New principal case for Chap. 4.B.2, "What Must an Adequate EIS Discuss," after Robertson v. Methow Valley Citizens Council.

Also, note in Chap. 8.A.3, "NEPA Tiering," under "Climate Change Update."

WildEarth Guardians v. U.S. Bureau of Land Management
2017 WL 4079137 (10th Cir. 2017)
--- F.3d ---
September 15, 2017

Before BRISCOE, McKAY, and BALDOCK, Circuit Judges.

Opinion

BRISCOE, Circuit Judge.

Appellants WildEarth Guardians and Sierra Club (Plaintiffs) challenge the Bureau of Land Management's (BLM) decision to approve four coal leases in Wyoming's Powder River Basin. Plaintiffs brought an Administrative Procedure Act (APA) claim arguing that the BLM failed to comply with the National Environmental Policy Act (NEPA) when it concluded that issuing the leases would not result in higher national carbon dioxide emissions than would declining to issue them. The district court upheld the leases. We reverse and remand with instructions to the BLM to revise its Environmental Impact Statements (EISs) and Records of Decision (RODs). We do not, however, vacate the resulting leases.

Factual and Procedural Background

The Powder River Basin (PRB) region is the largest single contributor to United States' domestic coal production. In 2008, PRB coal represented 55.5% of the United States's surface-mined coal, and 38.5% of the country's total coal production. The BLM controls much of the region and is often in the business of approving mining infrastructure and issuing mining leases under the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. §§ 1701–1787, the Mineral Leasing Act, 30 U.S.C. §§ 181–287, and BLM's own regulations and plans. *See* 43 C.F.R. §§ 1601.0–1610.8, 43 C.F.R. §§ 3400.0–3–3487.1.

At issue in this case are four coal tracts that extend the life of two existing surface mines near Wright, Wyoming: the Black Thunder mine and the North Antelope Rochelle mine. The four "Wright Area Leases" at issue here are North Hilight, South Hilight, North Porcupine, and South Porcupine. The tracts are also near, and partially within, the Thunder Basin National Grassland, a national forest.

Alone, the two existing mines account for approximately 19.7% of the United States's annual domestic coal production. The North and South Hilight leases will extend the life of the Black Thunder mine by approximately four years; the North and South Porcupine leases will extend the life of the North Antelope Rochelle mine by approximately nine years. Without these leases, the existing mines would cease operations after the currently leased reserves are depleted. The North Hilight lease was never sold, although the BLM did prepare a ROD for it. Mining has already commenced under three of the four leases, as counsel stated at oral argument. In total, the tracts at issue contain approximately two billion tons of recoverable coal.

Pursuant to NEPA, BLM prepared a Draft Environmental Impact Statement (DEIS) for the leases. 74 Fed.

Reg. 32,642–01 (July 8, 2009). In the DEIS, BLM compared its preferred action to a no action alternative in which none of the coal leases would be issued, as it was required to do under CEQ regulations. 40 C.F.R. § 1502.14. Regarding carbon dioxide emissions and impacts on climate change, BLM concluded that there was no appreciable difference between the United States's total carbon dioxide emissions under its preferred alternative and the no action alternative. BLM concluded that, even if it did not approve the proposed leases, the same amount of coal would be sourced from elsewhere, and thus there was no difference between the proposed action and the no action alternative in this respect.

BLM then received comments on the DEIS, including from Plaintiffs. WildEarth Guardians commented that BLM's conclusion on carbon dioxide emissions under the no action alternative was "at best a gross oversimplification, and at worst entirely impossible." They argued that if the tracts were not leased, "it will be very difficult for domestic coal mines," or international coal mines, to replace that quantity of coal at the same price, making "other sources of electricity," with lower carbon dioxide emissions rates, "more competitive with coal."

In its responses to comments, BLM stood by its conclusion regarding the comparative demand for coal and resulting carbon dioxide emissions. It acknowledged that cost is one factor which "determine[s] the potential for switching to non-carbon based electric generation," and that "if the demand for coal decreases nationwide, then coal production and coal mining would decrease." But it did not acknowledge that denying the Wright Area Leases would have any effect on the price for coal or thereby demand for it. Instead, the BLM concluded that because Energy Information Administration (EIA) projections indicated that population and energy demand would rise, and that coal would remain the largest fuel in the energy mix, demand for coal would remain static even in the face of the potential reduction in supply. The BLM stated that "[l]imiting one or even several points of fuel supply will not affect coal use because of the diverse group of national and international suppliers."

The BLM published its Final Environmental Impact Statement (FEIS) for the Wright Area Leases in July, 2010. The FEIS acknowledges some basic presumptions that no one in this litigation contests: the quantity of coal proposed in these leases would result in approximately 382 million tons of annual carbon dioxide emissions from electricity generation, which is the equivalent of roughly 6% of the United States's total emissions in 2008, anthropogenic carbon dioxide emissions contribute to climate change, climate change presents a litany of environmental harms disbursed throughout the globe, and if the nation's energy mix shifts towards non-coal energy sources, less carbon dioxide would be emitted.

However, the BLM's contested conclusion regarding comparative carbon dioxide emissions from the no action alternative remained in the FEIS:

> It is not likely that selection of the No Action alternative[ ] would result in a decrease of U.S. CO2 emissions attributable to coal mining and coal-burning power plants in the longer term, because there are multiple other sources of coal that, while not having the cost, environmental, or safety advantages, could supply the demand for coal beyond the time that the Black Thunder ... and North Antelope Rochelle mines complete recovery of the coal in their existing leases.

For purposes of this conclusion, the BLM "assum[ed] that all forms of electric generation would grow at a proportional rate to meet forecast electric demand" in 2010, 2015, and 2020. The FEIS relies on various governmental reports, including the EIA's Annual Energy Outlook reports from 2008, 2009, and 2010. Under these projections, coal's share of the energy mix continues to represent the largest portion of the United States's energy mix. The BLM predicted that overall demand for coal in the United States was

predicted to grow during the life of the Wright Area Leases.

The BLM then concluded that, because overall demand for coal was predicted to increase, the effect on the supply of coal of the no action alternative would have no consequential impact on that demand. This long logical leap presumes that either the reduced supply will have no impact on price, or that any increase in price will not make other forms of energy more attractive and decrease coal's share of the energy mix, even slightly.

The BLM acknowledged that many forces might impact future demand for coal, but it continued to disagree that a lack of supply leading to an increase in price could be one of those forces. Additionally, BLM also repeatedly noted that PRB coal enjoys several cost advantages over coal from other regions, but again, disavows the possibility that the no action alternative, in which half of current PRB production would stop, would impact the price of coal or the demand for it.

Following the FEIS, BLM issued a ROD for each of the four tracts, deciding to offer them for lease. Each ROD is practically identical in its discussion of the climate change implications of the no action alternative.

Finally, and somewhat contradictory to its assertions regarding replacement coal not having an effect on the market, BLM noted that:

> PRB coal has competed for an increasing share of coal sales in the market primarily because it [ha]s lower cost, [is] environmentally compliant, and [its] successful post-mining reclamation has been thoroughly demonstrated. For these reasons, over the past several decades, PRB coal has been replacing other domestic coals in the open market, and would be expected to compete similarly in the future .... When current reserves are depleted at these mines, their production would likely be replaced by other domestic and, potentially, international coal producers with coal that is more costly, less environmentally compliant, and has greater residual environmental impact.

The Merits of the Claims

Turning to the merits, the central issue in this case is whether the BLM's assumption that there was no real world difference between issuing the Wright area leases and declining to issue them because third party sources of coal would perfectly substitute for any volume lost on the open market should the BLM decline to issue the leases was arbitrary and capricious. We hold that it was.

The Plaintiffs argue the BLM's substitution assumption rendered its comparison of the preferred alternative (issuing the leases) and the no action alternative arbitrary and capricious for two reasons: the assumption itself was arbitrary and capricious because it lacks support in the administrative record and ignores basic supply and demand principles; and it ignored readily available tools to measure the market impact of such a large contraction in the nation's coal supply, which amounts to a failure to acquire the information "essential to a reasoned choice among alternatives." 40 C.F.R. § 1502.22(a).

The Perfect Substitution Assumption

The Plaintiffs' first argument is persuasive. They assert that the BLM's assumption of "replacement" lacks any support in the administrative record. As a factual matter, we agree. The BLM did not point to any information (other than its own unsupported statements) indicating that the national coal deficit of 230 million tons per year incurred under the no action alternative could be easily filled from elsewhere, or at a comparable price. It did not refer to the nation's stores of coal or the rates at which those stores may be extracted. Nor did the BLM analyze the specific difference in price between PRB coal and other sources; such a price difference would effect substitutability.

Wyoming argues on appeal, and vigorously asserted at oral argument, that the record supports a conclusion that failing to issue the leases would not impact the nation's coal supply and thus would not impact the national price of coal because the replacement coal would come from within the PRB, and enjoy the same cost advantages over other regions. But BLM never indicated on the record that coal from within the PRB would replace that extracted under these leases (possibly to avoid any perception of agency capture); to the contrary, its statements indicate only that replacement coal would come from outside the region.

We also agree with the Plaintiffs that the BLM's assumption was contradicted by one of the principal resources on which it relies. The BLM did not acknowledge portions of EIA's 2008 Energy Outlook which contradict its conclusion, and thus these portions of the report are not in the FEIS or RODs. However, BLM relied on other excerpts of this report, and it seems only appropriate to look to other portions of that same source for a more complete picture of the EIA's forecasts and expertise on the coal markets.

Principally, Plaintiffs point to a portion of the 2008 Energy Outlook which explains that an increase in coal prices would affect national demand for coal because it would compete less effectively against other sources of energy. Although, as BLM points out, the report generally predicts an increase in coal production, "different assumptions about economic growth (which mainly affect overall electricity demand) and about the costs of producing fossil fuels (which primarily determine the mix of supply sources for generation and petroleum products) lead to different results."

Thus, the report supports what one might intuitively assume: when coal carries a higher price, for whatever reason that may be, the nation burns less coal in favor of other sources. A force that drives up the cost of coal could thus drive down coal consumption.

Seemingly counter to its entire argument, BLM admits that the 2008 Energy Outlook "undoubtedly predicts that coal demand may decline in response to increased coal price, and BLM has never suggested otherwise." But, BLM argues, overall increased demand for electricity will override the effect of increased coal prices. But there is no evidence in the record that BLM considered the potential impact of increased price on demand but rather BLM merely concluded it would have no impact. The record contains only BLM's conclusions that the effect on demand would be "inconsequential," with no reference to how, or if, it decided which demand-driving factors would prevail or why.

That this perfect substitution assumption lacks support in the record is enough for us to conclude that the analysis which rests on this assumption is arbitrary and capricious. True, "the mere presence of contradictory evidence does not invalidate the Agencies' actions or decisions." If the agency is faced with conflicting evidence or interpretations, "[w]e cannot displace the agencies' choice between two conflicting views, even if we would have made a different choice had the matter been before us de novo."

But this assumption nevertheless falls below the required level of data necessary to reasonably bolster the Bureau's choice of alternatives. A number of our cases discuss the quality of evidentiary support sufficient to avoid our concluding that a challenged NEPA analysis is arbitrary and capricious. The evidence must be sufficient in volume and quality to "sharply defin[e] the issues and provid[e] a clear basis for choice among options." Here, the blanket assertion that coal would be substituted from other sources, unsupported by hard data, does not provide "information sufficient to permit a reasoned choice" between the preferred alternative and no action alternative. It provided no information.

Even if we could conclude that the agency had enough data before it to choose between the preferred and no action alternatives, we would still conclude this perfect substitution assumption arbitrary and capricious because the assumption itself is irrational (i.e., contrary to basic supply and demand principles). "We apply a rule of reason standard (essentially an abuse of discretion standard) in deciding whether claimed deficiencies in a FEIS are merely flyspecks, or are significant enough to defeat the goals of informed decisionmaking and informed public comment."

We have not previously addressed when the assumptions an agency makes in its EIS render its analysis unreasonable in violation of the "rule of reason."

In Baltimore Gas & Electric Co. v. NRDC, 462 U.S. 87 (1983), the Supreme Court upheld the Nuclear Regulatory Commission's conclusion that permanent nuclear waste storage would not have a significant environmental impact, which was based on the Commission's assumption that the waste repositories would perform perfectly. The Court upheld the agency's decision based on the zero release assumption after considering three factors: (1) it had a limited purpose in the overall environmental analysis, i.e., it was not the key to deciding between two alternatives; (2) overall, the agency's estimation of the environmental effects was overstated, so this single assumption did not determine the overall direction the NEPA analysis took; and (3) courts are most deferential to agency decisions based not just on "simple findings of fact," but in the agency's "special expertise, at the frontiers of science."

Here, the BLM's substitution assumption appears to be quite different from the Commission's zero release assumption under the three factor analysis in *Baltimore Gas*. First, the BLM's perfect substitution assumption was key to the ultimate decision to open bidding on the leases. In each of the four RODs, the "Reasons for Decision" section first discusses the leases' effect on coal combustion in the nation overall, then lists the other facts that influenced its decision in bullet points. In each ROD, the discussion opens with the assertion that: "Denying this proposed coal leasing is not likely to affect current or future domestic coal consumption used for electric generation." Prioritizing the carbon emissions and global warming analysis in the RODs suggests that this question was critical to the decision to open the leases for bidding. Prioritizing the perfect substitution assumption within that analysis suggests it was critical to deciding between two alternatives: whether or not to issue the leases. The perfect substitution assumption was more than a "mere flyspeck" in the BLM's NEPA analysis.

Second, the BLM's carbon emissions analysis seems to be liberal (i.e., underestimates the effect on climate change). The RODs assume that coal will continue to be a much used source of fuel for electricity and that coal use will increase with population size. We do not owe the BLM any greater deference on the question at issue here because it does not involve "the frontiers of science." The BLM acknowledged that climate change is a scientifically verified reality. Climate science may be better in 2017 than in 2010 when the FEIS became available, but it is not a scientific frontier as defined by the Supreme Court in *Baltimore Gas*, i.e., as barely emergent knowledge and technology.

Plaintiffs also cite authority questioning other agency assumptions similar analytically to the perfect

substitution assumption. The primarily disputed case—Mid States Coalition for Progress v. Surface Transp. Bd., 345 F.3d 520 (8th Cir. 2003)—is not on point. In that case, the Eighth Circuit rejected an agency's argument that it did not need to consider the effect on air quality of building a national coal railway because the exact impact was speculative. The agency's FEIS had concluded that any emissions the rail project caused would comply with any statutory caps and thus have only a known effect on air quality, an assumption that ignored how emissions not subject to statutory caps would affect air quality.

Mid States is distinguishable from the present case. The agency there had "completely ignored the effects of increased coal consumption" and "made no attempt" to meet the CEQ regulation requirements. Here, the BLM has not completely ignored the effects of increased coal consumption, but rather it has analyzed them irrationally.

This deficiency is more than a mere flyspeck. The BLM's perfect substitution assumption was key to the ultimate decision to open bidding on the leases. In each of the four RODs, the "Reasons for Decision" section first discusses the leases' effect on coal combustion in the nation overall, then lists the other facts that influenced its decision in bullet points. In each ROD, the discussion opens with the assertion that: "Denying this proposed coal leasing is not likely to affect current or future domestic coal consumption used for electric generation." Prioritizing the carbon emissions and global warming analysis in the RODs suggests that this question was critical to the decision to open the leases for bidding. Prioritizing the perfect substitution assumption within that analysis suggests it was critical to deciding between two alternatives: whether or not to issue the leases.

Moreover, failing to adequately distinguish between these alternatives defeated NEPA's purpose. We have explained that if the EIS is so deficient as to "defeat NEPA's goals of informed decisionmaking and informed public comment," then it is arbitrary and capricious. Failing to disclose the data critical to the key distinction between two alternatives led to what appears, on the record, to be an uninformed agency decision and did not adequately disclose the BLM's rationale to the public.

Therefore, we hold that it was an abuse of discretion to rely on an economic assumption, which contradicted basic economic principles, as the basis for distinguishing between the no action alternative and the preferred alternative.

Modeling Tools

The Plaintiffs argue that because the BLM assumed perfect substitution, it failed to take additional efforts to determine climate impact, a failure that "prevented the agency from 'providing a clear basis for choice among options by the decisionmaker and the public.' " (quoting 40 C.F.R. § 1502.14). It points to an available computer modeling system, National Energy Modeling System (NEMS), the BLM might have used. Contrary to BLM's and Wyoming's characterizations, Plaintiffs do not argue that the failure to use these models, in and of itself, was arbitrary and capricious or invalidates the FEIS or the RODs. Nor could Plaintiffs make such an argument here, since they did not argue for the necessity of modeling in their comments on the DEIS.

Plaintiffs' modeling argument is not persuasive. "NEPA does not require agencies to adopt any particular internal decisionmaking structure." *Balt. Gas*. Choosing not to adopt a modeling technique does not render the BLM's EIS arbitrary and capricious; its irrational and unsupported substitution assumption does. We therefore decline to find that the EIS and RODs arbitrary and capricious for this reason.

Relief

Under the APA, courts "shall" "hold unlawful and set aside agency action" that is found to be arbitrary or capricious. 5 U.S.C. § 706(2)(A). Vacatur of agency action is a common, and often appropriate form of injunctive relief granted by district courts. It is, however, a different question whether we may grant vacatur of BLM's decision, or if we must remand to the district court with instructions to do so.

In the past, we have done all of the following when placed in a similar posture: (1) reversed and remanded without instructions, (2) reversed and remanded with instructions to vacate, and (3) vacated agency decisions.

We decline to vacate the leases. First, because Plaintiffs challenge a fairly narrow issue, the district court may vacate the entire FEIS and RODs, or it might fashion some narrower form of injunctive relief based on equitable arguments the parties have failed to make here. Second, the question remains what will happen to the leases which have already been issued and whether mining the lease tracts should be enjoined—a question that the parties have not touched on in their arguments before us. Third, the Appellees stated at oral argument that the three leases that were issued are currently being mined.

We hold that the BLM's EIS and RODs were arbitrary and capricious and thus REVERSE the district court. We REMAND with instructions to enter an order requiring the BLM to revise its EIS and RODs. We do not, however, vacate the resulting leases.

BALDOCK, J., concurring.

The question before us is whether the Bureau of Land Management (BLM) engaged in arbitrary and capricious action when it issued the Wright Area leases on the assumption that there would be no "consequential" reduction in coal use, and thus environmental impact, if it were to decline to issue such leases. The relevant environmental impact for purposes of this appeal is climate change, and the BLM has conceded that carbon dioxide emissions from coal use cause climate change.

The Court's opinion ably sets forth why, in light of the BLM's concession that coal use causes climate change, the BLM's assumption that declining to issue the Wright Area leases would not result in less climate impact renders the decision to issue the leases arbitrary and capricious: (1) declining to issue the Wright Area leases would have the effect of removing some twenty percent of the nation's present annual coal supply from the market; (2) replacement coal would be more costly; (3) as the cost of coal goes up, "basic supply and demand principles" predict that demand for coal goes down; and (4) lessened demand for coal results in less use of coal, which results in less impact on the climate. To assume that declining to issue the Wright Area leases would not have a "consequential[ ]" impact on coal use, and thus the climate, the Court concludes, runs counter to basic supply and demand principles. Consistent with this conclusion, the Court characterizes the BLM's analytical flaw as an "economic" one in its opinion.

Because the question before us is an economic one, and because in resolving that question we dispose of this appeal, I see no need to comment on matters of climate science, as the Court does when it attempts to distinguish this appeal from *Baltimore Gas*. In *Baltimore Gas*, the Supreme Court held the Nuclear Regulatory Commission's assumption that permanent storage of nuclear waste would not result in environmental harm was not arbitrary and capricious in part because the assumption dealt with an "area of special expertise, at the frontiers of science" and thus merited deference from the Court. The obvious distinction between this appeal and *Baltimore Gas* is this appeal does not turn on scientific expertise; it

turns, instead and in this Court's words, on "basic economic principles." Perplexingly, the Court does not cite this distinction in addressing *Baltimore Gas*. The Court attempts, instead, to distinguish this appeal from *Baltimore Gas* by positing that unlike assumptions about nuclear waste storage, assumptions about climate change "do[ ] not involve 'the frontiers of science' " because "[c]limate science ... is not a scientific frontier."

The assertion that climate science is settled science is, in my view, both unnecessary to this appeal and questionable as a factual matter. Such an assertion is not necessary to this appeal because there is no disputed issue of climate science before us and thus no question of climate science we must decide whether to defer to the BLM on. As set forth above, we can distinguish *Baltimore Gas* on other grounds. The assertion is questionable as a factual matter because it is contrary to evidence in the record. Section 4.2.14.1 of the Final Environmental Impact Statement (FEIS) states that "the science [of climate change] is not settled and there is strong debate among the scientific community that natural variability is the overwhelming factor influencing climate rather than the accumulation of anthropogenic GHG emissions in the atmosphere." The FEIS also states that "[t]here has been, and continues to be, considerable scientific investigation and discussion as to the causes of the recent historic rise in global mean temperatures, and whether the warming trend will continue," and "[g]lobal climate models are at this time imperfect and ... should not be used as a basis for public policy." The Court neither addresses these statements nor cites any authority seconding its assertion that climate science is settled science. Contrary to this Court's assertion, the Supreme Court has recognized that opposing views exist on climate science. *See Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 417 n.2 (2011).

In commenting on the merits of climate science, I fear the Court suggests we have adjudicated the BLM's concession about climate change as a dispositive matter, when the validity of such concession was never before us on this appeal. The oft-cited axiom that we decide only the matters before us counsels us to be more prudent with our choice of commentary. Accordingly, I concur with the Court's analysis of the BLM's economic assumption and disposition of this appeal on that basis, without joining its conclusion about climate science.

Notes and Questions

1. Perfect Substitution. Does *WildEarth Guardians* put an end to the "perfect substitution" assumption that agencies have used to dodge analysis of GHG emissions? Can you imagine a scenario where a federal agency could support that assumption and conclude that a project would not affect GHG emissions? In other words, is there a circumstance where it would not be "irrational" to conclude that an agency decision to increase fossil fuel supply would not affect use/demand by lowering cost? Michael Burger and Jessica Wentz address the issue in *Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review*, 41 Harv. Envtl. L. Rev. 109, 150-52 (2017).

2. Judge Baldock concurs with the result but argues that the question is purely economic ("perfect substitution") and states that there is "no need to comment on matters of climate science." Yet he goes on to state that the "assertion that climate science is settled science" is "questionable as a factual matter." What does it mean for a science to be "settled," and how might that relate to the degree of deference enjoyed by agencies? The majority found that climate change is not on "the frontiers of science" compared to the design of a zero-leakage, long-term nuclear waste repository at issue in *Baltimore Gas*. Which position is stronger? Should federal courts adopt tests that depend on adjudicating which scientific or technical questions are "settled"?

2. Relief. While the plaintiffs won a NEPA precedent, the coal miners may continue to use the leases they won at auction. The district court will hear arguments to determine whether to suspend the leases. Does a remand to fix an EIS without vacating the final agency action it supports (in this case, coal leases) create an incentive for project advocates to cut corners in environmental analysis? Would it be fair to the lessees to vacate the leases they purchased and upon which they may have made investments?

5. Judicial vs. Executive Requirements for NEPA. President Trump's Mar. 28, 2017 Executive Order, "Promoting Energy Independence and Economic Growth," instructed the Council on Environmental Quality to rescind its 2016 final guidance for GHG emissions and climate change impacts in NEPA reviews. The 2016 guidance urged agencies to consider both the impacts contributing to climate change (through GHG emissions) and also the effects of climate change on a proposed action/alternatives. Nonetheless, several scholars argue that the social cost of carbon estimate employed by the Obama administration does reflect the best available science and economics. *E.g.*, Richard Revesz, et al., *Best Cost Estimate of Greenhouse Gases*, 357 Science 655 (2017). The most recent estimate of $50 per ton of carbon dioxide resulted from peer-reviewed models and best available data. Does *WildEarth Guardians* essentially reinstate the guidance by highlighting the importance of incorporating the best economic models in evaluating fossil fuel mining? *WildEarth Guardians* is clear that the judiciary should not force an agency to adopt any particular modeling technique (e.g. NEMS). That suggests that each agency may have to decide for itself how to quantify the impacts of GHG emissions in the absence of CEQ guidance.