July 28, 2016

By electronic mail

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Re: Comments on Department of the Interior's Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Review the Federal Coal Program

Dear Secretary Jewell, Director Kornze, and Director Pizarchik:

WildEarth Guardians and the Grand Canyon Trust submit the following comments in response to the March 30, 2016 notice of intent to prepare a programmatic environmental impact statement ("PEIS") to review the federal coal program consistent with Secretarial Order 3338, issued on January 15, 2016. *See* 81 Fed. Reg. 17,720 (March 30, 2016). We previously provided testimony at the public hearings in Casper, Wyoming on May 17, 2016 and in Grand Junction, Colorado on June 23, 2016. These comments expound upon the brief remarks we provided at these hearings.

We first want to thank the Department of the Interior and the Bureau of Land Management ("BLM") for acknowledging the need to modernize the way publicly owned coal is managed in the United States. As you have acknowledged, the federal coal program faces significant contemporary challenges and its relevancy, effectiveness, and need is more in question than ever before. The PEIS process, coupled with the temporary moratorium on new federal coal leasing, presents an historic opportunity to ensure the federal coal program is consistent with our nation's energy, climate, and public lands protection goals. Further, conducting a program-wide review of the federal coal program will ensure that the Interior Department more effectively analyzes, assesses, and acts upon the true depth and breadth of the reasonably foreseeable impacts of its coal management decisions. For too long, coal

management decisions have been made in piecemeal and isolated fashion. The PEIS will ensure the most robust look at the impacts of the federal coal program and guarantee that future management will be set on the best path possible.

1. Initial Comments

Second, we want to emphasize that the move to reform the federal coal program comes as a critical moment in our nation's energy history. In the past several years, the federal coal program, which has sought to maximize economic return for the United States of America, has faced the new reality that more coal mining is not yielding the economic benefits intended when the program was first enacted. As our understanding of the costs of climate change have evolved, it is now clear that the federal coal program is not producing an economic return, but rather costing society tremendously.

One vivid illustration of this is with regards to the climate costs of publicly owned coal production. As reports have found, every ton of carbon released into the atmosphere imposes a cost to society in the form of economic damages. The U.S. Environmental Protection Agency ("EPA") has explained this "social cost of carbon" concept as follows:

> The [social cost of carbon] SC-CO2 is an estimate of the economic damages associated with a small increase in carbon dioxide (CO2) emissions, conventionally one metric ton, in a given year. This dollar figure also represents the value of damages avoided for a small emission reduction (i.e., the benefit of a CO2 reduction).[1]

Although a U.S. Interagency Working Group consisting of the White House Council on Environmental Quality, U.S. Department of Agriculture, the EPA, the Department of Energy, and others reports that the current cost of carbon emissions may be as high as $105 per metric ton of carbon dioxide released, peer-reviewed studies actually indicate the cost is as high as $220 per metric ton.[2] Agencies have lately been using a mid-range value of $37 per metric tons of carbon dioxide.

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[1] EPA, "The Social Cost of Carbon," website available at https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html.

[2] According to the Interagency Working Group, the 2015 cost of carbon based on the 95th percentile value across three models at a 3% discount rate was $105 per metric ton of carbon dioxide. *See* Exhibit 1, Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (July 2015), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/scc-tsd-final-july-2015.pdf. However, recent studies have determined that current estimates for the social cost of carbon should be as much as $220 per ton. *See* Exhibit 2, Moore, C.F. and B.D. Delvane, "Temperature impacts on economic growth warrant stringent mitigation policy," *Nature Climate Change* (January 12, 2015).

Based on recent reports that federal coal production is responsible for 765,241,950 metric tons of carbon dioxide, this would put the total climate cost of the federal coal program at up to $168,353,229,000 based on a $220 per metric ton social cost of carbon value.[3] Even based on a $105 per metric ton of carbon value, the costs of the federal coal program would be as much as $80,350,404,750. These are staggering expense. Especially considering the Department of the Interior has estimated the total economic benefits from all oil, gas, and coal production overseen by the BLM may be as high as only $64.50 billion, the net costs of the federal coal program alone are obvious and far overshadows any economic benefits.[4]

The costs of the federal coal program are underscored by methane emissions associated with federal coal production. As recent reports have found, among federal fossil fuel development, federal coal production is the largest source of methane pollution, releasing 13,080 metric tons annually.[5] According to recent studies, the social cost of methane as of 2015 was as high as $3,000 per metric ton.[6] This puts the cost of methane emissions associated with federal coal production at $39,240,000, further highlighting how costly the climate consequences of the federal coal program are to our society.

Put another way, the annual climate costs of just the federal coal program far outweigh the benefits of all fossil fuel production overseen by the BLM. Taking into account all carbon dioxide and methane emissions associated with federal coal production, the costs are 2.5 times greater than all economic benefits.

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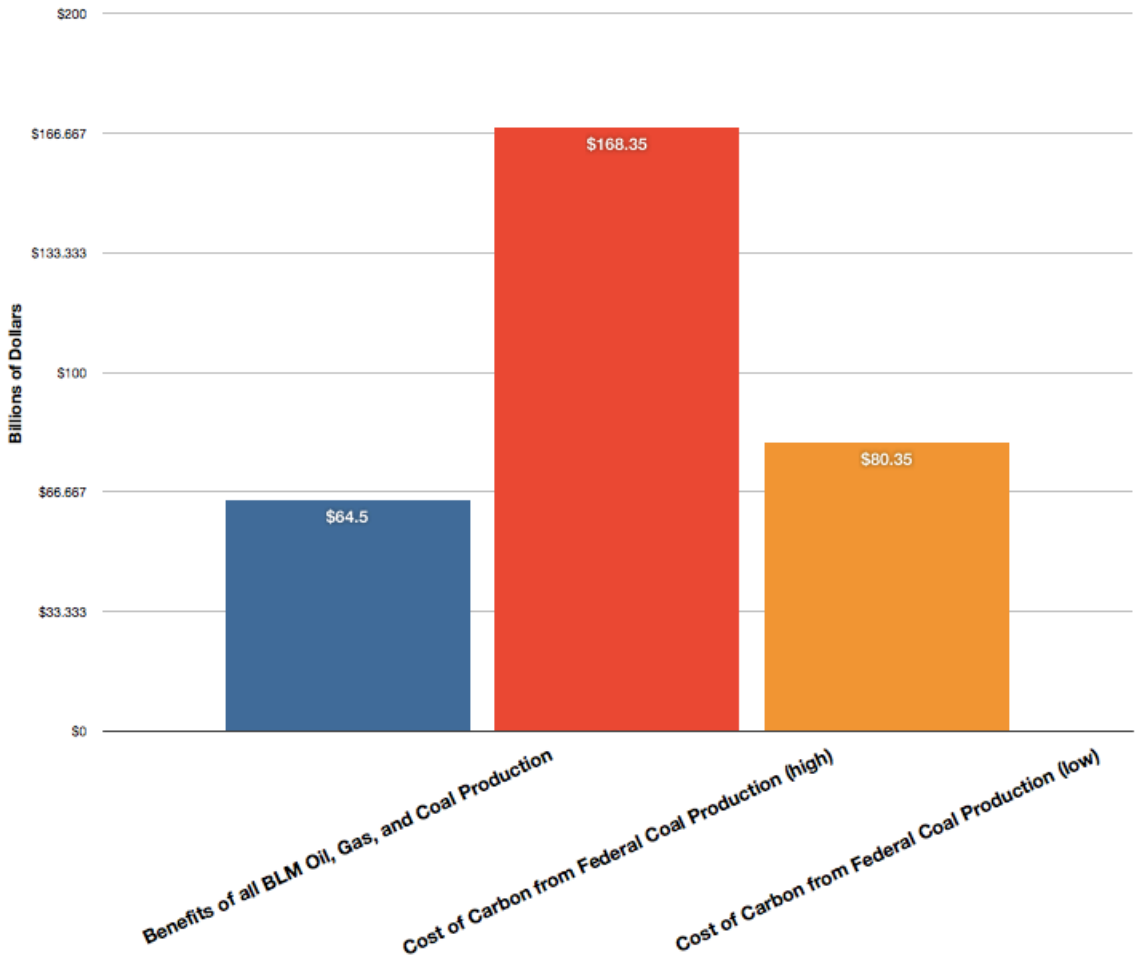
[3] According to a recent report for The Wilderness Society, total carbon dioxide emissions related to federal coal production are estimated to be 765,241,950 metric tons annually. *See* Exhibit 3, Stratus Consulting, "Greenhouse Gas Emissions from Fossil Energy Extracted From Federal Lands and Waters: an Update," Final Report Prepared for The Wilderness Society (Dec. 23, 2014) at 10, available online at http://wilderness.org/sites/default/files/Stratus-Report.pdf.

[4] In the Department of the Interior's most recent Economic Report for FY 2015, the agency estimates a total economic contribution from all coal, oil, and gas production overseen by the BLM to amount to $64.5 billion. *See* U.S. Department of the Interior, "Economic Report, FY 2015) (June 17, 2016) at 22, available online at https://www.doi.gov/sites/doi.gov/files/uploads/fy2015_doi_econ_report_2016-06-17.pdf. This number is based on the direct economic benefits of all oil, gas, and coal production overseen by the BLM, which are estimated to be $29.5 billion, and the "value added" benefits, which are vaguely defined and amount to $36.64 billion. The report does not disaggregate between coal, oil, and gas benefits, but rather presents an aggregate figure for all fossil fuel production overseen by the BLM.

[5] *See* Exhibit 3 at 10. Contrast this figure with total methane emissions from onshore natural gas production, which at 12,358 metric tons is the second largest source of methane from federal fossil fuel production.

[6] *See* Exhibit 4, EPA, "Regulatory Impact Analysis of the Proposed Emission Standards for New and Modified Sources in the Oil and Natural Gas Sector" (Aug. 2015) at 4-14, available online at https://www3.epa.gov/airquality/oilandgas/pdfs/og_prop_ria_081815.pdf.



Benefits of BLM Oil, Gas, and Coal Production and High and Low Carbon Cost Estimates Associated with Federal Coal Production.

Another way to look at this is to assess the climate costs that society stands to bear from future coal production. According to estimates, 231.92 billion metric tons of carbon stands to be unleashed if all remaining leased and unleased federal coal reserves are mined and consumed.[7] Based just on carbon cost estimates for 2015, these emissions stand to produce as much as $51.03 trillion in damages, more than 17 times the total budget of the United States of America. However, because these emissions are likely to occur later in time, when carbon costs are more pronounced, these estimates represent very conservative amounts. Nevertheless, they remain illustrative of the need for reforms to ensure the United States, and indeed the world, are not forced to shoulder these costs.

[7] *See* Exhibit 5, Eco-Shift Consulting, "The Potential Greenhouse Gas Emissions from U.S. Federal Fossil Fuels," Report Prepared for Center for Biological Diversity and Friends of the Earth (Aug. 2015), available at http://www.ecoshiftconsulting.com/wp-content/uploads/Potential-Greenhouse-Gas-Emissions-U-S-Federal-Fossil-Fuels.pdf.

Projected Carbon Emissions and Costs Related from Unleased and Leased Federal Coal Reserves

	Total carbon emissions	$220 per metric ton social cost of carbon	$105 per metric ton social cost of carbon
Carbon from Unleased Federal Coal Reserves	212.26 billion metric tons	$46.70 trillion	$22.29 trillion
Carbon from Leased Federal Coal Reserves	19.66 billion metric tons	$4.33 trillion	$2.06 trillion
TOTALS	231.92 billion tons	$51.03 trillion	$24.35 trillion

Even under the more conservative, mid-range value of $37 per metric ton of carbon dioxide, the total carbon emissions from unleashed federal coal reserves stands to be more than $7.8 trillion. No matter how you slice it, the liabilities of future coal development are nearly unfathomable and certainly cannot be something the BLM and Interior Department should expect future generations to shoulder.

These climate costs are not theoretical. As the Interior Department itself has acknowledged, the cost of climate change to the resources it manages is and stands to be enormous, including:

- More than $40 billion in National Park resources and infrastructure at risk because of climate change;[8]
- Devastating impacts to western water supplies, including decreased precipitation in the American southwest, decreased runoff, and decreased streamflow;[9]
- Loss of imperiled and iconic American wildlife, including polar bear, caribou, salmon, and moose;[10] and

[8] *See* National Park Service, "Interior Department Releases Report Detailing $40 Billion of National Park Assets at Risk from Sea Level Rise" (June 23, 2015), website available at https://www.nps.gov/aboutus/news/release.htm?id=1715.

[9] *See* Department of the Interior, "Interior Releases Report Highlighting Impacts of Climate Change to Western Water Resources" (April 25, 2011), website available at https://www.doi.gov/news/pressreleases/Interior-Releases-Report-Highlighting-Impacts-of-Climate-Change-to-Western-Water-Resources; *see also* Department of the Interior, "Interior Department Releases Report Underscoring Impacts of Climate Change on Western Water Resources" (March 22, 2016), website available at https://www.doi.gov/pressreleases/interior-department-releases-report-underscoring-impacts-climate-change-western-water.

- Greater difficulty in reclaiming land disturbed by energy and mineral extraction and other human activities on public lands.[11]

The federal coal program, however, is doing more than just damaging our climate. Facing declining demand, the consequences of chronically poor business decisions, and increased competition from cleaner sources of energy, the coal industry is now in the midst of one of the most significant job killing and downsizing sprees in history, firing thousands of workers and leaving communities hanging.

In the past year, the first, second, and fourth largest coal companies, Peabody Energy, Arch Coal, and Alpha Natural Resources, filed for Chapter 11 bankruptcy in federal court.[12] All three of these companies have major mining operations in the western United States and rely heavily on federal coal to sustain their businesses. Further, in the western United States, more than 2,600 jobs have been lost in the coal industry since 2012.[13] In the wake of the industry's collapse, coal-dependent communities are struggling to stay afloat, with revenues declining and putting even local schools at risk.[14] Not surprisingly, coal production rates are hitting historic lows, particularly in the western United States.

The coal industry's collapse is a clear sign that now is the time for a new path forward for managing publicly owned coal that moves us away from this destructive, carbon-based form of energy. This is underscored by the reality that, to meet our nation's and our world's climate objectives, we have to completely transition from burning coal—and unleashing the attendant carbon pollution—as quickly as possible. This means not only transitioning electricity

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[10] *See* Department of the Interior, "9 Animals that are Feeling the Impacts of Climate Change" (Nov. 16, 2015), website available at https://www.doi.gov/blog/9-animals-are-feeling-impacts-climate-change.

[11] *See* Exhibit 6, Department of the Interior, "Climate Change Adaptation Plan" (Jan. 2014) at 6, available at https://www.doi.gov/sites/doi.gov/files/migrated/greening/sustainability_plan/upload/2014_DOI_Climate_Change_Adaptation_Plan.pdf.

[12] For information on Alpha Natural Resources bankruptcy, see http://www.kccllc.net/alpharestructuring. For information on Arch Coal's bankruptcy, see http://www.archcoal.com/restructuring/. For information on Peabody Energy's bankruptcy, see http://www.kccllc.net/peabody.

[13] *See* Blankenbuehler, P., "By the numbers: western coal mine layoffs," *High Country News* (July 6, 2016), available online at https://www.hcn.org/articles/western-coal-miner-layoffs.

[14] *See e.g.* Finley, B., "Coal giant's hiccup causes turmoil and dependent Colorado towns," *Denver Post* (June 23, 2016), available online at http://www.denverpost.com/2016/06/23/coal-giants-hiccup-causes-turmoil-in-dependent-colorado-towns/.

generation from coal to cleaner sources of energy, a shift that is already happening, but also keeping unmined coal reserves in the ground.

How does keeping coal in the ground work to combat climate change and rein in carbon pollution? Aside from the obvious, which is that coal left unmined will never be burned, reports have found myriad reasons for the climate benefits of keeping coal, as well as other fossil fuels, in the ground. Among them:

- Keeping coal in the ground could "'widen the cost mitigation curve,' allowing greater emission reductions at the same (or lower) cost than demand-side policies alone, and can also help address carbon leakage risks;"

- Keeping coal in the ground "can help to reduce carbon lock-in effects, making it easier for lower-carbon alternatives to compete with fossil fuels;"

- Keeping coal in the ground can "bring added pressure to bear on climate change mitigation efforts, and could help make the case for more ambitious global climate action."[15]

Not surprisingly, scientific reports confirm that keeping coal and other fossil fuels unburned is a critical means of reducing carbon emissions and limiting global warming. As a recent report in the journal *Nature* found to meet international goals of limiting global temperature increases to no more than 2ºC, 95% of all U.S. coal reserves, or 245 billion metric tons of coal, must remain unburned.[16] A recent report prepared by the Stockholm Environmental Institute confirmed that the benefits of putting an end to new federal coal leasing and the inevitable mining, effectively avoiding carbon "lock-in effects," stands to reduce carbon emissions by 238 million metric tons annually.[17]

Perhaps it's not surprising that the President himself recently remarked, "[I]f we're going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our

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[15] Exhibit 7, Lazarus, M., P. Erickson, and K. Tempest, "Supply-side climate policy: the road less taken," Stockholm Environment Institute, Working Paper No. 2015-13 at 18, available online at http://sei-us.org/Publications_PDF/SEI-WP-2015-13-Supply-side-climate-policy.pdf.

[16] *See* Exhibit 8, McGlade, C. and P. Ekins, "The geographical distribution of fossil fuels unused when limiting global warming to 2°C," *Nature*, Vol. 15 (Jan. 2015).

[17] *See* Exhibit 9, Erickson, P. and M. Lazarus, "How would phasing out U.S. federal leases for fossil fuel extraction affect CO_2 emissions and 2ºC goals," Stockholm Environmental Institute Working Paper No. 2016-02 (May 2016) at 27, available online at https://www.sei-international.org/mediamanager/documents/Publications/Climate/SEI-WP-2016-US-fossilfuel-leases-climate.pdf.

lifetimes, we're going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky."[18]

Given all this, we urge the Department of the Interior and the BLM to ensure that as the PEIS is developed, that the purpose and need for the review and the proposed actions is to put an end to the federal coal program and lead our nation away from coal toward cleaner, mores sustainable forms of energy. A purpose and need is required for an EIS pursuant to 40 C.F.R. § 1502.13. We strongly urge the Interior Department to make clear that, given the collapse of the coal industry, the need to combat climate change, and mounting support for keeping coal in the ground, the purpose and need for the PEIS is to ensure an orderly transition away from coal and an end to the leasing and future mining of all publicly owned coal reserves.

Such a purpose and need is entirely within the scope of the Interior Secretary's discretion and duties under the U.S. Mineral Leasing Act. As the Act makes clear, the Secretary is "authorized," but not compelled to lease coal. 30 U.S.C. § 201(a)(1). It is telling that not only is the Secretary not only is not required to lease coal, but also is authorized to lease coal "as [s]he finds appropriate and in the public interest[.]" *Id*. Further, the Secretary is even authorized to "disapprove" of plans to allowing the mining of leased federal coal. 30 U.S.C. § 207(c). Taken together, there is overwhelming authority and discretion for the Interior Department and the BLM to begin to say "no" to more federal coal leasing and production and "yes" to a brighter future that is not ruined by fossil fuels and driving our world deeper into climate debt.

Given the public's immense interest in limiting, if not reversing, the impacts of climate change and preventing trillions in potential climate damages, there is ample reason for the Interior Department and the BLM to use their discretion to make the goal of the PEIS and any future reforms to be to end the federal coal program.[19]

We do not suggest that the Interior Department and BLM simply shut down all publicly owned coal mining overnight. Rather, we urge the Interior Department and the BLM to consider, consistent with the National Environmental Policy Act ("NEPA"), 42 U.S.C. § 4332(C)(iii), a range of alternatives to determine the most effective and orderly means of ending the federal coal program. At a minimum, we urge the detailed consideration, analysis, and assessment of the following alternative, which we describe as the "Just Transition Alternative":

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[18] *See* Exhibit 10, President of the United States, "Statement by the President on the Keystone XL Pipeline" (Nov. 6, 2015), available online at https://www.whitehouse.gov/the-press-office/2015/11/06/statement-president-keystone-xl-pipeline.

[19] It is further telling that the BLM is not simply authorized, but actually compelled, to reject coal lease applications if "leasing of the lands covered by the application, for environmental or other sufficient reasons, would be contrary to the public interest." 43 C.F.R. § 3425.1-8(a)(3). This applies to leasing by application, which is the only way the BLM currently offers leases for competitive sale. Similarly, a lease modification, which is a form of non-competitive leasing, cannot be issued if it is not "in the interest of the United States." 30 U.S.C. § 203(a)(2)(A).

2. Just Transition Alternative

The "Just Transition Alternative" is meant to both wind down the federal coal program in order to keep fossil fuels in the ground and to ensure an orderly, effective, and fair transition of workers and communities away from coal to more prosperous and sustainable economies. The "Just Transition Alternative" is defined by the following key components:

1. An end to federal coal leasing: Consistent with authorities and discretion under the Mineral Leasing Act, the Just Transition Alternative imposes a permanent pause on the leasing of federal coal. The primary basis for adopting this permanent pause would be to ensure the protection of the public interest and the interests of the United States. Such justification for an end to leasing is clearly supported by the Mineral Leasing Act.

   This pause would apply to all competitive leases (including all leases by application, including emergency leases, as defined by 43 C.F.R. § 3425.1-4) and lease modifications. We further believe there is ample justification for applying a permanent pause to other forms of non-competitive leasing, such as preference right lease applications and lease exchanges. With regards to lease exchanges, the BLM has clear authority to reject exchanges that are not in the "public interest." 43 C.F.R. § 3435.4(a); *see also* 43 C.F.R. § 3436.0-2(b) (related to alluvial valley floor exchanges) and 43 C.F.R. § 2200.0-6 (generally related to exchanges). With regards to preference right lease applications, the BLM has the authority to reject such applications where there does not exist "commercial quantities" of coal. 43 C.F.R. § 3430.5-1(a)(1). Given the dismal state of the coal industry and the overwhelming climate costs that coal imposes on society, it would be dubious at best to claim that any commercial quantities of coal exist where there are preference right lease applications. Accordingly, the BLM has the authority to reject such applications.[20]

   Furthermore, to ensure an orderly end to federal coal leasing, the BLM and the Department of the Interior should issue a rule or guidance requiring that as land management planning is undertaken pursuant to 43 C.F.R. § 1610, *et seq*., that all lands within a resource management area that are not currently leased for coal, be made unavailable for leasing. The authority to impose such direction is set forth at 43 C.F.R. § 3420.1-4(e), which gives the BLM broad discretion to "eliminate additional coal deposits from consideration to protect other resource values." 43 C.F.R. § 3420.1-4(e)(3).

[20] The only preference right lease applications that exist are in northwestern New Mexico, where Arch Coal, which is currently bankrupt, has the rights to acquire 21,000 acres of leases. Legislation was introduced in the U.S. House of Representatives that would allow the Secretary to retire these preference right lease applications. *See* HR-1820, available online at https://www.congress.gov/bill/114th-congress/house-bill/1820/text. If this legislation is passed, there would be no additional preference right lease applications requiring action. We support this legislation and urge the Secretary of the Interior to encourage its passage in the U.S. Senate and adoption into law.

Putting a permanent pause on leasing will not destroy the U.S. economy or otherwise endanger our energy security. As a recent report looking at leasing in the Powder River Basin found, existing leased reserves in the Powder River Basin are sufficient to meet demand and effectively contribute to limiting temperature increases.[21] This report is instructive as the Powder River Basin is the largest coal producing region in the United States and imposes the greatest influence on energy supply and demand in the nation. If an end to federal leasing can be justified in the Powder River Basin, it can be justified for federal leasing elsewhere in the U.S.

2. Increased royalty rates and rentals: Coal is exacting a tremendous toll on our nation, costing our society billions in climate damages, adverse health impacts from air pollution, and water contamination. Royalty rates from production on existing coal leases and rentals on existing leases must be increased to begin to recoup the costs of these externalities, which are currently shouldered by the public.

   Although royalty rates are normally imposed through new leasing, we recommend that the Interior Department and BLM incorporate higher royalty rates into existing leases as existing leases are readjusted pursuant to 43 C.F.R. § 3451.1. To accomplish this, we urge the amendment of 43 C.F.R. § 3473.3-2(a)(1) and (2) to incorporate increased royalty rates for both surface and underground mining. As leases are readjusted, these royalty rates must be applied to existing leases pursuant to 43 C.F.R. § 3451.1(a)(2).

   Increasing royalty rates has been recommended by the White House as both a means to generate revenue and address the costs of environmental externalities, including carbon costs.[22]

   Furthermore, royalty rate reductions should not be approved. Currently, royalty rate reductions are routinely granted as companies claim poverty or difficulty in mining with little apparent scrutiny as to whether the reductions are justified. In Colorado, for example, BLM officials have approved royalty rate reductions to facilitate methane venting and most recently proposed to approve a retroactive royalty rate reduction for a mine that was not even producing coal.[23]

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[21] *See* Exhibit 11, Fulton, M., D. Koplow, R. Capalino, and A. Grant, "Enough Already: Meeting 2°C PRB Coal Demand Without Lifting the Federal Moratorium," Report Prepared for Energy Transition Advisors, Earth Track, and Carbon Tracker Initiative (July 2016), available online at http://www.carbontracker.org/report/enough-already-2c-powder-river-basin-coal-demand-federal-moratorium/.

[22] *See* Exhibit 12, Executive Office of the President of the United States, "The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers" (June 2016), available online at https://www.whitehouse.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf.

[23] *See* Exhibits 13 and 14.

Similarly, we urge Interior and BLM to amend 43 C.F.R. § 3473.3-1(a) to raise rental rates for federal coal leases. Currently, rental rates are set at $3.00 per acre, a figure that has not been adjusted since 1979, if not earlier. This rental rate not only has failed to be adjusted to account for inflation, but fails to account for the fact that some leases may be of small acreage, yet yield significant amounts of coal. Rentals should reflect the value of the lease, which depends on the amount of coal a lease contains. In accordance with 43 C.F.R. § 3473.3-1(a), any increased rental rate must be applied to any readjusted coal lease.

3. Existing leases that are not producing must be canceled: Where a lease is not meeting continued operation requirements under 43 C.F.R. § 3483.1(a)(2), it is subject to cancellation pursuant to 43 C.F.R. § 3452.2. Where a lease is not meeting continued operation requirements, BLM and the Interior Department should make clear that cancellation of the lease must be pursued. To this end, discretionary avenues for avoiding cancellation should be prohibited. Thus, lease suspensions under 43 C.F.R. § 3483.3 and payment of advanced royalties in lieu of continued operation under 43 C.F.R. § 3483.4 should be barred.

   The justification for imposing such direction is very clear. Currently, BLM regularly grants lease suspensions and allows payment of royalties in lieu of continued operation with no assessment of whether such actions are appropriate or in the public interest. BLM appears to be under the impression that lease suspensions or advanced royalties are somehow mandated, and that the agency has no choice but to approve company requests. An egregious example of this is with regards to Arch Coal's Carbon Basin Lease in southern Wyoming (No. WYW-139975). Arch acquired this lease with the aim of developing a mine to fuel a proposed coal to liquids facility. However, this coal to liquids facility has never materialized or even shown any promise of materializing. Most recently, the Wyoming Department of Environmental Quality terminated the permit for the proposed facility.[24] Nevertheless, since 2010, Arch has failed to meet continued operation requirements. The BLM has allowed Arch to maintain its lease, however, by routinely allowing the company to pay advanced royalties in lieu of continued operation.[25] These decisions appear to be pro forma in nature, and do not reflect any consideration as to whether it is appropriate or remotely in the public interest to accept advance royalties in lieu of continued operation.

   Furthermore, where an existing lease is not producing, yet is part of a producing logical mining unit, BLM and the Interior Department should use their discretion to modify the boundaries of logical mining units to eliminate the non-producing lease and facilitate its cancellation. BLM has such discretion under 43 C.F.R. § 3478.1.

   Cancelling leases that are not producing will serve the goal of preventing any potential future development of existing leases and contribute to an orderly end to the federal coal program.

[24] *See* Exhibit 15, Wyoming Department of Environmental Quality, "Permit Termination, Medicine Bow Fuel and Power Coal to Liquid Project" (June 27, 2016).

[25] *See* Exhibit 16.

4. Accounting for carbon costs in coal management: It should be made clear, whether through new rules or guidance, that carbon costs must be analyzed, assessed and disclosed as federal coal management decisions are made. Such decisions are most likely to include mining plan modifications issued pursuant to the Mineral Leasing Act, 30 U.S.C. § 207(c), and the Surface Mining Control and Reclamation Act ("SMCRA"), 30 C.F.R. § 746, and lease readjustments. It is imperative that the BLM and Interior maintain close accounting of the carbon emissions and costs resulting from its coal management actions, to ensure full transparency around these emissions and costs, and to meaningfully act to address these emissions and costs. Particularly given that, pursuant to authorities under the Mineral Leasing Act and SMCRA, the Secretary of the Interior has full discretion to disapprove mining plans authorizing the development of leased federal coal, it is imperative that carbon emissions and costs factor into and influence such decisionmaking.

5. Reclamation must be guaranteed: To ensure an orderly end to the federal coal program, full and final reclamation must be guaranteed within a reasonable timeframe. We urge two regulatory changes to ensure this occurs.

   First, Interior should amend regulations at 30 C.F.R. §§ 816.100 and 817.100 to provide clarification and specificity around contemporaneous reclamation. Current rules are vague and fail to ensure that reclamation proceeds in a manner that is as "contemporaneously as possible" with mining in accordance with 30 U.S.C. § 1202(e). These regulations should be amended to make clear that the success of contemporaneous reclamation must be measured based on a comparison of Phase III bond release acres, as defined under 30 C.F.R. § 800.40(c)(3), with disturbed acres and ensure that reclamation proceeds at a 1:1 rate, in other words for every acre disturbed, one acre should be fully reclaimed to meet Phase III bond release standards.

   Second, just as current BLM rules require diligent development of federal coal, these rules should also require diligent reclamation. To this end, Interior and BLM should consider rule changes to ensure that nonproducing coal leases are fully reclaimed within two years of failing to meet continued operation requirements and set deadlines for the full reclamation of federal coal leases that are no later than 2035. This reclamation deadline should be established by rule and incorporated into lease terms as leases are readjusted.

   Finally, Interior should amend self-bonding regulations at 30 C.F.R. § 800.23, and any other regulations, as appropriate, to prohibit self-bonding whenever publicly owned coal is permitted to be mined. This will ensure that, as coal companies continue their decline, that American public resources are fully protected and fully guaranteed to be cleaned up.

6. Prioritizing transition: Above all, the BLM and Interior must make transition away from coal a foremost goal as the federal coal program comes to an end. To do this, the agencies should not only explicitly commit, to the extent possible, their leadership, resources, and expertise to ensure that workers and communities receive the support and assistance they need to transition to more sustainable and prosperous economies. Among the actions that Interior and BLM can and should undertake to ensure transition:

- Work to secure Congressional authorization to direct increased royalty and rental payments toward worker and community support. Under NEPA, agencies are required to rigorously explore and objectively evaluate reasonable alternatives "not within the jurisdiction of the lead agency." 40 C.F.R. § 1502.14(c). Here, although BLM and Interior may not be able to direct royalties toward transition support, they can recommend that Congress pass legislation that provides such authorization.

- Establishing an Economic Transition Fund, which would be sustained by an increase in reimbursement fees charged by the Interior Department when processing coal-related applications. Under the Federal Land Policy and Management Act ("FLPMA"), Interior has authority to recover reasonable costs associated with its coal management program and to appropriate and spend such monies. Specifically, FLPMA provides the Secretary of the Interior with authority to "require a deposit of any payments intended to reimburse the United States for reasonable costs with respect to applications," including coal lease application. *See* 43 U.S.C. § 1734(b). Such payments are "authorized to be appropriated and made available until expended" by FLPMA. *Id*. Funds from the Economic Transition Fund should be directed toward transition-oriented initiatives.

- Prioritizing support and assistance to help communities transition. In addition to securing funds and making them available, the Department of the Interior can play a key role in helping direct communities to support, steering resources to support conservation and research projects in or near communities, encouraging renewable energy development on public lands. Such leadership could be conveyed through a Secretarial Order that simply makes it an overarching priority of the Interior Department to advance transition.

Overall, the Interior Department and BLM must move to keep our publicly owned coal in the ground. However, keeping coal in the ground should not mean that we turn our backs on the workers and communities that have been dependent on coal for so long. Embracing an alternative that ensures "Just Transition," in other a fair, compassionate, and orderly transition away from coal, is the most effective way to both protect our climate and help our nation effectively move to more sustainable economies and reliable and affordable means of energy production.

As WildEarth Guardians has acknowledged in its own outreach materials, coal miners have kept our lights on for years. The least we can do is to help them and their communities transition, especially as we rise to the challenge of combating climate change.

3. Other Comments/Concerns

a. OSMRE Must be Involved in the PEIS Process and Federal Coal Reform Efforts

We take issue with the apparent exclusion of the Office of Surface Mining Reclamation and Enforcement ("OSMRE") from the PEIS process. While Secretarial Order 3338 states that it does not "apply to any action of the Office of Surface Mining Reclamation and Enforcement" (Order 3338 § 1), this statement does not appear to preclude or otherwise prevent OSMRE's involvement in the PEIS and the broader effort to reform the federal coal program. In fact, this statement appears to speak to the applicability of the coal leasing moratorium set forth under the Order, which clearly does not affect actions undertaken by OSMRE. That OSMRE and its management authorities should be implicated in the development of the PEIS seems entirely consistent with the Order, which directs that a PEIS be prepared to, "analyz[e] potential leasing and management reforms to the current Federal coal program." Order 3338 § 1. As the Order acknowledges, OSMRE's coal management responsibilities are considered part of the "Federal Coal Program." Order 3338 § 2(a).

In fact, OSMRE (as well as the Secretary) has extensive authorities and responsibilities related to the management of publicly owned coal that are highly relevant, if not indispensible, to the purpose of the PEIS. These authorities and responsibilities include reviewing and taking action on mining plans and mining plan modifications for the mining of leased federal coal pursuant to 30 C.F.R. § 746, ensuring state-issued permits authorizing the mining of leased federal coal are consistent with non-delegable federal laws pursuant to 30 C.F.R. § 745, and exercising oversight of state permitting of the mining of leased federal coal pursuant to 30 C.F.R. § 740. These duties are entirely germane to the core issues that will be addressed in the PEIS, including the climate impacts of the federal coal program, other impacts of the federal coal program, socio-economic considerations, exports, and energy needs.

For example, the PEIS could and should address how OSMRE can best measure, assess, and address the climate impacts of continued federal coal production when reviewing and taking action on mining plans and mining plan modifications. Especially given that OSMRE and the Secretary have been directly admonished by federal courts for ignoring the climate impacts of coal mining decisions, such a move seems imminently wise.[26] To this end, it would make sense

[26] The Department of the Interior and OSMRE have recently lost and/or conceded on at least lawsuits challenging their failure to comply with the National Environmental Policy Act when reviewing and taking action on mining plan modifications in accordance with 30 C.F.R. § 746. *See WildEarth Guardians v. OSMRE*, 104 F.Supp. 3d 1208 (D. Colo 2015), *WildEarth Guardians v. OSMRE*, Nos. CV14-13-BLG-SPW, CV14-103-BLG-SPW, 2016 WL 259285 (D. Mont. Jan. 21, 2016), and Federal Defendants' Motion for Voluntary Remand and Memorandum in Support, *WildEarth Guardians. V. OSMRE*, Civ. No. 1:14-cv-00112-RJ-CG, filed July 18, 2016. The latter motion is attached to these comments as Exhibit 17.

to consider changes to 30 C.F.R. § 746 (or other provisions of 30 C.F.R. § 740, *et seq*.) to ensure that, even after publicly owned coal has been leased, that reforms are integrated into OSMRE and Secretarial reviews and decisionmaking regarding the mining of leased federal coal. Ultimately, it just makes sense to ensure OSMRE's role in the management of federal coal is taken into account to ensure the most effective reforms are implemented.

Furthermore, although the Secretary has the authority to disapprove of mining plans, there are currently no explicitly criteria to guide the Secretary in making such decisions. We would urge the Interior Department to consider changes to 30 C.F.R. § 746 that would require the Secretary to make, at a minimum, a finding that mining leased federal coal is in the public interest for environmental or other sufficient reasons. This "public interest" standard is similar to what the BLM considers when determining whether leasing is appropriate. Because at times, after a lease is issued, new information or circumstances may arise calling into question any "public interest" determination made at the leasing stage, it would make sense to ensure that, even after a lease is issued, the mining of the leased federal coal remains firmly within the public interest.

b. Social Cost of Carbon Must be Analyzed

The PEIS must fully analyze and assess the climate impacts of coal reforms using the social cost of carbon protocol.

The social cost of carbon protocol for assessing climate impacts is a method for "estimat[ing] the economic damages associated with a small increase in carbon dioxide (CO2) emissions, conventionally one metric ton, in a given year [and] represents the value of damages avoided for a small emission reduction (i.e. the benefit of a CO2 reduction)."[27] As explained above, the protocol was developed by a working group consisting of several federal agencies, including the U.S. Department of Agriculture, EPA, CEQ, and others, with the primary aim of implementing Executive Order 12866, which requires that the costs of proposed regulations be taken into account.

In 2009, an Interagency Working Group was formed to develop the protocol and issued final estimates of carbon costs in 2010.[28] These estimates were then revised in 2013 by the Interagency Working Group, which at the time consisted of 13 agencies.[29] This report and the social cost of carbon estimates were again revised in 2015.[30]

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[27] EPA, "Fact Sheet: Social Cost of Carbon" (Nov. 2013) at 1, available online at http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf.

[28] Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866" (Feb. 2010), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/for-agencies/Social-Cost-of-Carbon-for-RIA.pdf.

[29] Interagency Working Group on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory

Depending on the discount rate and the year during which the carbon emissions are produced, the Interagency Working Group estimates the cost of carbon emissions, and therefore the benefits of reducing carbon emissions, to range from $11 to $220 per metric ton of carbon dioxide. *See* Chart Below. In its most recent update to the Social Cost of Carbon Technical Support Document, the White House's central estimate was reported to be $36 per metric ton.[31] In July 2014, the U.S. Government Accountability Office ("GAO") confirmed that the Interagency Working Group's estimates were based on sound procedures and methodology.[32]

Revised Social Cost of CO_2, 2010 – 2050 (in 2007 dollars per metric ton of CO_2)

Discount Rate Year	5.0% Avg	3.0% Avg	2.5% Avg	3.0% 95th
2010	10	31	50	86
2015	11	36	56	105
2020	12	42	62	123
2025	14	46	68	138
2030	16	50	73	152
2035	18	55	78	168
2040	21	60	84	183
2045	23	64	89	197
2050	26	69	95	212

Most recent social cost of carbon estimates presented by Interagency Working Group on Social Cost of Carbon. The 95th percentile value is meant to represent "higher-than-expected" impacts from climate change. *See* Exhibit 4 at 3.

Although it appears that Interior and BLM must analyze and assess carbon costs consistent with Executive Order 12866, agencies within the Interior Department, including the BLM, have already been utilizing the social cost of carbon protocol in the context of analyzing the impacts of fossil fuel development under NEPA.

In recent Environmental Assessments for oil and gas leasing in Montana, the agency estimated "the annual SCC [social cost of carbon] associated with potential development on

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Impact Analysis Under Executive Order 12866" (May 2013), available online at https://www.whitehouse.gov/sites/default/files/omb/inforeg/social_cost_of_carbon_for_ria_2013_update.pdf.

[30] *See* Exhibit 1.

[31] Exhibit 18, White House, "Estimating the Benefits from Carbon Dioxide Emissions Reductions," website available at https://www.whitehouse.gov/blog/2015/07/02/estimating-benefits-carbon-dioxide-emissions-reductions.

[32] Exhibit 19, GAO, "Regulatory Impact Analysis, Development of Social Cost of Carbon Estimates," GAO-14-663 (July 2014), available online at http://www.gao.gov/assets/670/665016.pdf.

lease sale parcels."[33] In conducting its analysis, the BLM used a "3 percent average discount rate and year 2020 values," presuming social costs of carbon to be $46 per metric ton.[34] Based on its estimate of greenhouse gas emissions, the agency estimated total carbon costs to be "$38,499 (in 2011 dollars)."[35] In Idaho, the BLM also utilized the social cost of carbon protocol to analyze and assess the costs of oil and gas leasing. Using a 3% average discount rate and year 2020 values, the agency estimated the cost of carbon to be $51 per ton of annual CO_2e increase.[36] Based on this estimate, the agency estimated that the total carbon cost of developing 25 wells on five lease parcels to be $3,689,442 annually.[37]

To be certain, the social cost of carbon protocol presents a conservative estimate of economic damages associated with the environmental impacts climate change. As the EPA has noted, the protocol "does not currently include all important [climate change] damages."[38] As explained:

> The models used to develop [social cost of carbon] estimates do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research.[39]

In fact, more recent studies have reported significantly higher carbon costs. For instance, a report published this month found that current estimates for the social cost of carbon should be

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[33] Exhibit 20, BLM, "Environmental Assessment for October 21, 2014 Oil and Gas lease Sale," DOI-BLM-MT-0010-2014-0011-EA (May 19, 2014) at 76, available online at http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2014/oct__21_2014/july23posting.Par.25990.File.dat/MCFO%20EA%20October%202014%20Sale_Post%20with%20Sale%20(1).pdf.

[34] *Id*.

[35] *Id*.

[36] Exhibit 21, BLM, "Little Willow Creek Protective Oil and Gas Leasing," EA No. DOI-BLM-ID-B010-2014-0036-EA (February 10, 2015) at 81, available online at https://www.blm.gov/epl-front-office/projects/nepa/39064/55133/59825/DOI-BLM-ID-B010-2014-0036-EA_UPDATED_02272015.pdf.

[37] *Id*. at 83.

[38] EPA, "Fact Sheet: Social Cost of Carbon" (Nov. 2013) at 1, available online at http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf.

[39] *Id*.

increased six times for a mid-range value of $220 per ton.[40] In spite of uncertainty and likely underestimation of carbon costs, nevertheless, "the SCC is a useful measure to assess the benefits of CO2 reductions," and thus a useful measure to assess the costs of CO2 increases.[41]

That the economic impacts of climate change, as reflected by an assessment of social cost of carbon, should be a significant consideration in agency decisionmaking, is emphasized by a recent White House report, which warned that delaying carbon reductions would yield significant economic costs.[42] As the report states:

> [D]elaying action to limit the effects of climate change is costly. Because CO_2 accumulates in the atmosphere, delaying action increases CO_2 concentrations. Thus, if a policy delay leads to higher ultimate CO_2 concentrations, that delay produces persistent economic damages that arise from higher temperatures and higher CO_2 concentrations. Alternatively, if a delayed policy still aims to hit a given climate target, such as limiting CO_2 concentration to given level, then that delay means that the policy, when implemented, must be more stringent and thus more costly in subsequent years. In either case, delay is costly.[43]

The requirement to analyze the social cost of carbon is supported by the general requirements of NEPA and by federal case law.

To this end, courts have ordered agencies to assess the social cost of carbon pollution, even before a federal protocol for such analysis was adopted. In 2008, the U.S. Court of Appeals for the Ninth Circuit ordered the National Highway Traffic Safety Administration to include a monetized benefit for carbon emissions reductions in an Environmental Assessment prepared under NEPA. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 538 F.3d 1172, 1203 (9th Cir. 2008). The Highway Traffic Safety Administration had proposed a rule setting corporate average fuel economy standards for light trucks. A number of states and public interest groups challenged the rule for, among other things, failing to monetize the benefits that would accrue from a decision that led to lower carbon dioxide emissions. The Administration had monetized the employment and sales impacts of the proposed action. *Id*. at 1199. The agency argued, however, that valuing the costs of carbon emissions was too uncertain. *Id*. at 1200. The court found this argument to be arbitrary and capricious. *Id*. The court noted that while estimates of the value of carbon emissions reductions occupied a wide

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[40] *See* Exhibit 2.

[41] EPA, "Fact Sheet: Social Cost of Carbon" (Nov. 2013) at 1, available online at http://www.epa.gov/climatechange/Downloads/EPAactivities/scc-fact-sheet.pdf.

[42] Exhibit 22, Executive Office of the President of the United States, "The Cost of Delaying Action to Stem Climate Change" (July 2014), available online at https://www.whitehouse.gov/sites/default/files/docs/the_cost_of_delaying_action_to_stem_climate_change.pdf.

[43] *Id*. at 1.

range of values, the correct value was certainly not zero. *Id.* It further noted that other benefits, while also uncertain, were monetized by the agency. *Id*. at 1202.

More recently, a federal court has done likewise for a federally approved coal lease. That court began its analysis by recognizing that a monetary cost-benefit analysis is not universally required by NEPA. *See High Country Conservation Advocates v. U.S. Forest Service*, 52 F.Supp.3d 1174 (D. Colo. 2014), citing 40 C.F.R. § 1502.23. However, when an agency prepares a cost-benefit analysis, "it cannot be misleading." *Id*. at 1182 (citations omitted). In that case, the NEPA analysis included a quantification of benefits of the project. However, the quantification of the social cost of carbon, although included in earlier analyses, was omitted in the final NEPA analysis. *Id*. at 1196. The agencies then relied on the stated benefits of the project to justify project approval. This, the court explained, was arbitrary and capricious. *Id*. Such approval was based on a NEPA analysis with misleading economic assumptions, an approach long disallowed by courts throughout the country. *Id*.

A recent op-ed in the New York Times from Michael Greenstone, the former chief economist for the President's Council of Economic Advisers, confirms that it is appropriate and acceptable to calculate the social cost of carbon when reviewing whether to approve fossil fuel extraction.[44]

c. The PEIS Must Thoroughly Analyze and Assess All Reasonably Foreseeable Impacts

As the PEIS is drafted, BLM and Interior must ensure that all reasonably foreseeable impacts associated with any action alternatives, including the No Action alternative, are fully analyzed and assessed. To this end, we request the agency ensure that, as a minimum, the following reasonably foreseeable impacts are addressed in the PEIS:

i. Impacts of coal mining

The PEIS must obviously analyze and assess the impacts that any proposed alternative will have on the mining of federal and the impacts that will flow from that mining. Similar to other EISs prepared by the BLM for coal leasing, we expect the PEIS to fully analyze and assess the program-wide impacts to public lands, air quality, water quality, and fish and wildlife (in particular threatened and endangered species listed under the Endangered Species Act, 16 U.S.C. § 1531, *et seq*.).[45] Such an analysis must address total greenhouse gas emissions, including methane emissions, associated with mining operations.

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[44] Exhibit 23, Greenstone, M., "There's a Formula for Deciding When to Extract Fossil Fuels," *New York Times* (Dec. 1, 2015), available online at http://www.nytimes.com/2015/12/02/upshot/theres-a-formula-for-deciding-when-to-extract-fossil-fuels.html?_r=0.

[45] An example of an EIS where the BLM fully analyzed and assessed the impacts of mining to myriad resources is the Wright Area coal leasing FEIS, which is available on the BLM's website here, http://www.blm.gov/wy/st/en/info/NEPA/documents/hpd/Wright-Coal.html. Although we

The PEIS must review the air quality impacts of coal mining, including the impacts of nitrogen dioxide emissions produced during blasting at surface mines.

ii. Coal Combustion Impacts

The full scope of reasonably foreseeable coal combustion impacts must be analyzed and assessed in the PEIS. These impacts include, but are not limited to:

- Coal burning impacts to air quality: The impacts of burning coal to air quality, including impacts related to criteria pollutant emissions, hazardous air pollutant emissions, greenhouse gas emissions, and black carbon must be fully analyzed and assessed. It is imperative that the PEIS provide information and analysis disclosing to what extent federal coal production and the reasonably foreseeable impacts of coal combustion contribute to local, regional, and national air quality concerns.

- Ash management impacts: Burning of coal produces massive amounts of coal ash, which is often disposed of in inconsistent and potentially unhealthy ways. The PEIS must address the impacts of coal ash production and disposal and provide information and analysis disclosing to what extent the federal coal program is linked to adverse health and environmental impacts related to coal ash production.

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disagree that this FEIS was fully compliant with NEPA, it nevertheless addressed many important reasonably foreseeable impacts and stands for the proposition that federal coal management decisions can have far-reaching consequences that warrant detailed review under NEPA.

- Water quality and quantity impacts: Burning coal requires massive amounts of water for cooling and impacts water quality through the discharge of pollutants. The PEIS must address the impacts of coal combustion to water quality and quantity and provide information and analysis disclosing to what extent the federal coal program contributes to depletion of water supplies, particularly in the western United States, and to what extent water quality problems are linked to the federal coal program.

iii. Coal Transportation Impacts

The PEIS must fully analyze and assess impacts related to coal transport, including, but not limited to, the impacts of rail transport of coal, local and regional trucking of coal, and any conveying of coal from mines to power plants. Transport-related impacts are likely to include air impacts, impacts related ongoing rail maintenance and possible expansions, water quality impacts related to roads and railways, and fish and wildlife impacts. The PEIS must provide a detailed analysis and assessment of how federal coal is transported from mines to the source of consumption, and provide the public with information and analysis on what the impacts of this transport are likely to be.

Coal from the Powder River Basin being hauled by rail through downtown Denver.

iv. Coal Exports

As the notice of intent to prepare the PEIS emphasizes, the impacts of coal exports are of great concern. To this end, the PEIS must fully analyze and assess the reasonably foreseeable impacts of coal exports that may occur as a result of future coal management. These impacts include, but are not limited to, the following:

- Rail-related impacts: The impacts of hauling coal from mines to ports must be analyzed and assessed. The impacts that must be addressed include, but are not limited to, the air quality impacts of rail traffic, noise impacts of rail traffic, fish and wildlife impacts of rail traffic, and water quality impacts. Such an analysis must take into account the potential for spills and/or derailments and the impacts such events may have on land, water, fish, wildlife, and air.

- Port-related impacts: The impacts of unloading coal from trains, loading coal onto barges and/or ships, constructing and/or maintaining port facilities, and the impacts of port operations, including ship, locomotive, and/or truck operations must be analyzed and assessed. The impacts that must be addressed include, but are not limited to, the air quality impacts of all port operations, including ship, locomotive, and truck emissions, water quality impacts (including wetland impacts), and fish and wildlife impacts.

- Shipping impacts: The impacts of shipping coal, both within waters of the United States and through international waters must be addressed. The impacts that must be analyzed and assessed include air quality impacts, impacts to water quality (particularly through discharge from ships), and impacts to river and ocean species, especially species listed as threatened or endangered under the Endangered Species Act.

- Coal unloading impacts at international ports: Just as coal unloading and loading at American ports must be addressed, the impacts of unloading coal from ships and loading coal onto trains and/or trucks at international ports must be analyzed and assessed.

- Inland coal transport abroad: The impacts of transporting coal from international ports to facilities must be analyzed and assessed. Such an analysis must analyze and assess whether the coal is hauled by rail or by truck, and analyze and assess the attendant impacts.

- Coal combustion abroad: Finally, the impacts of combusting coal abroad must be analyzed and assessed. Such an analysis must include, but not be limited to, an analysis of the air quality impacts of coal combustion (including greenhouse gas emission impacts), water quality impacts, coal ash disposal impacts, fish and wildlife impacts, and impacts to lands.

d. Impacts of Similar and Cumulative Actions Must be Analyzed and Assessed in the PEIS

As BLM and Interior prepare the PEIS, the agencies must analyze and assess the impacts of similar and cumulative action consistent with NEPA. Indeed, in accordance with NEPA, the scope of an EIS must include all "[c]umulative" and "[s]imilar" actions. 40 C.F.R. § 1508.25(a)(2) and (3). Cumulative actions are defined as those that "when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the

same statement." 40 C.F.R. § 1508.25(a)(2). Similar actions are defined as those that "when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography." 40 C.F.R. § 1508.25(a)(3). Pursuant to NEPA regulations, both cumulative and similar actions must be analyzed and assessed together with alternatives and any proposed agency actions in the same EIS.

With regards to cumulative and similar actions, it is imperative that the PEIS, at a minimum, address the following:

i. The impacts of oil and gas development in the western United States

Oil and gas development, particularly the development of federal oil and gas as authorized by the BLM, is not only a cumulative action, but a similar action under NEPA. Oil and gas development, particularly federal oil and gas development, often occurs on or near mines that are producing federal coal. For example, a massive oil and gas project under consideration by the BLM in the Powder River Basin of Wyoming would take place where extensive coal mining is currently occurring. *See* 80 Fed. Reg. 65,242 (Oct. 26, 2015). At a minimum, oil and gas development occurs extensively throughout the coal producing regions of the western United States, where the vast amount of federal coal is located and mined.

Federal oil and gas wells in the Uinta Basin of northeastern Utah adjacent to the Bonanza coal-fired power plant. The Bonanza power plant is fueled by the nearby Deserado coal mine in northwestern Colorado, which is comprised almost entirely of federal coal reserves.

Not only does oil and gas development take place in similar geographies and at similar times as coal mining, it poses similar impacts, particularly in terms of air emissions and climate

impacts. Indeed, as reports indicate, the onshore an offshore development of federal oil and gas contributes to nearly 10% of all U.S. greenhouse gas emissions.[46] Onshore development of federal oil and gas, which largely occurs in the western United States, often at or near coal mining operations, accounts for nearly 4% of all U.S. greenhouse gas emissions. To this end, climate concerns related to oil and gas development are entirely relevant to addressing the climate impacts of the federal coal program and must be fully analyzed and assessed in the PEIS as similar and/or cumulative actions.

The need to address the impacts of oil and gas development in the PEIS together with the impacts of the federal coal program is critical given that there are a number of reasonably foreseeable proposed oil and gas developments currently under consideration by the BLM, including:

- The Continental Divide-Creston oil and gas project in southern Wyoming, approval of which would open the door for 8,950 new oil and gas wells. *See* 81 Fed. Reg. 22,628 (April 18, 2016).

- The Monument Butte oil and gas project in northeastern Utah, approval of which would open the door for 5,750 new oil and gas wells. *See* 81 Fed. Reg. 41,331 (June 24, 2016).

- The Converse County oil and gas project in eastern Wyoming, approval of which would open the door for 5,000 new oil and gas wells. *See* 79 Fed. Reg. 28,538 (May 16, 2014).

- The Greater Crossbow oil and gas project in northeastern Wyoming, approval of which would open the door for 1,500 oil and gas wells. *See* 80 Fed. Reg. 80 Fed. Reg. 65,242 (Oct. 26, 2015).

- Extensive oil and gas leasing in Colorado, Montana, New Mexico, Utah, and Wyoming. As the BLM's own statistics show, millions of acres of these states have been leased over the years, opening the door for extensive oil and gas development. In the remainder of 2016, the BLM is proposing lease 87 parcels in August comprising 89,137 acres in Wyoming, 21 parcels in November comprising 30,197 acres in Wyoming, 91 parcels in October comprising 19,790 acres in Montana, 28 parcels in November comprising 12,344 acres in Utah, 36 parcels in September comprising 13,876 acres in New Mexico, and 37 parcels in November comprising 25,298 acres in Colorado.[47] It is reasonable to believe that the BLM is likely to

[46] *See* Exhibit 3.

[47] *See* BLM, "Notice of Competitive Oil and Gas Lease Sale" (May 4, 2016), available online at https://eplanning.blm.gov/epl-front-office/projects/nepa/61292/73465/80674/08list.pdf; BLM, "Environmental Assessment, November 1, 2016 Competitive Oil and Gas Lease Sale Parcels," EA No. DOI-BLM-WY-D040-2016-0138EA (April 2016), available online at https://eplanning.blm.gov/epl-front-office/projects/nepa/60579/72678/79780/EAv1.pdf; BLM,

propose, offer for sale, and issue millions more acres of federal oil and gas leases in the near future. The climate consequences of such leasing actions must be addressed in the PEIS.

The climate impacts of the federal coal program cannot be analyzed in a piecemeal fashion that overlooks BLM's twin role in managing onshore oil and gas. Particularly given that the scope of the PEIS will necessarily be national in focus, if not broader, the BLM is compelled under NEPA to ensure these similar actions are fully accounted for.

The need to address the reasonably foreseeable climate impacts of oil and gas development is underscored by the greenhouse gas emissions that are likely to result. As reported, if fully developed, unleased onshore oil and gas reserves stand to release nearly 30 billion metric tons of carbon.[48] *See* Table below.

Carbon Emissions (in billion metric tons)
Projected from Unleased Federal Onshore Oil and Gas Reserves

	Total Emissions (low)	Total Emissions (high)
Onshore oil	10.37	11.81
Onshore natural gas	13.63	17.01
TOTALS	**24**	**28.82**

ii. The climate impacts of all Interior Department fossil fuel management

Additionally, if Interior and the BLM are to properly analyze and assess the climate impacts of federal coal management, the climate impacts of all Interior Department overseen fossil fuel development must be taken into account. This includes, but is not limited to, the impacts of offshore oil and gas development, oil shale, and tar sands development. As reports indicate, the potential climate impacts of offshore oil and gas, oil shale, and tar sands stand to be

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"Notice of Competitive Oil and Gas Lease Sale" (July 2016), available online at http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2016/oct16_2016.Par.89806.File.dat/10_18_16%20SaleNotice_Map_List_Stips_for%20posting.pdf; BLM, "Environmental Assessment, November 2016 Competitive Oil and Gas Lease Sale," EA No. DOI-BLM-UT-G010-2016-033-EA, available online at http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2016/oct16_2016.Par.89806.File.dat/10_18_16%20SaleNotice_Map_List_Stips_for%20posting.pdf; BLM, "Notice of Competitive Oil and Gas Lease Sale" (April 20, 2016), available online at http://www.blm.gov/style/medialib/blm/nm/programs/0/og_sale_notices_and/2016/july_2016.Par.97830.File.dat/July%202016%20OG%20Lease%20Sale%20Notice.pdf; BLM, "November 10, 2016 Oil and Gas Lease Sale" website available at http://www.blm.gov/co/st/en/BLM_Programs/oilandgas/oil_and_gas_lease/20160/november_2016.html.

[48] *See* Exhibit 5 at 18.

tremendous, with more than 222.14 billion metric tons of carbon projected, nearly as much as the total carbon emissions that could be released if all unleased federal coal reserves are developed.[49]

Carbon Emissions (in billion metric tons) From Other Interior Department-overseen Fossil Fuel Development

Fossil Fuel Development	Leased	Unleased	Total Leased and Unleased
Offshore natural gas	6.8	30.24	37.04
Offshore oil	4.98	30.3	35.28
Oil shale	2.0	142.07	144.07
Tar sands	0.0	5.75	5.75
TOTALS	**13.78**	**208.36**	**222.14**

Similar to onshore oil and gas development, the Interior Department and BLM's management of offshore oil and gas, oil shale, and tar sands are both cumulative and similar in nature, and therefore must be a part of the scope of the analysis for the PEIS. Indeed, if the climate impacts of the federal coal program are to be completely understood, they must be analyzed together with the impacts of other fossil fuel management programs that are under the control and authority of the Department of the Interior.

iii. State and Private Coal Development

The PEIS must analyze and assess the impacts of state and private coal development, particularly as such development is often connected to the mining of federal coal.

Under NEPA, the direct, indirect, and cumulative impacts of connected actions must be analyzed in the same NEPA document as a proposed action. As the Interior Board of Land Appeals ("IBLA") has held, "connected action must be considered to be a part of the proposed action when determining whether a proposed action will have a significant effect on the human environment." *Glacier-Two Medicine Alliance, et. al*., 88 IBLA 133 (1985), 134. The 10th Circuit has explained,"[o]ne of the primary reasons for requiring an agency to evaluate 'connected actions' in a single NEPA analysis is to prevent agency from minimizing the potential environmental consequences of a proposed action (and thus short-circuiting NEPA review) by segmenting or isolating an individual action that, by itself, may not have a significant environmental impact." *Citizens' Committee to Save our Canyons v. U.S. Forest Service,* 297 F.3d 1012, 1029 (10th Cir. 2002) (citations omitted).

A "connected action" is defined as one that is "closely related" to other actions and is identified based on three factors in NEPA's implementing regulations. Actions are "connected" if they:

[49] *See* Exhibit 5 at 18.

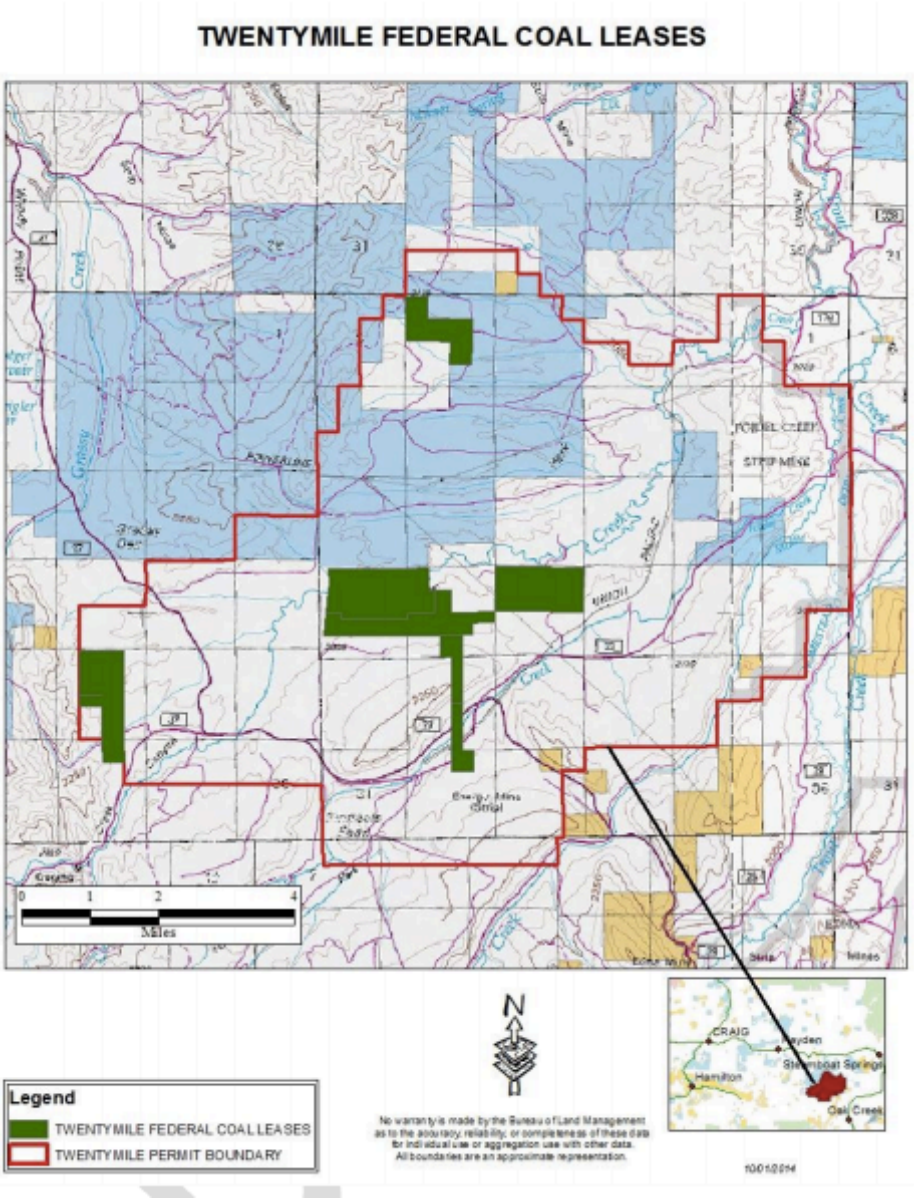
(i) automatically trigger other actions which may require environmental impact statements.

(ii) cannot or will not proceed unless other actions are taken previously or simultaneously.

(iii) are interdependent parts of a larger action and depend on the larger action for their justification."

40 C.F.R. § 1508.25(a)(1). To determine whether actions are connected, the Tenth Circuit applies the "independent utility test," which asks whether "each of the two projects *would* have taken place with or without the other" *Wilderness Workshop v. U.S. Bureau of Land Mgmt.*, 531 F. 3d 1220, 1229 (10th Cir. 2008) (emphasis added) (quoting *Great Basin Mine Watch v. Hankins*, 456 F.3d 955, 969 (9th Cir. 2006); *see also Wetlands Action Network*, 222 F.3d at 1118 ("[W]e have rejected claims that actions were connected when each of the two projects would have taken place with or without the other and thus had independent utility." (internal quotation marks omitted)); *South Carolina v. O'Leary*, 64 F.3d 892, 899 (4th Cir. 1995) (holding that actions are not "connected" when they are "independent and separable").

Here, it is often the case that approval of federal coal mining facilitates the mining of state and privately owned coal. In many cases, mines in the western United States consist of an amalgam of privately owned, state owned, and federal coal. Not only that, but approval of federal coal mining can influence the development of state and privately coal on a larger scale. For instance, if cheap Powder River Basin coal continues to be mined and sold, there will be less incentive to develop private and state coal. Conversely, if Powder River Basin coal production declines, would private and state coal production necessarily increase?



An example of a mine with extensive state, private, and some federal coal reserves. The Foidel Creek (or Twentymile) mine, owned by Peabody Energy, is in northwestern Colorado. The map above shows the location of federal coal leases in green. Outside these leases, the coal is state owned (under the blue lands) or private (under the white lands).[50]

The PEIS must rigorously analyze the effects that the federal coal program has on the connected action of private and state coal mining, not only as it relates to direct access to state and federal reserves, but also as it relates to economic impacts. Furthermore, where private and state coal mining may not actually be "connected" to the federal coal program, Interior and BLM

[50] Map from BLM, "Environmental Assessment for the Peabody Twentymile Coal, LLC COC54608 Lease Modification" (Oct. 2014), available online at https://eplanning.blm.gov/epl-front-office/projects/nepa/41852/55032/59723/DOI-BLM-CO-N010-2014-044-EA-Public_Comment.pdf.

must continue to address the impacts of this coal mining given that they represent cumulative actions that must be analyzed and assessed as part of the scope of analysis for the PEIS.

e. Interim Federal Coal Management Measures

We are concerned that as the PEIS process is unfolding, the Interior Department and BLM have be falling short of ensuring that actions are not undertaken that would prejudice the ultimate decision pursuant to 40 C.F.R. § 1506.1(c)(3). In the Secretary's January 16, 2016 statement regarding coal reform, it was indicated that the BLM would be moving forward in the near-term to provide guidance related to transparency, royalty rate reductions, and waste mine methane.[51] As we conveyed in an earlier letter, we support this effort. However, we would urge you to add clarity as follows:

- On transparency, BLM state and field offices must be directed to immediately post online pending requests to lease coal, pending applications to reduce royalties, pending lease readjustments, pending lease suspensions and pending proposals to accept advance royalties in lieu of continued operation, and any and all findings that operators are not diligently developing or meeting continued operation requirements. Ensuring that these proposals and findings are made public will be critical for buttressing the integrity that Interior expects to bring to its reform efforts.

- With regards to royalty rate reductions, the BLM must be directed to pause consideration of any pending or new royalty rate reduction requests until completion of the programmatic environmental impact statement. With recent media reports indicating royalty rate reductions may be enriching coal companies at the expense of the public, these reductions are uncalled for in the near-term.[52]

- On waste mine methane, the Interior Department must be directed to pause approval of any coal lease or mining plan that would lead to underground mining activities requiring degasification systems (i.e., systems that vent methane other than normal ventilation air systems) pending completion of BLM regulations meant to address coal mine methane.[53]

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[51] *See* "Fact Sheet: Modernizing the Federal Coal Program," available at http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf.

[52] *See* Rucker, P., "U.S. taxpayer due to subsidize Koch-controlled coal mine," *Reuters* (Jan. 12, 2016), available at http://www.reuters.com/article/usa-koch-coal-idUSL2N14W1JJ20160112.

[53] In 2014, the Bureau of Land Management issued an Advanced Notice of Proposed Rulemaking requesting comments to assist in developing a "program to capture, use, or destroy waste mine methane that is released into the mine environment and the atmosphere as a direct consequence of underground mining operations[.]" 79 Fed. Reg. 23,923 (April 29, 2014). The agency has yet to initiate a rulemaking, however.

Methane Venting Above the West Elk Coal Mine in Colorado.[54]

f. Greater Transparency Must be Achieved

Finally, we urge the BLM and the Interior Department to live up to its commitment to making federal coal management more transparent and accessible to the American public. Currently, information related to federal coal management is not readily available, is difficult to track down in a consistent manner, and is not affirmatively made available to the public through the internet.

WildEarth Guardians experienced this firsthand recently. In 2015, we sought to prepare maps presenting information related to federal coal leases in the United States.[55] In embarking upon this project, we found many shortcomings in the way the BLM manages data regarding coal leases. For example:

- BLM does not maintain consistent GIS data for coal leases in the United States. Although some state offices maintain shapefiles showing accurate lease boundaries , most

[54] More pictures of methane venting above the West Elk mine can be viewed at https://www.flickr.com/photos/wildearth_guardians/albums/72157628013512966.

[55] This series of interactive maps is available at http://www.wildearthguardians.org/site/PageServer?pagename=priorities_climate_energy_coal_public_land_interactive_map#.V5qVxyMrIdY.

state offices do not appear to maintain such data.[56] The most reliable form of geographic data is accessible through BLM's LR2000 database. However, this data is not easily transferrable to spreadsheets or databases and does not easily translate into precise geospatial presentation. It seems reasonable to expect BLM to maintain consistent, reliable, accurate, and accessible GIS data regarding coal leases.

- Information related to coal management actions is not made available online. Information regarding readjustments, lease suspension reviews, royalty rate reductions, etc. is not regularly posted online and made available to the public. Furthermore, even though these actions are subject to NEPA, they are not made readily available to the public, even on BLM's NEPA logs. Certainly, the BLM often provides no notice to the public that these decisions are being contemplated and/or undertaken.

- LR2000 is useful (albeit not user-friendly), but it would be more useful if BLM would provide consistent and more detailed entries for coal lease cases. We found that LR2000 entries for coal leases varied by state, with some states providing greater detail and others not so much. If LR2000 is meant as a clearinghouse for public information related to federal coal leases, it could be improved considerably to ensure consistent and more useful data is available. LR2000, if it is to be utilized as a public database of federal coal information, should also include information regarding mining plan and mining plan modification approvals for federal coal leases. This would take coordination with OSMRE and the Secretary, but would provide more robust information regarding the status of current leases.

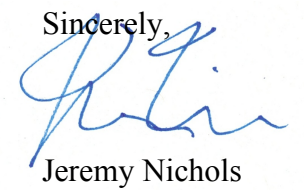
- Production data for individual federal coal leases has not been made available. It is unclear why this is the case. For members of the public wishing to determine whether a specific coal lease is producing and if so, how much coal it produces, such data is not available. BLM and Interior should strive to make this data available to provide greater transparency around federal coal production.

BLM and Interior should strive to ensure that records related to federal coal management are made available online so that the public can be more informed and engaged in the management of their coal resources. As it stands, federal coal management often occurs in a black box, making it very difficult to foster public trust and acceptance of BLM and Interior management actions.

[56] The Colorado State Office has very accessible, accurate, and up-to-date coal lease GIS data available on its website, http://www.blm.gov/co/st/en/BLM_Programs/geographical_sciences/gis/GeospatialData.html.

Thank you for the opportunity to comment. Please keep us apprised of future actions related to the preparation of the PEIS and future reforms to the federal coal program.

Sincerely,



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