

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA**

WILDEARTH GUARDIANS, <i>et al.</i> ,	:	
	:	
Plaintiffs,	:	Civil Action No.: 16-1724 (RC)
	:	
v.	:	Re Document Nos.: 143, 147, 148,
	:	150, 152
BERNHARDT, <i>et al.</i> ,	:	
	:	
Defendants.	:	
	:	
WESTERN ENERGY ALLIANCE, <i>et al.</i> ,	:	
	:	
Defendant-Intervenors.	:	

MEMORANDUM OPINION

**GRANTING IN PART PLAINTIFFS' MOTION FOR SUMMARY JUDGMENT; DENYING DEFENDANTS'
CROSS-MOTION FOR SUMMARY JUDGMENT**

I. INTRODUCTION

Two non-profit organizations, WildEarth Guardians (“WildEarth”) and Physicians for Social Responsibility (together, “Plaintiffs”), assert that the United States Bureau of Land Management (“BLM”) failed to sufficiently consider climate change when authorizing oil and gas leasing on federal land in Wyoming, Utah, and Colorado. Those states and two industry organizations with interests in the leases—the Western Energy Alliance and Petroleum Association of Wyoming (“Western Alliance”), and the American Petroleum Institute (“API”)—(together with BLM, “Defendants”) have intervened as defendants. The Court previously considered motions for summary judgment concerning the leases in Wyoming and held that BLM failed to comply with the National Environmental Policy Act (“NEPA”) because it did not sufficiently consider the impacts of climate change before authorizing oil and gas leasing on

federal land in the state. *See WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41 (D.D.C. 2019).

The Court remanded to the agency for further consideration.

BLM has considered the environmental impacts again and produced a supplemental assessment of the potential effects that oil and gas leasing on the federal land in Wyoming may have on climate change. Plaintiffs maintain that BLM’s supplemental assessment still fails to take the requisite “hard look” at the environmental impacts of the leasing decisions. The parties have again moved for summary judgment.¹ Having considered the record and relevant law, the Court concludes that BLM’s supplemental assessment does not comply with federal law and does not adequately consider the climate change impacts of the oil and gas leasing decisions in accordance with this Court’s prior opinion. Accordingly, for the reasons set forth below, the Court grants Plaintiffs’ motion in part, denies Defendants’ motions, and again remands to the agency for further consideration.

II. BACKGROUND

A. Statutory and Regulatory Framework

1. Mineral Leasing Act

Under the Mineral Leasing Act (“MLA”), 30 U.S.C. §§ 181–287, the Secretary of the Interior must manage and oversee mineral development on public lands in a manner that “safeguard[s] . . . the public welfare.” *Id.* § 187. Subject to this general mandate, the MLA provides for the development of oil and gas resources on federal land. *Id.* § 226. It requires that “[l]ease sales shall be held for each State where eligible lands are available [for oil and gas

¹ *See* Pls.’ Mot. Summ. J. (“Pls.’ Mem.”), ECF No. 143; BLM’s Mem. Supp. Cross Mot. Summ. J. (“BLM Mem.”), ECF No. 148-1; Wyo. Mem. Supp. Cross Mot. Summ. J. (“Wyo. Mem.”), ECF No. 147-1; Western Alliance Mem. Supp. Cross Mot. Summ. J. (“Western Alliance Mem.”), ECF No. 150-1; API Mem. Supp. Cross Mot. Summ. J. (“API Mem.”); ECF No. 152-1.

development] at least quarterly and more frequently if the Secretary of the Interior determines such sales are necessary.” 30 U.S.C. § 226(b)(1)(A). However, while oil and gas leasing is mandatory, the Secretary has discretion to determine where, when, and under what terms and conditions oil and gas development should occur. *See id.* § 226; 43 C.F.R. § 3101.1-2.

Accordingly, the federal government may impose a broad range of stipulations on oil and gas leases for federal land, including concerning the timing, pace, and scale of development. *Id.*

2. Federal Land Policy and Management Act

The MLA’s mandate to lease federal land for oil and gas development is carried out by BLM, in strict compliance with the Federal Land Policy and Management Act of 1976 (“FLPMA”). 43 U.S.C. §§ 1701–1787. The FLPMA directs BLM to “manage the public lands under principles of multiple use and sustained yield.” *Id.* § 1732(a). Under this mandate, the FLPMA identifies “mineral exploration and production” as one of the “principal or major uses” of public lands. *Id.* § 1702(l). As described below, the FLPMA establishes a series of steps that BLM must take when leasing federal lands for oil and gas development. *Id.* § 1712(a); 43 C.F.R. § 1601.0-5(n). These steps are further governed by the National Environmental Policy Act (“NEPA”).

3. National Environmental Policy Act

NEPA is the country’s basic national charter for the protection of the environment. *See* 40 C.F.R. § 1500.1(a). Its purposes are:

To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

42 U.S.C. § 4321. The Council on Environmental Quality (“CEQ”) formed pursuant to NEPA promulgates regulations that guide federal agencies’ compliance with the statute. *See* 40 C.F.R. §§ 1500.1–1508.28.

Broadly speaking, NEPA requires that federal agencies consider the environmental consequences of their actions. *See* 42 U.S.C. §§ 4321–4370(h); 40 C.F.R. § 1501.1. NEPA directs agency decisionmakers to identify and understand the environmental effects of proposed federal actions and to inform the public of those effects so that it may “play a role in both the decisionmaking process and the implementation of [the agency’s] decision.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). NEPA thus “imposes on agencies certain procedural requirements, but it ‘does not mandate particular consequences.’” *Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, 440 F. Supp. 3d 1, 8 (D.D.C. 2020) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 194 (D.C. Cir. 1991)). While the statute does not mandate particular substantive results, NEPA compliance is not merely a bureaucratic exercise. NEPA is not intended to “generate . . . excellent paperwork,” but rather to “foster excellent action” through informed decisionmaking. 40 C.F.R. § 1500.1(a).

Under NEPA, an agency must prepare an environmental impact statement (“EIS”) for every “major [f]ederal action[] significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(C); 40 C.F.R. § 1502.3. An EIS is a detailed study of “the environmental impact of the proposed action” and “any adverse environmental effects which cannot be avoided.” 42 U.S.C. § 4332(C)(i)–(ii). An EIS must examine “alternatives to the proposed action,” and the

action's direct, indirect and cumulative effects.² 42 U.S.C. § 4332(C)(iii); 40 C.F.R. §§ 1502.16, 1508.7, 1508.8.³

To determine whether an EIS must be prepared for a proposed action, the agency may prepare an environmental assessment (“EA”). *See* 40 C.F.R. §§ 1501.4, 1508.9. An EA is “a ‘concise public document’ that ‘[b]riefly provide[s] sufficient evidence and analysis for determining whether to prepare an [EIS].’” *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 757 (2004) (quoting 40 C.F.R. § 1508.9(a)). An EA, like an EIS, must take a “hard look” at the environmental consequences of the proposed action, *Kleppe v. Sierra Club*, 427 U.S. 390, 410 n.21 (1976), including its direct, indirect, and cumulative effects, *see EarthReports, Inc. v. FERC*, 828 F.3d 949, 953 (D.C. Cir. 2016); 40 C.F.R. §§ 1508.9, 1508.25(c). If, after preparing the EA, the agency determines that an EIS is not necessary, the agency must issue a finding of no significant impact (“FONSI”) summarizing its decision. *See* 40 C.F.R. §§ 1501.3, 1501.4, 1508.13.

An EA may incorporate by reference previous related analyses, a process known as “tiering.” Tiering refers to the

coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared.

² “Effects” and “impacts” are synonymous in this opinion, as they are in NEPA’s implementing regulations. 40 C.F.R. § 1508.8.

³ “Direct” environmental effects “are caused by the [agency’s] action and occur at the same time and place.” 40 C.F.R. § 1508.8. “Indirect” environmental effects “are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” *Id.* “Cumulative” environmental effects account for “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* § 1508.7.

40 C.F.R. § 1508.28. An EA may therefore refer to a more general EIS prepared for a broader federal program. *See* 43 C.F.R. § 46.140(c). However, “[t]o the extent that any relevant analysis in the broader NEPA document is not sufficiently comprehensive or adequate to support further decisions, the tiered NEPA document must explain this and provide any necessary analysis.” *Id.* § 46.140(b).

B. Oil and Gas Development Framework

Oil and gas development on federal land is typically conducted through a three-stage process governed by the FLPMA, NEPA, and the BLM’s Land Use Planning Handbook. These stages are: (1) land use planning; (2) leasing; and (3) drilling.

1. Land Use Planning Stage

The land use planning stage begins when a BLM field office develops a resource management plan for its assigned geographic area (the “planning area”). 43 U.S.C. § 1712(a); 43 C.F.R. §§ 1601.0-5(n), 1610.1. The resource management plan determines which portions of the planning area will be open to oil and gas leasing, and under what conditions. 43 U.S.C. § 1712(a). The plan typically incorporates a reasonably foreseeable development scenario (“RFDS”), which projects the scope and pace of oil and gas development within the planning area. By regulation, a resource management plan must be accompanied by an EIS. *See* 43 C.F.R. § 1601.0-6.

2. Leasing Stage

If a resource management plan authorizes oil and gas development on certain land parcels, BLM must sell leases for those parcels on a quarterly basis. 30 U.S.C. § 226(b)(1)(A); 43 C.F.R. § 3120.1-2. An oil and gas lease confers “the right to use so much of the leased lands as is necessary to explore for, drill for, mine, extract, remove and dispose of all the leased

resource in a leasehold.” 43 C.F.R. § 3101.1-2. However, BLM may impose terms and conditions on the leases, including conditions designed to protect the environment. *Id.* § 3101.1-3. At the leasing stage an EIS may be required but is not mandated by regulation.

3. Drilling Stage

Once a lease is sold, the lessee must apply for a permit to drill (“APD”) for oil and gas on the leased parcel, subject to BLM approval. 43 C.F.R. § 3162.3-1(c). BLM may condition APD approval on the lessee’s adoption of “reasonable measures,” delimited by the lease and the lessee’s surface use rights, to mitigate the drilling’s environmental impacts. *Id.* § 3101.1-2. And before approving an APD, BLM must confirm that the APD complies with the governing resource management plan, *see id.* § 1610.5-3, and it must undertake additional NEPA analysis, *id.* § 3162.5-1.

C. Relevant Factual and Procedural Background⁴

Plaintiffs challenge BLM’s approval and issuance of 473 oil and gas leases, issued through eleven different lease sales, covering over 460,000 acres of land in Wyoming, Utah, and Colorado. *See* Am. Compl. ¶ 1, ECF No. 22. Plaintiffs argue that BLM failed to comply with NEPA when it determined that it did not need to prepare an EIS and instead issued EAs and FONSIIs. *See generally* Am. Compl. Plaintiffs claim that the EAs and FONSIIs failed to sufficiently account for greenhouse gas (“GHG”) emissions that would be generated by oil and gas development on the leased parcels. *Id.*

Early in the action, the Court allowed five entities to intervene as Defendants: Western Alliance, API, the State of Wyoming, the State of Utah, and the State of Colorado (the “States”).

⁴ The Court assumes familiarity with its previous opinion, *see Zinke*, 368 F. Supp. 3d at 55–57, and limits its discussion of the factual and procedural background to what is more relevant to the present motions.

Mem. & Order Granting Mot. Intervene (Feb. 14, 2017), ECF No. 46; Mem. & Order Granting Mot. Intervene (Nov. 23, 2016), ECF No. 19. In November 2016, the Court entered a scheduling order trifurcating the briefing. Scheduling Order (Nov. 28, 2016), ECF No. 24. The parties agreed to first brief the merits of Plaintiffs' claims concerning the Wyoming leasing decisions, with briefing on the Utah and Colorado leasing decisions to follow. *Id.*

The Wyoming leasing decisions involve 282 separate parcels that span approximately 303,995 acres in the state. Pls.' Mem. at 12. BLM issued the leases (the "Wyoming Leases") through five oil and gas lease sales that took place in 2015 and 2016 (the "Wyoming Lease Sales"). *Id.* The agency originally prepared nine separate EAs, accompanied by nine FONSIIs, for the leases in Wyoming. *Id.* The Court summarized the contents of the original EAs in its prior opinion. *See Zinke*, 368 F. Supp. 3d at 56–57.

After considering the parties' initial motions for summary judgment, the Court found that "BLM failed to take a 'hard look' at GHG emissions from the Wyoming Lease Sales, and therefore the EAs and FONSIIs issued for those sales did not comply with NEPA." *Id.* at 85. The Court stated:

In summary, the challenged EAs failed to take a hard look at the climate change impacts of oil and gas drilling because the EAs (1) failed to quantify and forecast drilling-related GHG emissions; (2) failed to adequately consider GHG emissions from the downstream use of oil and gas produced on the leased parcels; and (3) failed to compare those GHG emissions to state, regional and national GHG emissions forecasts, and other foreseeable regional and national BLM projects.

Id. at 83. The Court remanded to BLM stating that the agency "must supplement [the EAs and FONSIIs], addressing the deficiencies identified by the Court." *Id.* at 85. Despite finding that BLM violated NEPA, the Court stopped short of vacating the leasing decisions, opting instead to enjoin the agency "from issuing any APDs for the Wyoming Leases while the agency works to substantiate its EAs and FONSIIs." *Id.*

In response to the Court’s decision, BLM prepared a single Supplemental EA for the Wyoming Lease Sales, in addition to a new FONSI that applies to all the Wyoming leases at issue.⁵ *See* Suppl. A.R. 27–96; *id.* at 97–104.⁶ The Supplemental EA has sections dedicated to quantifying direct emissions, indirect emissions, and cumulative impacts at the state, regional, and national level. To calculate emission estimates, BLM relied on various sources. The agency drew on data contained in the RMP EISs and RFDS prepared for each of the field offices. *See id.* at 54. BLM referenced the Environmental Protection Agency (“EPA”) GHG Inventory Report, *id.* at 59, the U.S. Geological Survey (“USGS”) Scientific Investigations Report (“SIR”) from 2018, *id.* at 50, and U.S. Energy Information Administration (“EIA”) reports, *id.* at 48. BLM also used the EPA GHG Equivalences Calculator to estimate total indirect emissions resulting from downstream consumption. *Id.* at 58.

The Supplemental EA quantifies direct and indirect⁷ emissions stemming from the Wyoming Leases as annual rates of emissions per acre. *See id.* at 57; *id.* at 59. For its cumulative impacts analysis, BLM also calculated annual averages for comparison purposes. *See id.* at 74. The agency did not separately consider particular foreseeable regional and national BLM projects, choosing instead to rely on the calculated averages. Based on a review of the Supplemental EA, BLM “determined that the Proposed Action is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively

⁵ Plaintiffs point out that BLM produced a draft Supplemental EA less than four weeks after the Court issued its opinion and then provided only a 10-day period for public comment. *See* Pls.’ Mem. at 14.

⁶ The supplemental administrative record is stamped with page numbers using the following format: Wyo Ph-2 0000000. For convenience, the Court will cite to the supplemental record simply as “Suppl. A.R.” instead.

⁷ “Indirect emissions” refers to what the Court previously described as “downstream emissions” in its previous opinion. *See* Zinke, 368 F. Supp. 3d at 71–75.

with other actions in the general area.” *Id.* at 98. For this reason, the agency again determined that preparation of an EIS is not required prior to moving forward. *Id.*

Before the Court are the parties’ cross-motions for summary judgment. Plaintiffs broadly argue that the Supplemental EA represents a rushed attempt to paper over the deficiencies previously identified by the Court. They take issue with a number of the assumptions underlying BLM’s analyses and the methodological choices made by the agency. Defendants assert that the agency addressed every point identified in the previous opinion and that the Court should not second guess the discretionary and methodological choices made by BLM. As explained more fully below, the Court finds that BLM’s Supplemental EA fails to sufficiently discharge the agency’s duties under NEPA. Accordingly, the Court grants Plaintiffs’ motion for summary judgment in part and denies Defendants’ motions for summary judgment.

III. LEGAL STANDARD

In a typical case, a court may grant summary judgment to a movant who “shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). But when assessing administrative action, at the summary judgment stage “the district judge sits as an appellate tribunal,” *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1083 (D.C. Cir. 2001), limited to determining whether, as a matter of law, the evidence in the administrative record supports the agency’s decision, *Citizens for Responsibility & Ethics in Wash. v. SEC*, 916 F. Supp. 2d 141, 145 (D.D.C. 2013). In such a case, the complaint “actually presents no factual allegations, but rather only arguments about the legal conclusion to be drawn about the agency action.” *Rempfer v. Sharfstein*, 583 F.3d 860, 865 (D.C. Cir. 2009) (quoting *Marshall Cty. Health Care Auth. v. Shalala*, 988 F.2d 1221, 1226

(D.C. Cir. 1993)). Accordingly, the Court’s review “is based on the agency record and limited to determining whether the agency acted arbitrarily or capriciously.” *Id.* (citing 5 U.S.C. § 706).

An agency action is arbitrary and capricious if:

[T]he agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.

Del. Riverkeeper Network v. FERC, 753 F.3d 1304, 1313 (D.C. Cir. 2014) (quoting *Motor Vehicle Mfrs. Ass’n of the U.S., Inc. v. State Farm Mut. Auto. Ins.*, 463 U.S. 29, 43 (1983)). This standard applies when assessing an agency’s compliance with NEPA. *WildEarth Guardians v. Jewell*, 738 F.3d 298, 319 (D.C. Cir. 2013) (citing *Theodore Roosevelt Conservation P’ship v. Salazar*, 616 F.3d 497, 507 (D.C. Cir. 2010); *Nevada v. Dep’t of Energy*, 457 F.3d 78, 87 (D.C. Cir. 2006)).

Applying this standard, the Court has a “limited” role in reviewing an agency’s decision not to issue an EIS: it must merely confirm “that no arguably significant consequences have been ignored.” *Pub. Citizen v. Nat’l Highway Traffic Safety Admin.*, 848 F.2d 256, 267 (D.C. Cir. 1988). The Court’s task “is not to ‘flyspeck’ [BLM’s] environmental analysis for ‘any deficiency no matter how minor.’” *Sierra Club v. FERC*, 827 F.3d 36, 46 (D.C. Cir. 2016) (quoting *Theodore Roosevelt*, 661 F.3d at 75). Rather, NEPA’s “rule of reason” dictates that an agency’s assessment is sufficient unless its “deficiencies are significant enough to undermine informed public comment and informed decisionmaking.” *Sierra Club v. FERC (Sierra Club II)*, 867 F.3d 1357, 1368 (D.C. Cir. 2017) (citing *Pub. Citizen*, 541 U.S. at 767; *Nevada*, 457 F.3d at 93).

IV. ANALYSIS

Plaintiffs largely do not dispute that the Supplemental EA at least ostensibly addresses each deficiency identified by the Court’s prior opinion. Instead, Plaintiffs make a number of overarching objections that they say make the Supplemental EA arbitrary and in violation of NEPA. These objections can be organized into five categories: 1) BLM arbitrarily ignored reasonably foreseeable development scenarios when evaluating cumulative effects; 2) BLM improperly analyzed only yearly emission rates instead of total emissions; 3) BLM calculated emission rates by making the arbitrary assumption that all federal lands open to leasing would produce oil and gas; 4) BLM conducted an incomplete carbon budget analysis; and 5) mathematical errors throughout the Supplemental EA render BLM’s analysis arbitrary and capricious.⁸ Plaintiffs also reassert the argument that the findings of no significant impact remain arbitrary and in violation of NEPA and that the proper remedy should be vacatur of the leasing decisions. The Court considers each argument in turn.

A. Cumulative Impact Analysis

NEPA requires “an agency to evaluate ‘cumulative impacts’ along with the direct and indirect impacts of a proposed action.” *TOMAC, Taxpayers of Michigan Against Casinos v. Norton*, 433 F.3d 852, 864 (D.C. Cir. 2006) (citing *Grand Canyon Tr. v. FAA*, 290 F.3d 339, 345 (D.C. Cir. 2002)). A cumulative impact is “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal

⁸ Plaintiffs also argue that BLM did not offer sufficient time for public comment. *See* Pls.’ Mem. at 14. However, it is within the agency’s discretion to set what it believes the appropriate time frame for comment should be, and, in fact, BLM could have argued that it was not required to seek public comment on the EA at all. *See Theodore Roosevelt*, 616 F.3d at 519 (“Yet the Bureau need not include the public in the preparation of every EA . . . the agency has significant discretion in determining when public comment is required with respect to EAs.” (quotation omitted)).

or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7. “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” *Id.* § 1508.7. Under D.C. Circuit precedent, a NEPA cumulative impact analysis must include discussion of “other actions—past, present, and proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area,” “the impacts or expected impacts from these other actions,” and “the overall impact that can be expected if the individual impacts are allowed to accumulate.” *Grand Canyon Tr.*, 290 F.3d at 345.

The Court found that BLM’s original cumulative effect analysis lacked sufficient GHG quantification. *See Zinke*, 368 F. Supp. 3d at 76–77. The original EAs concluded that the proposed leases would only represent an incremental contribution to total regional and global GHG emission levels. *Id.* at 77. But the EAs failed to support this claim with data. *Id.* Because of this, the Court stated that NEPA “require[s] that BLM quantify the emissions from each leasing decision—past, present, or reasonably foreseeable—and compare those emissions to regional and national emissions, setting forth with reasonable specificity the cumulative effect of the leasing decision at issue.” *Id.* The Court further ordered that “[t]o the extent other BLM actions in the region—such as other lease sales—are reasonably foreseeable when an EA is issued, BLM must discuss them as well.” *Id.* To satisfy NEPA, the Court found that “the agency must also consider the cumulative impact of GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation.” *Id.*

Plaintiffs argue that BLM ignored this Court’s directive. Specifically, Plaintiffs claim that BLM “limited its consideration only to lease sales within Wyoming, failing to acknowledge contemporaneous and planned oil and gas leasing in neighboring states, let alone across the nation.” Pls.’ Mem. at 26–27. Plaintiffs state that “BLM did not discuss or assess a *single*

reasonably foreseeable lease sale or other BLM action outside the State of Wyoming” and that “even within Wyoming, BLM only considered Wyoming lease sales ‘currently undergoing internal review’ to be ‘reasonably foreseeable,’ instead of using the ‘*reasonably foreseeable* development scenarios’ for each BLM planning unit in Wyoming and other states.” *Id.* at 27–28 (emphasis in original and citations omitted). Instead of analyzing actual proposed projects in neighboring states or the region, Plaintiffs state that BLM estimated existing “regional emissions based on an unsupported, arbitrary assumption that the five-year average of direct and indirect emissions from 2014 to 2018 represents an accurate portrayal of *current* conditions.” *Id.* at 28. Plaintiffs argue this assumption flies in the face of the data. *See id.* at 29. Furthermore, Plaintiffs say it is “unreasonable for BLM to assume past emission rates will reflect future trends” and that the Supplemental EA “offer[s] no projections for future oil and gas activities aside from three BLM Wyoming lease sales already planned or completed at the time of BLM’s decision.” *Id.* at 30.

Defendants argue that BLM’s approach conforms with the requirements of NEPA and this Court’s prior opinion. To start, BLM takes issue with the requirement to conduct a cumulative impact analysis related to climate change. The agency argues that “as a practical matter . . . analysis of the effects of GHG emissions does not lend itself to a traditional NEPA cumulative effects analysis.” BLM Mem. at 17. Rehashing an argument previously made before the Court, BLM says that to conduct a traditional cumulative effects analysis, “an agency would be required to identify all past, present, and reasonably foreseeable GHG-emitting project *worldwide.*” *Id.* For this reason, BLM argues the Court should uphold the agency’s decision to use regional and national estimates. *See id.* at 18. In response to Plaintiffs’ argument that the agency should have utilized the RFDSs to estimate future emissions, BLM states that “[w]hile

the RMP RFDs projected potential development over the life of a plan, not all lands are ultimately offered for lease, and BLM does not know in advance when specific parcels will be offered. Accordingly, BLM considered parcels identified for upcoming sales only as ‘reasonably foreseeable’ actions.” *Id.* at 23 n.16. Defendants acknowledge that BLM relied on regional and national averages but argue that the Court should defer to BLM’s choice of methodology. *See* Western Alliance Mem. at 21; Wyo. Mem. at 14; API Mem. at 28–29.

BLM broke down its cumulative impact analysis into six pieces: statewide direct emissions, regional direct emissions, national direct emissions, statewide indirect emissions, regional indirect emissions, and national indirect emissions. *See* Suppl. A.R. 65–74. For statewide direct and indirect emissions, only “lease sales currently undergoing internal review” were deemed “reasonably foreseeable” for the cumulative impact analysis. *Id.* at 65; *id.* at 71 (stating that analysis for cumulative indirect emissions “is similar to the method used for cumulative direct emission”). BLM calculated per-acre emission rates to “account[] for the variable drilling rates and well types across the state” and “assume[d] that all Federal acreage has the same average potential to produce.” *Id.* at 66. This methodology is the same BLM used to estimate direct and indirect emissions.

BLM’s methodology to estimate regional direct and indirect emissions is different:

In order to determine the existing annual direct CO₂ emissions from the Rocky Mountain and Northern Great Plains Regions for comparison purposes, we first divided each state’s 2014 emission estimates from the USGS SIR by their respective 2014 total Federal producing acreage; this calculation resulted in a 2014 per-acre direct CO₂e emission factor by state. The resulting 2014 per-acre emission estimate was then used to calculate total existing CO₂e emissions for the years 2015–2018 using BLM information on annual producing acreage for each state. The 2015–2018 calculated emissions for each state were then added to the 2014 USGS estimate to get total existing emissions through 2018. Since we want to compare emission levels expected on an annual basis, the five year total was then divided by 5 years to get an estimated annual average. Each region’s annual average was summed and divided by the total number of states in each region (i.e.

for Rocky Mountain it was divided by 5 states since Arizona is 0, and for Northern Great Plains Region it was divided by 3). There annual averages are referred to as a 5-year average annual total. Please refer to the full USGS SIR for specific information that the USGS incorporated into its analysis. For comparison purposes, it is the best available information at this time.

Id. at 68; *id.* at 73 (“BLM calculated regional indirect CO₂e emissions using the same methodology as for regional direct emission estimates”). BLM then stated that “[b]ased on average lease sale numbers, annual average contributions to total emissions are expected to remain constant, or decrease if projections made by the EIA regarding future activity remain true,” and that “it is impossible to project future leasing activity with greater certainty than these general trends.” *Id.* at 69. BLM’s analysis of emissions on the regional level thus does not specifically address any planned or proposed projects in neighboring states or the greater region. For national emissions, BLM used EPA emissions data from 2017. *Id.* at 70, 74. As such, the agency’s analysis of national emissions also does not specifically address any planned or proposed projects.

BLM’s cumulative impact analysis falls short of what NEPA requires and what the Court ordered. The supplemental EA fails to properly consider proposed and “reasonably foreseeable BLM lease sales in the [state,] region[,] and nation.” *Zinke*, 368 F. Supp. 3d at 77. BLM only considered “lease sales currently undergoing internal review to be reasonably foreseeable.” Suppl. A.R. 65. This amounted to consideration of three pending lease sales, only in Wyoming, extending only to the second quarter of 2019. *Id.* at 67. Nowhere in the supplemental EA does BLM explain—or define with particularity—the “currently undergoing internal review” cut-off or justify the position that no other planned actions are reasonably foreseeable—such as the RFDS projections that are “based upon known geologic and economic conditions, current

development technology, and industry-provided data about future planned development.”⁹

Suppl. A.R. 43.¹⁰ Even assuming that BLM’s benchmark for reasonable foreseeability can appropriately be used, the Supplemental EA failed to consistently apply it. BLM abandoned that methodology for regional estimates and instead calculated a five-year state average for each state in the region based on 2014 per-acre emission estimates. Suppl. A.R. 68. BLM then assumed, based on average lease sale numbers, that “annual average contributions to total emissions are expected to remain constant, or decrease” and that “it is impossible to project future leasing activity with a greater certainty than these general trends.” *Id.* at 70. BLM did not evaluate any lease sales “currently undergoing internal review” in neighboring states or the region, let alone any planned actions outlined in RFDSs or projections of drilling activities for leases that had already been sold but not yet developed.¹¹ BLM similarly did not analyze any proposed or

⁹ The Court does not mandate that BLM use the RFDSs to conduct its cumulative impact analysis, but the agency must consider it and explain why some other methodology might better predict future development. This explanation may be particularly difficult for BLM because it strikes the Court that the data in the RFDSs is by definition based on “reasonably foreseeable” development. Thus, while Plaintiffs say that RFDSs should have served as the basis for the whole analysis, Pls.’ Mem. at 28 (citing *Dine Citizens Against Ruining Our Env’t v. Bernhardt*, 923 F.3d 831, 853 (10th Cir. 2019)), the Court does not yet conclude the agency must use those projections. However, the Court notes that such an analysis apparently is within the capability of the agency because the RFDSs were used to estimate direct and indirect emissions for the leases at issue. See Suppl. A.R. 56 (“These RFDs represent the best available data about the potential future oil and gas activity on BLM administered mineral estates in Wyoming.”).

¹⁰ In Notices of Supplemental Authority, ECF Nos. 168, 169, Western Alliance and API cite a recent decision by the District Court for the District of New Mexico in *WildEarth Guardians v. David Bernhardt*, No. 1:19-cv-00505-RB-SCY, 2020 WL 4784821 (D.N.M. Aug. 18, 2020). While the court found that BLM sufficiently accounted for cumulative effects of oil and gas development in the region, *see id.* at *7–10, Plaintiffs point out that “BLM New Mexico specifically quantified GHG emissions attributable to the 16,000 wells predicted by the Carlsbad Field Office’s *reasonably foreseeable development scenario*.” Pls.’ Resp. Notice of Supp. Authority at 3, ECF No. 170. For this reason, Plaintiffs argue that the case is distinguishable because BLM did not use the ambiguous and arbitrary “currently undergoing internal review” cut-off. *See id.* The Court agrees.

¹¹ WildEarth raised this issue in a comment, stating “BLM failed to consider the cumulative effects of an estimated 2.8 million acres of BLM oil and gas leases throughout the

reasonably foreseeable actions at the federal level. *Id.* at 70–71. In so doing, BLM failed to “consider the cumulative impact of GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation” as this Court directed. *Zinke*, 368 F. Supp. 3d at 77.

This conclusion fits within D.C. Circuit precedent. In *WildEarth Guardians v. Jewell*, the court stated that “[b]ecause ‘projects in their infancy have uncertain futures,’ it was neither arbitrary nor capricious for the BLM to omit the eleven proposed leases from its analysis of reasonably foreseeable future actions.” 738 F.3d 298, 310 (D.C. Cir. 2013) (quoting *Theodore Roosevelt*, 616 F.3d at 513). In that case, a majority of the proposed actions “ha[d] not passed the ‘scoping’ stage.” *Id.* For this reason, the court determined that BLM’s approach of “evaluat[ing] GHG emissions as a percentage of state—and nation-wide emissions” sufficed. *Id.* Here, the situation is different because WildEarth specifically pointed to lease sales that had already been completed and added them to the record. *See Suppl. A.R. 14* (“BLM failed to consider the cumulative effects of an estimated 2.8 million acres of BLM oil and gas leases throughout the country since 2017, including vast acreage within the” region.); *see also id.* at 16735 (showing September 2018 lease sale results for Utah); *id.* at 16728–30 (showing September 2018 lease sale results for Montana); *id.* at 16636–38 (showing September 2018 lease sale results for Colorado). Yet BLM’s analysis failed to consider estimated direct or indirect emissions that would occur from these sales. Consequently, BLM did not analyze the cumulative impact that the Wyoming Lease Sales would have when added to the lease sales in neighboring states. As the Court previously determined, “the leasing stage is the point of no

country since 2017, including vast acreage within the Rocky Mountain region states of Arizona, Colorado, Idaho, Nevada, New Mexico, and Utah.” *Suppl. A.R. 14*. BLM’s response to this comment did not address this criticism regarding leasing in other states. *See id.*

return with respect to emissions.” *Zinke*, 368 F. Supp. 3d at 66. BLM offered no explanation for why it could not, in accordance with this Court’s ruling, estimate emissions from other lease sales in the region.¹² Failing to analyze the lease sales in the region, and other reasonably foreseeable lease sales in the country, renders BLM’s cumulative impact analysis deficient.

B. Yearly Emissions Rates

Plaintiffs contend that the Supplemental EA is deficient because it fails to consider total emissions (over the life of the proposed projects) and instead only considers annual emission rates. Pls.’ Mem. at 20–24. Because the magnitude of climate change depends more on total cumulative emissions than it does on yearly rates, Plaintiffs argue that the Supplemental EA obscures the damaging effects of the planned oil and gas leases. *Id.* at 20. Plaintiffs cite two out of circuit cases in support of their position that the Court should require BLM to calculate and analyze the total cumulative emissions over the life of the project: *South Fork Band Council v. U.S. Dep’t of Interior*, 588 F.3d 718 (9th Cir. 2009) and *Dine Citizens Against Ruining Our Env’t v. OSM*, 82 F. Supp. 3d 1201 (D. Colo. 2015), *vacated as moot*, 643 F. App’x 799 (10th Cir. 2016).

¹² BLM appears to suggest that because NEPA requires consideration of federal and non-federal actions in a cumulative impact analysis, it cannot conduct an analysis of reasonably foreseeable federal actions without violating NEPA. *See* BLM Reply at 2 (“And, while the standard created in this Court’s March 19, 2019 Order attempts to cabin [the cumulative impacts analysis], by focusing only on BLM-related emissions, NEPA’s implementing regulations specifically provide that a cumulative impacts analysis cannot ignore non-federal emissions.”). BLM concludes, then, that it should not have to analyze *any* reasonably foreseeable federal actions in the region and can rely solely on emission inventories. *See id.* NEPA does not require, and the Court did not order, that BLM “identify all past, present, and reasonably foreseeable GHG-emitting projects worldwide.” *Id.* But that does not mean that BLM can choose to ignore federal projects, like lease sales in the region, that it knows have happened or that it knows are reasonably foreseeable.

Defendants argue that using yearly rates of emissions is fully within BLM’s discretion. For example, BLM states that “[n]othing in the Court’s order precluded BLM from expressing what the aggregate direct GHG emissions would be annually” and that “the data sources BLM relied upon in conducting its calculations presented the data in annual terms, [so] it was reasonable for BLM to frame its analysis in terms of the data available to it.” BLM Mem. at 10. Wyoming argues that Plaintiffs “are conflating procedures for modeling global climate change in academic studies with legal standards for NEPA analysis of oil and gas leasing” and that “this line of argument does not show any real deficiency in [BLM’s] methodology.” Wyo. Mem. at 17. Western Alliance states that “NEPA does not require agencies to sum the annual impacts of a single project into a lifetime ‘cumulative’ impact of the single action under review.” Western Alliance Mem. at 17. In reply, Western Alliance further argues that the Court required BLM to use raw data to project direct emissions and “left to BLM’s discretion how to use that aggregated data in the method most helpful to BLM to inform its own decisionmaking.” Western Alliance Reply at 4, ECF No. 161. Defendants also argue that the cases cited by Plaintiffs are distinguishable because they dealt with assessments that ignored indirect environmental impacts completely. *See* API Mem. at 23–24.

In *South Fork Band*, the Ninth Circuit considered whether an EIS regarding a proposed gold mining project that would extend the life of an existing mine adequately considered the impact of the federal action. 588 F.3d at 722–23. The project would “make five million tons of refractory ore available,” which would be transferred to a processing facility “in two shipments per day, every day, for ten years.” *Id.* at 725. The plaintiffs argued that because the transportation and processing of the ore would affect the air quality, the EIS must discuss those impacts. *Id.* BLM maintained that “because no increase in the rate of toxic ore shipments is

proposed,” the EIS need not mention these environmental impacts. *Id.* The court found that BLM was incorrect and that, even though the rate of shipping and processing would not change, “the mine expansion will create ten additional years of such transportation that is, ten years of environmental impacts that would not be present in the no-action scenario.” *Id.* at 725–26. Furthermore, BLM failed to consider the effects of transportation and processing of the ore even on a year-to-year basis. *Id.* at 726.

In *Dine Citizens*, the court also considered the expansion of a mine. 82 F. Supp. 3d at 1206–07. Like in *South Fork Band*, the expansion would result in an amount of available coal for extraction, specifically “an additional 12.7 million tons of coal over the term of the coal supply contract.” *Id.* at 1214. The Office of Surface Mining Reclamation and Enforcement, the agency charged with evaluating the environmental impact of the expansion, argued that it did not need to produce an EIS “because the proposed expansion would not change the status quo with respect to the rate of coal combustion.” *Id.* at 1214. The court found that focusing on the rate of combustion missed the mark. *See id.* The expansion, “even if it does not alter the rate of combustion . . . will result in the combustion of an additional 12.7 million tons of coal.” *Id.* at 1215. In particular, the court noted the “deleterious impacts of combustion-related mercury” because “primary impacts of mercury are not associated with its ambient concentration in the air but with its deposition from the atmosphere.” *Id.*

The Court does not find these cases as analogous to this case as Plaintiffs do. In both, the agency had not conducted any analysis at all of the indirect effects of processing the coal at issue. BLM clearly did more here. However, the cases do speak to the intuitive appeal of Plaintiffs’ position. If a proposed action generates only slight changes in yearly emission rates, but will produce emissions for hundreds of years, disclosing the yearly rate by itself does not

paint the whole picture. Similarly, if a project will greatly increase yearly emission rates, but will only produce emissions for a year or two, the full environmental impact cannot be understood knowing only the yearly rate. BLM acknowledges the importance of cumulative GHG emissions in the Supplemental EA, stating “the magnitude of human-induced climate change depends less on the year-to-year emissions than it does on the net amount of carbon, or cumulative carbon, emitted into the atmosphere.” Suppl. A.R. 77 (quoting Fourth National Climate Assessment). The problem is that BLM’s analyses of direct, indirect, and cumulative impacts, at bottom, largely rest on comparisons of yearly rates.¹³ With respect to direct emissions, the Court found that the record contained “raw data that would allow BLM to project the pace *and scope* of oil and gas development on the leased parcels.” *Zinke*, 368 F. Supp. 3d at 68 (emphasis added).¹⁴ Like the expansion of the coal mines in *South Fork Band and Dine Citizens*, the leases at issue will likely produce direct emissions—that is to say, emissions resulting from oil and gas drilling on the lease parcels—for decades. While Defendants claim that BLM’s omission of the cumulative totals of direct emissions should not constitute a NEPA violation—for example, Western Alliance argues “Plaintiffs’ remedy lies in multiplication—not vacatur,” Western Alliance Mem. at 20—failure to calculate and consider the total makes the Court doubtful that BLM took the requisite “hard look” at the full environmental impact.

¹³ The Court acknowledges that BLM included a calculation of the estimated total indirect emissions from the proposed action based on a forty-year well life assumption. *See id.* at 59. BLM did not do the same for direct emissions and did not discuss the total emissions from the proposed actions over the life of the projects in its cumulative impact analysis.

¹⁴ The Court noted what information BLM had at its disposal: “(1) the number of wells to be developed; (2) the GHG emissions produced by each well; (3) the GHG emissions produced by all wells overseen by certain field offices; and (4) the GHG emissions produced by all wells in the state.” *Id.* at 69.

C. Calculation of Per-Acre Rates

Plaintiffs claim that BLM’s method of calculating average rates of emission arbitrarily underestimated those rates. This is so, Plaintiffs say, because by “[c]alculating a per-acre emission factor by dividing the total emissions estimates by the area *open to leasing*, instead of land *actually leased*, BLM’s approach erroneously assumed that average emissions for each acre of land *actually leased* are equivalent to average emissions from each acre of all lands *open to be leased*.” Pls.’ Mem. at 17 (emphasis in original). Because there are “approximately 8.1 million” acres in Wyoming leased for oil and gas activity, but “30.5 million acres” open to leasing, BLM’s “maneuver had the effect of significantly diluting the leases’ expected GHG emissions.” *Id.* at 25–26. Plaintiffs argue that there is “no realistic prospect that all such lands will be leased over the 20-year RFD period.” Pls.’ Reply at 8, ECF No. 157. They further state that “[w]hile BLM argues that the agency cannot project future leasing rates, this information gap does not support the agency’s decision to simply *assume* the *largest* possible denominator, i.e., that all 30 million acres open to leasing will be leased over the 20-year RFD period, leading to the *lowest* possible emission rate.” *Id.* at 10. Defendants all argue that BLM is entitled to deference on this point and that Plaintiffs have failed to show that the methodology makes the analysis arbitrary. *See* Wyo. Mem. at 23 (“[T]he prorated estimate allowed for the creation of a more consistent per acre emissions average.”); Western Alliance Mem. at 20 (“BLM is provided particular deference where, as here, analysis of GHGs as a result of oil and gas leasing decisions is particularly within its level of expertise.”); API Mem. at 26 (“[T]he per-acre analysis used by the BLM provides an apples-to-apples comparison of emission rates.”). Because the RFDSs that BLM relied on “derived emission data from assumed full-field development of all lands eligible for lease within

the planning area or field office under consideration,” API Mem. at 26, Defendants argue that BLM’s method is reasonable.

The Supplemental EA explains that BLM “calculated estimated GHG emissions associated with the Proposed Action based on existing planning area RFD well total estimates” and then subsequently “prorated the expected emissions from the RFDs by the acreage of the Proposed Action leases.” Suppl. A.R. 56. BLM “considered estimating emissions based on estimates of number of new wells that could potentially be installed . . . but concluded that this approach would duplicate the analysis that was used to develop the RFDs.” *Id.* Furthermore, “development of specific well-emission estimates . . . would require untenable assumptions (e.g. different well types can’t be ‘averaged’ together).” *Id.* BLM thus utilized “the total annual CO₂e estimates for each planning area (based on existing development and RFDs), divided by the total Federal mineral estate open to leasing in the planning area.” *Id.* BLM states that this approach “accounts for any type of well that may be drilled, as well as the increasing horizontal drilling activity that is occurring in the state, since these types of well[s] typically drill into and produce from multiple mineral estates.” *Id.* at 57.

This argument appears more of the flyspecking variety than others, but it reveals a deeper problem with the Supplemental EA. Considered alone, BLM’s decision to calculate per-acre emission rates by dividing total estimated emissions by all federal land open to leasing appears reasonable. BLM explains that this method accounts for uncertainty in forecasting because emissions might be overestimated or underestimated for a particular parcel, but on average, the estimate gets it right. BLM Mem. at 15. As the Court has noted before, it is “clearly within the expertise and discretion of the agency to determine proper testing methods.” *Sierra Club v. U.S. Dep’t of Transp.*, 753 F.2d 120, 128 (D.C. Cir. 1985). But the assumption underlying BLM’s

calculation renders the analysis of the agency internally inconsistent. To calculate per-acre direct and indirect emission rates for the proposed leases, BLM built into the equation all thirty million acres open to lease so as not to “exclude[] from the analysis” “lands that might be leased and developed in the future.” BLM Mem. at 15. To calculate per-acre direct and indirect emission rates for the region in the cumulative impact analysis, BLM “divided each state’s 2014 emission estimates . . . by their respective 2014 total Federal *producing* acreage.” Suppl. A.R. 68 (emphasis added). BLM then compared the totals generated by these different per-acre rates as if they measured the same thing. *See id.* at 69. In reality, the per-acre rate for the Wyoming Leases included lands that might be leased in the future and the per-acre rate for the region excluded lands available for lease in neighboring states. The Court does not mandate that BLM use one particular method over another,¹⁵ but the agency must be consistent. *Cf. ANR Storage Co. v. Fed. Energy Regulatory Comm’n*, 904 F.3d 1020, 1028 (D.C. Cir. 2018) (“Because FERC’s decision is internally inconsistent, it is arbitrary and capricious.”).

D. Carbon Budget Analysis

Plaintiffs argue that “BLM’s carbon budget analysis was inconsistent, irrational, and arbitrary.” Pls.’ Mem. at 18. According to Plaintiffs, while the agency recognized that carbon budgets play an important role in minimizing GHG emissions, BLM “entirely failed to disclose what the remaining carbon budget actually is.” *Id.* Moreover, Plaintiffs claim that “BLM was inconsistent about whether the agency even *conducted* a carbon budget analysis.” *Id.* at 31.

¹⁵ Plaintiffs argue that BLM’s method results in a “misleading dilution of the per-acre emissions from BLM’s leasing activity.” Pls.’ Reply at 9. They point to a Ninth Circuit case where BLM “attempt[ed] to dilute the impacts of a salvage logging project by averaging the project’s impacts over affected and unaffected areas.” *Id.* (citing *Or. Nat. Res. Council Fund v. Brong*, 492 F.3d 1120, 1129–30 (9th Cir. 2007)). But the Court does not find BLM’s method inherently misleading. BLM adequately explained what method it used and the uncertainty related to its projections. *See* Suppl. A.R. 60–61.

Portions of the Supplemental EA suggest that BLM did conduct a carbon budget analysis. *See* Suppl. A.R. 65 (“Since climate change is a global phenomenon, this section also includes consideration of global climate change and the global carbon budget.”); *id.* at 77 (“The tight timeline of the carbon budget makes interim overshoot likely”); *id.* at 78 (“[T]he data presented above show BLM Wyoming’s . . . minor potential to affect the rate of climate change relative to the latest iteration of the carbon budget projections.”). But in response to comments, BLM suggests that it did not intend to conduct a carbon budget analysis. *See id.* at 12–13 (stating that BLM’s analysis “should not be confused with an attempt to put emissions in the context of a global carbon budget, or an analysis of a global carbon budget.”). Plaintiffs argue that this “unexplained inconsistency on the basic elements of its own analysis is the ‘hallmark of arbitrary and capricious decision-making.’” Pls.’ Mem. at 32 (quoting *Bauer v. DeVos*, 325 F. Supp. 3d 74, 109 (D.D.C. 2018)).

Defendants argue that BLM’s treatment of the global carbon budget was reasonable. BLM argues that the Court only required the agency “on remand to ‘reassess whether the social cost of carbon or another methodology for quantifying climate change may contribute to informed decision making.’” BLM Mem. at 25 (quoting *Zinke*, 368 F. Supp. 3d at 79 n.31). The Intervenor Defendants all argue that the Court should defer to the expertise of the agency on this topic and deem BLM’s treatment of the global carbon budget as reasonable. *See* Wyo. Mem. at 25 (“[W]hether and how [BLM] decided to incorporate the global carbon budget . . . was a matter within the expertise of the agency.”) (internal quotations omitted); Western Alliance Mem. at 24 (Plaintiffs’ argument “presumes that NEPA requires BLM to use a carbon budget.”); API Reply at 18 (“BLM did not conduct a carbon budget analysis of the type Plaintiffs describe (or demand); nor was it required to adopt Plaintiffs’ preferred methodology.”).

Plaintiffs have the better argument; the Supplemental EA is confusing and does not contain an assessment about whether a carbon budget analysis “may contribute to informed decisionmaking.” *Zinke*, 368 F. Supp. 3d at 79 n.31. The Court appreciates BLM’s explanation for not including a social cost of carbon analysis. *See* Suppl. A.R. 75–76. But nowhere in the Supplemental EA or the corresponding responses to comments does the agency engage in the same assessment for use of a carbon budget analysis. Instead, the snippets that do mention carbon budget suggest the agency *did* consider the methodology, but it does not appear that the agency committed one way or another to actually using it to assess environmental impact. The only explanation provided by the agency is that the Court “did not require the BLM to put the emissions in the global context, or use any type of global budget analysis.” *Id.* at 12. The result of all this is confusion about whether BLM used a carbon budget analysis and whether the agency actually found the methodology useful.

The Court agrees that it did not require use of a carbon budget analysis; “it is within ‘the expertise and discretion of the agency’ to determine the methodologies underlying [its] analyses.” *Zinke*, 368 F. Supp. 3d at 79 (quoting *Sierra Club v. U.S. Dep’t of Transp.*, 753 F.2d 120, 128 (D.C. Cir. 1985)). But that does not justify an incomplete carbon budget analysis. BLM either had to explain why using a carbon budget analysis would not contribute to informed decisionmaking, in response to WildEarth’s comments, or conduct an “accurate scientific analysis” of the carbon budget. 40 C.F.R. § 1500.1(b). The agency did neither. *Standing Rock Sioux Tribe v. U.S. Army Corps of Engineers*, 440 F. Supp. 3d 1, 22 (D.D.C. 2020) (explaining that a challenge to methodology “cannot be resolved by the fact that the agency may not have been required to use this particular method in the first place [because] [s]uch a rule would immunize vast swaths of the [agency’s] analysis from judicial . . . review”). The post hoc

explanations offered by Defendants—that BLM repudiated the use of a carbon budget analysis—do not find support in the record. *See Suppl. A.R. 65* (“Since climate change is a global phenomenon, this section also includes consideration of global climate change and the global carbon budget.”); *id.* at 77 (“The tight timeline of the carbon budget makes interim overshoot likely”); *id.* at 78 (“[T]he data presented above show BLM Wyoming’s . . . minor potential to affect the rate of climate change relative to the latest iteration of the carbon budget projections.”). The NEPA “rule of reason” does not mean courts simply accept without question an agency’s decision; courts are “responsible for holding agencies to the standard the statute establishes,” which means ensuring the agency included “sufficient discussion of the relevant issues and opposing viewpoints” and that it engaged in “reasoned decisionmaking.” *Sierra Club II*, 867 F.3d at 1368. With respect to the carbon budget analysis, the Court finds that BLM fell short of this standard. On remand, BLM must “reassess whether the [carbon budget] or another methodology for quantifying climate change may contribute to informed decisionmaking,” *Zinke*, 368 F. Supp. 3d at 79 n.31, or it must conduct a more robust and complete carbon budget analysis.

E. Other Errors

Plaintiffs point to a number of errors throughout the Supplemental EA that Defendants acknowledge. For example, the agency acknowledges that “BLM inadvertently failed to update the table in 7.1.2 that reflects the emissions from the individual lease sales.” BLM Mem. at 14 n.8; *see also* Suppl. A.R. 95 (showing total direct emissions for proposed leases of 73,249.5 mt per year); Suppl. A.R. 57 (showing total direct emissions for proposed leases of 56,111.0 mt per year). BLM also admits that the agency “inadvertently divided the Northern Great Plains region by five states, instead of three” when calculating state regional direct emissions averages, but

argues that the “minor error . . . does not meaningfully change the analysis.” BLM Mem. at 19 n.12; *see also* Suppl. A.R. 68–69 (showing regional direct emissions tables and division error). API acknowledges that when discussing total indirect emissions, the Supplemental EA incorrectly characterizes total fossil fuel emissions for the whole country (including coal) as total oil and gas emissions, but it argues that the error is harmless. API Mem. at 25 n.11; *see also* Suppl. A.R. 59 (stating “the EPA GHG Inventory Report [] discloses that total oil and gas related combustion emissions in the U.S. in 2017, was 4,912,000,000 mt.”); Suppl. A.R. 9280 (table showing total fossil fuel combustion emissions as 4,912.0 mt, which includes 1,267.5 mt of coal emissions). Plaintiffs argue that “the aggregate of conflicting, erroneous, and confusing information BLM relied on failed to accurately inform the public regarding the severity of environmental impacts from the challenged lease sales[] and undermines the agency’s fundamental conclusion.” Pls.’ Reply at 2 n.1. Defendants argue that the errors are harmless and amount to *flyspecks*.

While each error in isolation may be merely a *flyspeck*, when considered together, the errors do raise concerns. The number of errors suggests a sloppy and rushed process, not the “[a]ccurate scientific analysis” that is “essential to implementing NEPA.” 40 C.F.R. § 1500.1(b). Take BLM’s calculation of regional direct emissions as an example. BLM’s described method for calculating a five-year state averages for regional emissions is not complicated. *See* Suppl. A.R. 68. It involves dividing a five-year total regional emission estimate by five to get a yearly average, then dividing again by the number of states in the region to get a yearly average for each state. *See id.* But BLM used the wrong numbers and failed to check the math. Similarly, the error of stating “that total oil and gas related combustion emissions in the U.S. in 2017, was 4,912,000,000 mt” could have been easily caught by simply

looking at the EPA GHG Inventory Report. *Id.* at 59. This error resulted in inadvertently counting 1,267.5 MMT of coal emissions into the analysis about oil and gas omissions. *See id.* at 9280. Errors of this nature—that can easily be corrected by double checking the work—may be flyspecks standing alone, but the cumulative effect of all the acknowledged errors undermines the Court’s confidence in the other calculations in the Supplemental EA. Because the Court remands for further consideration of the cumulative impact of the proposed action, the Court directs BLM to correct the acknowledged errors and to carefully review other calculations to ensure accuracy on remand.

F. FONSI

Plaintiffs renew their argument that the FONSI that accompanies the Supplemental EA is deficient, and that BLM should be ordered to prepare an EIS. An agency must prepare an EIS for every major federal action “significantly affecting” the quality of the human environment. 42 U.S.C. § 4332(C). An agency prepares an EA to determine whether an action will significantly affect the environment, and consequently, whether it must prepare an EIS. 40 C.F.R. § 1508.9. A FONSI follows the preparation of an EA and explains an agency’s decision not to prepare an EIS. *Id.* § 1508.13. Following remand and the preparation of the Supplemental EA, BLM issued a FONSI that concluded that issuing the proposed leases “is not a major federal action and will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area.” Suppl. A.R. 98.

Courts have a limited role in reviewing a FONSI. When examining the adequacy of a FONSI, courts in this jurisdiction assess whether the agency:

- (1) Has accurately identified the relevant environmental concern, (2) has taken a hard look at the problem in preparing its [FONSI or Environmental Assessment], (3) is able to make a convincing case for its finding of no significant impact, and (4) has shown that even if there is an impact of true significance, an EIS is

unnecessary because changes or safeguards in the project sufficiently reduce the impact to a minimum.

Sierra Club v. Van Antwerp, 661 F.3d 1147, 1154 (D.C. Cir. 2011) (alterations in original) (quoting *TOMAC*, 443 F.3d at 861). Although this analysis includes the phrase “convincing case,” D.C. Circuit precedent clarifies that “the scope of review is the usual one for reviewing administrative action—‘arbitrary, capricious, or an abuse of discretion.’” *Nat'l Parks Conservation Ass'n v. Semonite*, 311 F. Supp. 3d 350, 361–62 (D.D.C. 2018) (citing *Van Antwerp*, 661 F.3d at 1154), *rev'd on other grounds*, 916 F.3d 1075 (D.C. Cir. 2019).

When deciding whether an action will significantly impact the environment, the agency considers an action’s “context and intensity.” 40 C.F.R. § 1508.27. When considering “context,” the action must be “analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality.” *Id.* § 1508.27(a). “Intensity” refers “to the severity of the impact.” *Id.* § 1508.27(b). CEQ regulations identify a number of “significance factors” that should be considered in evaluating intensity, including two factors relevant to the pending motions: “[t]he degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks” and “[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts.” *Id.* § 1508.27(b)(5), (7). Implicating either of these “factors may be sufficient to require development of an EIS.” *Nat'l Parks Conservation Ass'n v. Semonite*, 916 F.3d at 1082 (D.C. Cir. 2019) (citing *Grand Canyon Tr.*, 290 F.3d at 347).

Plaintiffs argue that the FONSI contradicts the Supplemental EA’s statements that the agency cannot determine the full significance of the emissions from the leases. Pls.’ Mem. at 35. Plaintiffs argue that the FONSI contradicts the Supplemental EA’s statements about uncertainty. *Id.* at 37. Finally, Plaintiffs claim that the FONSI failed to assess the cumulative impacts of the

proposed leases. *Id.* 38–39. The FONSI relies on the analysis in the Supplemental EA. *See Suppl. A.R. 98.* Therefore, to the extent the Court has identified deficiencies in the Supplemental EA with respect to quantifying of GHG emissions and analysis of cumulative impacts, those deficiencies apply to the FONSI. *See Zinke*, 368 F. Supp. 3d at 80 n.33. The agency must address the deficiencies and fully consider the environmental impact before making any determination about the significance of the planned action.

With respect to uncertainty, the Court repeats its prior ruling. This significance factor is implicated “when an action involves new science, or when an action’s impact on a species is unknown.” *Id.* at 82. Thus, the uncertainty mentioned in the Supplemental EA with respect to forecasting GHG emissions levels is not of the type that would require an EIS on its own. *See id.* at 82–83. “[T]he risks of GHG emissions are not ‘unique or unknown,’ and the [Supplemental EA] adequately summarized those risks.” *Id.* at 83.

G. Remedy

In its prior opinion, the Court determined that the appropriate remedy was to “remand[] the EAs and FONSIs to BLM so that the agency may address the deficiencies identified by the Court.” *Id.* at 84. The Court also enjoined “BLM from issuing any APDs for the Wyoming Leases while the agency works to substantiate its EAs and FONSIs.” *Id.* at 85. The Court relied on the D.C. Circuit’s opinion in *Allied-Signal, Inc. v. U.S. Nuclear Regulatory Comm’n*, which states that “[t]he decision whether to vacate depends on ‘the seriousness of the order’s deficiencies (and thus the extent of doubt whether the agency chose correctly) and the disruptive consequences of an interim change that may itself be changed.’” 988 F.2d 146, 150–51 (D.C. Cir. 1993) (quoting *Int’l Union, United Mine Workers of Am. v. Fed. Mine Safety & Health Admin.*, 920 F.2d 960, 967 (D.C. Cir. 1990)). “Put otherwise, this Court must determine whether there is

‘at least a serious possibility that the [agency] will be able to substantiate its decision on remand,’ and whether vacatur will lead to impermissibly disruptive consequences in the interim.” *Standing Rock Sioux Tribe v. U.S. Army Corps of Eng’rs*, 282 F. Supp. 3d 91, 97 (D.D.C. 2017) (citing *Williston Basin Interstate Pipeline Co. v. FERC*, 519 F.3d 497, 504 (D.C. Cir. 2008); *Nat’l Parks Conservation Ass’n v. Jewell*, 62 F. Supp. 3d 7, 20 (D.D.C. 2014)). The Court did not deny vacatur based on the alleged economic harm that would result because the parties, despite forcefully arguing that suspending the leases would result in damage to public and private economic interests, failed to offer any empirical basis for their assertions. *Zinke*, 368 F. Supp. 3d at 84 n.35.

Plaintiffs argue that because “the agency completely ignored the Court’s specific directive to assess cumulative impacts of other reasonably foreseeable BLM lease sales in the region and nation . . . BLM should not be given a third chance to paper over the serious deficiencies underlying its issuance of the leases.” Pls.’ Mem. at 42. And though vacatur may have disruptive consequences for Defendants, Plaintiffs say that “the Court specifically put BLM and industry on notice of the risk that the leases and any additional approvals could be vacated.” *Id.* BLM points to the Court’s previous decision and reasoning and argues that the Court should choose to remand again so that the agency may address any noted deficiencies. BLM Mem. at 30–31. Intervenor Defendants do the same and also point to the economic interests at stake. *See* Wyo. Mem. at 40 (“The royalties derived from these leases total millions in revenue for Wyoming which the State then uses to fund critical infrastructure.”); Western Alliance Mem. at 29 (“Vacating these leases would violate valid existing property rights and subject BLM to potential lawsuits.”); API Mem. at 39 (“[V]acatur would also involve significant economic disruption to governmental and private interests.”).

The Court reaches the same conclusion as before. While the deficiencies noted above represent “a serious failing . . . because it leaves the Court in doubt as to whether the agency chose correctly in making its” leasing decisions, *Standing Rock*, 282 F. Supp. 3d at 98 (quotations omitted), nothing suggests that the agency would not be able to substantiate its prior conclusions, *see Heartland Reg'l Med. Ctr. v. Sebelius*, 566 F.3d 193, 198 (D.C. Cir. 2009) (“When an agency may be able readily to cure a defect in its explanation of a decision, the first factor in *Allied-Signal* counsels remand without vacatur.” (citations omitted)). The Court concludes today that BLM failed to take a “hard look” at GHG emissions from the Wyoming Lease Sales—it does not conclude that BLM’s analysis demonstrates that the proposed action requires an EIS. As before, however, the Court will enjoin BLM from issuing APDs for the Wyoming leases while it works to substantiate its Supplemental EA and FONSI.¹⁶

V. CONCLUSION

For the foregoing reasons, Plaintiffs’ motion for summary judgment is **GRANTED IN PART**. Defendants’ cross motions for summary judgment are **DENIED**. The Supplemental EA and FONSI associated with the Wyoming Lease Sales are **REMANDED** to BLM so that BLM may satisfy its NEPA obligations in the manner described above. Until BLM supplements those documents, it is **ENJOINED** from issuing APDs or otherwise authorizing new oil and gas

¹⁶ As the parties noted in their initial proposed briefing schedule, “[t]he benefit of litigating claims sequentially by state is that rulings on . . . the merits as to the Wyoming leasing decisions may guide the parties’ future course . . . with respect to the remaining claims.” Proposed Briefing Schedule at 2, ECF No. 20. The Court agreed and adopted the parties’ proposed schedule, making Wyoming the lead case. *See* Scheduling Order, ECF No. 24. Accordingly, the Court urges BLM to conduct a robust analysis, using conservative estimates based on the best data, analyzed in an unrushed fashion, so that the analysis can effectively serve as a model for the other leases.

drilling on the Wyoming Leases. An order consistent with this Memorandum Opinion is separately and contemporaneously issued.

Dated: November 13, 2020

RUDOLPH CONTRERAS
United States District Judge