; eighth in crude oil production; number one in uranium; number one in bentonite; number one in trona; and Wyoming has the most class 5-7 categories for wind energy resources in the continental United States.

Wyoming is also a leader in developing and providing electricity to many states. Wyoming sends electricity to both the eastern and the western power grids, reaching from Iowa to Washington. Wyoming generated 49.6 million Megawatt-hours of electricity in 2012¹, with 66% of this electricity consumed beyond our borders. This electricity generation is comprised of 88% coal, 9% wind, and the remainder from natural gas and hydropower.

On June 18, 2014, EPA proposed its rules pertaining to existing power plants. This initiated an unprecedented level of regulatory review for the State of Wyoming. The Wyoming Department of Environmental Quality coordinated with the Wyoming Public Service Commission (WYPSC) and provided extensive comments to EPA.

The EPA has proposed to reduce CO₂ emissions from electric generating units (EGUs) through a series of four Building Blocks

- 1 - Efficiency upgrades at coal units of 6%;
- 2 - Increase utilization of natural gas generation to 70%;
- 3 - Increase utilization of renewable energy resources and nuclear fleets; and
- 4 - Decrease use of electricity through demand-side energy efficiency.

As one reviews the 1,600 plus pages of the proposal it is apparent that it will impact states differently. Each state has unique characteristics and energy portfolios that drive the application of each of the four building blocks. For Wyoming, the goal is problematic and unrealistic to achieve.

In this action, EPA is proposing state-specific emission goals for CO₂ from the power sector, as well as guidelines for states to follow in developing plans to achieve the state-specific goals. EPA has on numerous occasions described the proposed rule as flexible, and that it was developed to provide a framework under which states can develop their own individual plans. As the State reviewed the proposed rule, it became evident that the rule does not provide flexibility for Wyoming. For reasons I will discuss shortly, the establishment of state-specific guidelines through the implementation of four building blocks makes the rule inflexible.

One concern with the proposed rule is the timing. This is a very complex rule that will require tremendous coordination to develop a compliance plan. Typical time associated with State Implementation Plan (SIP) submittals is three years, yet in this case the EPA is proposing a compressed timeline in which states are to develop and submit their state plans. States developing individual plans are given one year while states considering working together may be given two years. As proposed, EPA will review and issue a determination within one year after receiving a complete plan.

The emission reductions EPA requires of Wyoming by 2019 is far greater than can be achieved through heat rate improvements alone. This disparity is often referred to as the “cliff”. EPA’s methodology proposes Wyoming reduce the rate of CO₂ emission from 2,331 lbs/MWh to 1,899 lbs/MWh. This equates to 70% of the proposed state goal being achieved within one, possibly two years. Quoting the WYPSC, “...there are reasons to believe that the entire Section 111(d) program will cause a contraction of

¹ U.S. Energy Information Administration

Wyoming's economy, due to its impact on Wyoming's coal industry; to the premature retirement of a major portion of Wyoming's coal fleet; and to the resulting increase in electricity rates...."

The first building block involves heat rate improvements and is focused on measures power plant operators can put in place to improve the process by which electricity is generated. The proposed goal for heat rate improvements of 6% for EGUs in Wyoming is not achievable. Our utilities have found 2% to be more in line with what is achievable. EPA's goal is based on general assumptions that are not representative of Wyoming EGUs capabilities. In particular, many plants in Wyoming have already taken steps to improve heat rates by upgrading their steam turbines and replacing aging equipment. EPA also assumes the efficiency upgrades will largely be paid off by lesser coal purchases. Wyoming's fuel costs are among the lowest in the nation, evaporating any opportunity to offset these excessive costs.

In the proposed rule, EPA expects operators to have heat rate improvements in place by 2019. This is a concern for Wyoming utilities that are juggling compliance and installation of additional technologies resulting from numerous other EPA regulations. EPA should allow gradual implementation of heat rate improvement projects. Implementation of the remaining three building blocks is allowed to occur throughout the compliance period, 2019 through 2029.

Building block two is the re-dispatch of existing or under construction natural gas combined cycle power plants. Wyoming has little natural gas generation, rendering this component near moot, minus one incorrect assumption by EPA regarding the sole natural gas generating unit in Wyoming.

Building block three is renewable energy. EPA credited all of the wind generated in Wyoming to our renewable goal, some 4 million Megawatt-hours, and subsequently applied an unrealistic growth factor. Wyoming consumes only 666,212 Megawatt-hours of this amount while exporting 85% of the wind energy to other states. Since EPA incorporated all the renewable production in Wyoming into our goal, EPA's proposal requires Wyoming consumption to increase to 9.4 million Megawatt-hours by 2030. This is a 1,415% increase, equivalent to a 52% renewable portfolio standard.

During the course of the public comment period, EPA acknowledged a discrepancy in how state goals were calculated and how compliance with the interim and final state goals would be determined. EPA has said that renewable energy will be credited to the consuming state, not the hosting state. But host states will be responsible for all carbon reductions, regardless of export considerations. This inconsistency can potentially put electricity producing states, like Wyoming, at a severe disadvantage. Wyoming is being asked to take full responsibility of meeting EPA's carbon reduction goal, though we export 66% of our electricity. At the same time, Wyoming is being asked to increase renewable energy growth based on the total amount of renewables currently in the state, even though only 15% is actually consumed within Wyoming. This results in an inflated and unattainable goal for Wyoming.

The proposal includes an annual escalation factor for renewable energy which is intended to reflect the average past performance of an eleven-state region designated as "the West". The result is an EPA-derived growth rate of 6.095%. The WDEQ performed an analysis using the same data EPA relied upon and determined that the average annual state growth rate for renewables in the region was 0.95%, significantly lower than EPA's.

Not only is the renewable component by itself a major obstacle for Wyoming, but the time involved for permitting the development of renewable energy can be a significant challenge. The presence of federal land ownership in Wyoming subjects renewable and transmission projects to review under the National Environmental Policy Act (NEPA). While the intent is good, it has been WDEQ's experience that permitting projects often involve multiple NEPA processes. The NEPA process adds considerable time to renewable energy projects. NEPA processes for wind facilities and transmission lines have a proven track record of taking at least eight years. In some cases, even after such a lengthy approval process, only a partial decision is rendered, allowing only a portion of the project to move forward. Further time may be necessary should additional Environmental Impact Statements (EIS) or Environmental Assessments (EAs) be required by other Federal Agencies. For example, if the Wyoming Bureau of Land Management (BLM) requires an EIS for a decision regarding a wind facility, the elements of the BLM's analysis do not automatically satisfy an EIS process stipulated by the U.S. Fish and Wildlife Service (FWS) for an Eagle Take Permit. These ancillary federal requirements, to which Wyoming has no authority over, present obstacles that will hinder Wyoming's ability to make reductions given EPA's truncated timeframe.

The most recent wind energy facility in Wyoming, on federal land, was considered a high priority project by the Administration. A notice of intent was issued by the BLM in 2008, and a decision was issued in 2012; however, the BLM has required additional, site-specific NEPA work before the project can proceed to construction. Further, the FWS requires an additional NEPA process for an Eagle Take Permit. That decision is not anticipated until 2016. If approved, it will authorize only half the facility to be constructed. Additional approval from FWS will be required to build the entire facility, as planned. The NEPA process will span 8 years for partial approval of a fast-tracked project.

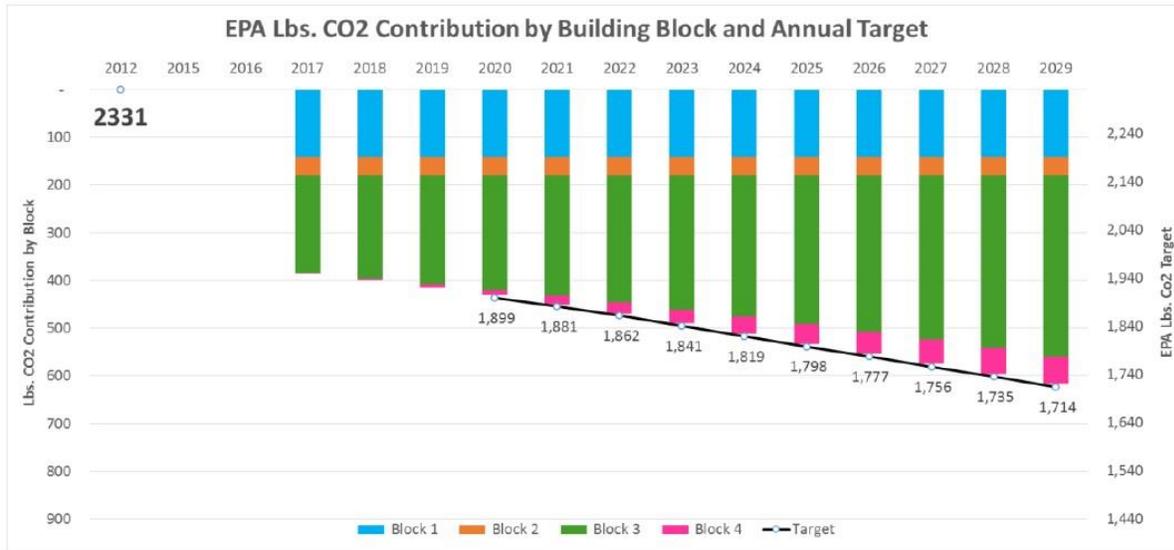
The NEPA processes for transmission lines have had similar experiences. Two federal 'fast-track' transmission projects in Wyoming began the NEPA process in 2008. Both are still awaiting a final decision. These examples demonstrate that it is unrealistic for Wyoming to build renewable energy and transmission projects within EPA's time line.

EPA assessed the amount of land available for renewable energy development. The largest technical potential in Wyoming is for wind energy, and the amount of land available for such development was assumed to be 110,415 km². However, the EPA failed to consider high-priority, environmental conflicts specific to Wyoming that greatly reduce the actual amount of land available. Considerations for Greater Sage-Grouse habitat, other designated critical habitats, and other protected areas of cultural and historical significance were not taken into account. In reality, only 20,158 km² are potentially available for wind development. Accounting for the wind energy projects already built or permitted in this area (1,888 km²), the total available land is further reduced to 18,270 km². Therefore, only 16.5% of the total land area EPA identified for wind energy development is actually available.

Building block four is demand side energy efficiency. EPA set goals for the fourth block based upon broad conclusions from other states' success with energy efficiency programs. The WYPSC performed a detailed analysis of energy efficiency saving potential in Wyoming. Based on Wyoming's low population, industrial-based load, and other factors, the proposed goal for Wyoming is unrealistic. Wyoming has offered a more realistic potential for building block four based on a state specific analysis.

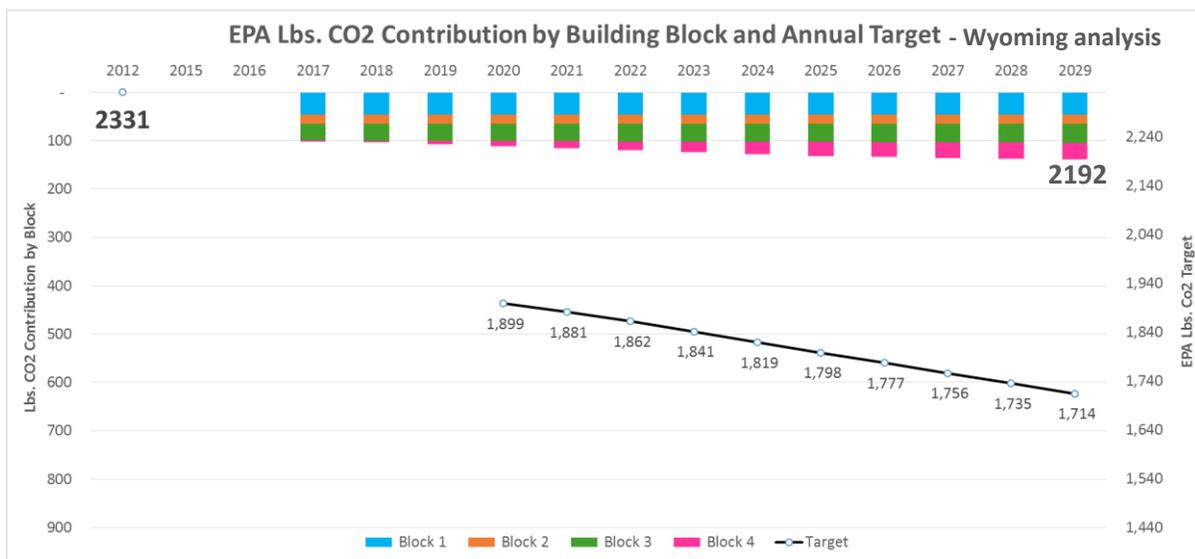
Graph 1 below depicts as a bar graph Wyoming’s glide path as proposed by EPA. One can observe the dominant influence of the renewables component.

Graph 1: EPA Lbs. Contribution by Building Block and Annual Target



After review, the WYPS and WDEQ determined what is practically achievable given EPA’s proposed avenues. This is shown below. The line in the graph represents Wyoming’s carbon emission requirements according to EPA’s analysis. The colored bars were derived through extensive analysis by the WYPS and WDEQ, representing what may be possible in Wyoming. No adjoining analysis was completed estimating the cost of this projection.

Graph 2: EPA Lbs. Contribution by Building Block and Annual Target – Wyoming analysis



As can be seen, there is a wide gap between EPA's and Wyoming's analyses. The bars in Graph 2 show the outer limit of the practical for Wyoming – a final emission rate of 2,192 lbs/MWh as opposed to EPA's target of 1,714 lbs/MWh hour. Wyoming may practically be able to achieve 22% of what EPA intends, without consideration to costs of achieving such reductions.

Based on EPA's overstated carbon reduction goal for Wyoming, and given the fact there are limited options for Wyoming to achieve this goal, the simplest illustration to show an avenue for Wyoming to meet the initial 2020 goal is to consider how many coal fired power plants must be closed. It was assumed the state would shut down coal plants in order of scheduled full depreciation to minimize stranded investments, though plants will not be fully depreciated within EPA's timeframe.

- Premature closure of Dave Johnston, 816 megawatts
- Premature closure of Naughton, 707 megawatts
- Premature closure of Jim Bridger, 2,317 megawatts
- Premature closure of Wyodak, 335 megawatts

This represents 4,175 megawatts of the states total coal fleet of 6,748 megawatts. This is Wyoming's "cliff". The WYPSC determined the amount of stranded investment for these power plants at the year 2020 to be \$1.491 billion:

- Dave Johnston: \$393 million
- Naughton: \$326 million
- Jim Bridger: \$524 million
- Wyodak: \$248 million

These power plants are owned by PacifiCorp, which serves a six-state territory. These costs will be spread to ratepayers within the territory and do not include the cost of replacement power.

In closing, I would also like to note that it is also important to Wyoming that the 111(d) process does not cause EPA to fall behind on its approval of other state air quality plans. This is an especially important issue as the Environmental Council of States, the Air Quality Associations and individual States have worked closely with EPA to develop a plan that addresses EPA's backlog of SIP reviews and approvals. We are concerned that 111(d) will add to the abundance of new regulations emanating from EPA and their impact on states' resources. In the air programs alone, there have been dozens of new rules in the past several years, including a proposal for a new ozone standard. States have primacy over the regulation of air quality, therefore EPA relies heavily upon the states to carry out these initiatives. We are the "boots on the ground" that ensure that the nation's priorities in cleaning up the air and protecting human health are achieved. But, state resources are being stretched ever more thin. As EPA continues to propose regulations at their current pace, they must consider the ability of states to meet this demand.

We look forward to continued dialogue with EPA and the other states as EPA considers our comments and reconsiders their original proposal.

Thank you for allowing me to provide input to your deliberations.