

**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.: 55, 60, 61, 62, 63,
ZINKE, <i>et al.</i> ,	:	71
	:	
Defendants,	:	
	:	
WESTERN ENERGY ALLIANCE, <i>et al.</i> ,	:	
	:	
Defendant-Intervenors	:	

MEMORANDUM OPINION

**GRANTING IN PART PLAINTIFFS’ MOTION FOR SUMMARY JUDGMENT;
DENYING DEFENDANTS’ CROSS-MOTIONS FOR SUMMARY JUDGMENT;
DENYING MOTION FOR LEAVE TO FILE AMICUS BRIEF**

I. INTRODUCTION

Climate change, and humanity’s ability to combat it, are increasingly prominent topics of public discourse. This case concerns the attention the government must give climate change when taking action that may increase its effects. Two non-profit organizations, WildEarth Guardians (“WildEarth”) and Physicians for Social Responsibility (together, “Plaintiffs”) assert that the United States Bureau of Land Management (“BLM”) violated federal law by not sufficiently considering 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 Association of Wyoming (“American Petroleum”)—(together with BLM, “Defendants”) have intervened as defendants. Another organization, the

New York University School of Law’s Institute for Policy Integrity (the “Institute”), seeks to file an amicus curiae brief in support of Plaintiffs.

Before the Court are the parties’ cross-motions for summary judgment and the Institute’s motion to file an amicus brief. Having reviewed the record and the relevant law, the Court concludes that—withholding judgment on whether BLM’s leasing decisions were correct—BLM did not sufficiently consider climate change when making those decisions. BLM summarized the potential on-the-ground impacts of climate change in the state, the region, and across the country. It failed, however, to provide the information necessary for the public and agency decisionmakers to understand the degree to which the leasing decisions at issue would contribute to those impacts. In short, BLM did not adequately quantify the climate change impacts of oil and gas leasing. Thus, for the reasons explained more thoroughly below, the Court grants Plaintiffs’ motion in part, denies Defendants’ motions, and denies the Institute’s motion.¹

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 is responsible for managing and overseeing 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; *see also* AR3379. It requires that “[l]ease sales shall be held for each State where eligible lands are available [for oil and gas 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

¹ The Institute’s core arguments have been adequately addressed in the parties’ briefs.

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. *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(1). 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.” 40 C.F.R. § 1500.1(a). Its purpose is “to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of [humans],” 42 U.S.C. § 4321; to ensure that the federal government uses all practicable means to “assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings”; and to “attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences,” among other policies, 42

U.S.C. § 4331(b). The Council on Environmental Quality (“CEQ”) promulgates regulations that guide federal agencies’ compliance with NEPA. *See* 40 C.F.R. §§ 1500.1–1508.28.

At its core, NEPA simply requires that federal agencies consider the environmental consequences of their actions. *See* 42 U.S.C. §§ 4321–4370h; 40 C.F.R. § 1501.1. Under NEPA, agency decisionmakers must identify and understand the environmental effects of proposed actions, and they must 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); *see also* 42 U.S.C. § 4321; 40 C.F.R. § 1501.1. In other words, “NEPA was designed ‘to insure a fully informed and well-considered decision.’” *Park Cty. Res. Council, Inc. v. U.S. Dep’t of Agric.*, 817 F.2d 609, 621 (10th Cir. 1987) (quoting *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 558 (1978)), *overruled in part on other grounds by Village of Los Ranchos De Albuquerque v. Marsh*, 956 F.2d 970 (10th Cir. 1992). Importantly, “NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail.” 40 C.F.R. § 1500.1(b). NEPA is not intended to “generate . . . excellent paperwork,” but rather to “foster excellent action” through informed decisionmaking. *Id.* § 1500.1(c).

NEPA dictates that 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. The “detailed” EIS must consider “the environmental impact of the proposed action” and “any adverse environmental effects which cannot be avoided.” 42 U.S.C. § 4332(C)(i)–(ii). It must also examine “alternatives to the proposed

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

Not every federal action, however, requires the preparation of an EIS, because not every federal action significantly affects the quality of the human environment. To determine whether an EIS is necessary for a particular 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)). As in an EIS, the EA 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; *see also* AR28440.

For multi-stage agency programs, such as the oil and gas development program at issue here, NEPA provides that the environmental analysis conducted at each stage may incorporate by reference previous, related analyses. In NEPA parlance, this is called “tiering.” NEPA more precisely defines tiering as the:

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.

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.

40 C.F.R. §§ 1502.20, 1508.28. CEQ regulations state that “[t]iering is appropriate when the sequence of statements or analyses is . . . [f]rom a program, plan, or policy environmental impact statement to a . . . site-specific statement or analysis.” *Id.* § 1508.28(a).

In other words, “[a]n [EA] prepared in support of an individual proposed action can be tiered to a programmatic or other broader-scope [EIS] . . . for a proposed action with significant effects . . . if the . . . broader [EIS] . . . fully analyzed those significant effects.” 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). Put simply, an EA for a specific BLM action may incorporate program-wide EISs, but must supplement those EISs with more specific environmental analyses of the action at issue. *See id.* § 46.120(d).

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. *See* AR55736–46. And by regulation, a resource management plan must be accompanied by an EIS. *See* 43 C.F.R. § 1601.0-6.⁴

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. § 3120.1-2. However, BLM may impose terms and conditions on the leases, including conditions designed to protect the environment. *Id.* § 3101.1-3.⁵ 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.

⁴ The public may comment on both the resource management plan and its accompanying EIS. 43 C.F.R. § 1610.2.

⁵ The public may comment on a proposed lease sale before it begins. 43 C.F.R. § 3120.3.

C. Relevant Factual and Procedural Background

Plaintiffs claim that BLM failed to comply with NEPA at stage two of the oil and gas development framework, the leasing stage. They have challenged 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; Pls. Mem. Supp. Mot. Summ. J. ("Pls. Mem.") at 1, ECF No. 55. BLM determined that these lease sales did not require the issuance of EISs, so BLM instead issued EAs and FONSIIs. *See* Pls. Mem. at 7–8. Plaintiffs claim that these EAs and FONSIIs failed to sufficiently account for the greenhouse gas ("GHG") emissions that would be generated by oil and gas development on the leased parcels. *See generally* Am. Comp. Plaintiffs seek to set aside the leases pending further environmental analyses. *Id.*

Early in the action, the Court allowed five entities to intervene as Defendants: Western Alliance, American Petroleum, the State of Wyoming, the State of Utah, and the State of Colorado (the "States"). 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.* Accordingly, the current round of briefing concerns five BLM oil and gas lease sales held in Wyoming between May 2015 and August 2016 (the "Wyoming Lease Sales").

BLM issued 282 leases through the Wyoming Lease Sales, encompassing approximately 303,000 acres of federal land across multiple BLM planning areas. Pls. Mem. at 1. The leased parcels are managed by ten different BLM field offices—which are responsible for drafting and

implementing the resource management plans and EISs governing the parcels—overseen by three district offices.⁶ *See* Fed. Defs.’ Cross-Mot. Summ. J. & Opp’n Pls. Mem. (“BLM Mem.”) at 7, ECF No. 63. Those three district offices conducted the lease sales at issue here in May, August, and November 2015, and May and August 2016.⁷ *Id.* at 7–8.⁸ For each lease sale, each district office involved prepared (1) an EA tiered to the relevant resources management plans and EISs issued by field offices at the land use planning stage; and (2) a FONSI disavowing the need for a new, leasing stage EIS. In total, therefore, the record contains nine EA⁹/FONSI¹⁰ combinations, tiered to nineteen resource management plan/EIS combinations, including resource management plan amendments. *Id.* WildEarth participated in the comment and protest periods for each of the challenged lease sales.¹¹

The challenged EAs referenced environmental analyses conducted at the land use planning stage and, in accordance with NEPA’s tiering requirements, conducted their own analyses of the specific parcels to be leased. The Court will briefly summarize the relevant portions of the EAs and then discuss them in greater detail below.

⁶ The relevant district offices are High Desert, High Plains, and Wind River-Bighorn Basin (“Wind River”), and the relevant field offices are Rock Springs, Rawlins, Pinedale, Kemmerer, Buffalo, Casper, Newcastle, Cody, Worland, and Lander. *See* Fed. Defs.’ Cross-Mot. Summ. J. & Opp’n Pls. Mem. (“BLM Mem.”) at 7–8, ECF No. 63.

⁷ Plaintiffs helpfully submitted a chart identifying which district offices conducted each lease sale. *See* Pls. Mem. at 8.

⁸ The May 2016 sale involved leases that were originally designated for sale in February 2016, but were not sold then due to inclement weather that forced the sale’s postponement. AR34764.

⁹ AR3373; AR13707; AR13943; AR19449; AR28168; AR28435; AR35276; AR54973; AR55232.

¹⁰ AR3470; AR13925; AR14237; AR19561; AR28233; AR28509; AR35376; AR55027; AR55272.

¹¹ Comments: AR1969; AR8905; AR16829; AR23682; AR32220. Protests: AR 2997; AR12984; AR18816; AR27646; AR34764; AR54453.

The EAs discuss climate change on a conceptual level. They summarize Wyoming's current climate, explain the mechanics of climate change, acknowledge that oil and gas drilling contributes to climate change, and predict the impact of climate change on the state's climate. *See* AR3411–3415; AR13961–63; AR19502–06; AR28195. Certain EAs also reference various climate change reports. For instance, several EAs incorporate reports issued by the Intergovernmental Panel on Climate Change (“IPCC”) discussing the impact of GHG emissions on climate change. *See* AR3412; AR13962; AR19504; AR34663.

The EAs also include more specific GHG emissions assessments, which are slightly different across the challenged EAs but are similarly detailed. The EAs acknowledge that oil and gas drilling on leased parcels will emit GHGs, and they describe the sources of those emissions, but they do not attempt to quantify and project the GHG emissions likely to result from a given lease sale. For instance, certain EAs acknowledge that each potential oil or gas well on the leased parcels could emit approximately 0.00059 metric tons of carbon dioxide,¹² but they state that “[t]he [total] amount of increased emissions cannot be quantified at this time since it is unknown how many wells might be drilled, the types of equipment needed if a well were to be completed successfully . . . or what technologies may be employed by a given company for drilling any new wells.” AR13989; *see also* AR13754; AR28220; AR55015–16. Likewise, certain EAs incorporate a report quantifying and projecting consumption-based GHG emissions in Wyoming through 2020—the “Wyoming GHG Inventory”—but the EAs do not attempt to apply those projections to particular lease sales. *See* AR3412; AR19503.

¹² Carbon dioxide is a GHG, along with methane, nitrous oxides, and hydrofluorocarbons. *See Chamber of Commerce of U.S. v. EPA*, 642 F.3d 192, 197 n.1 (D.C. Cir. 2011).

Although the EAs acknowledge that GHG emissions may contribute to climate change, they conclude that “[t]he inconsistency in results of scientific models used to predict climate change at the global scale coupled with the lack of scientific models designed to predict climate change on regional or local scales, limits the ability to quantify potential future impacts of decisions made at this level.” AR3435; *see also* AR28219. Ultimately, the EAs conclude that “[w]hen compared to total national or global emissions, the amount [of GHG emissions] released as a result of potential production from the proposed lease tracts would not have a measurable effect,” AR13989, or would represent only an “incremental contribution to the total regional and global GHG emission levels.” AR55023.

Finally, the EAs emphasize that the leasing stage is a preliminary step towards oil and gas drilling, but that specific drilling projects are not guaranteed to move forward simply because a given lease was sold. For instance, the EAs state that “[t]he offering and subsequent issuance of oil and gas leases is strictly an administrative action, which, in and of itself, does not cause or directly result in any surface disturbance.” AR3382; *see also, e.g.*, AR13718; AR19458; AR54983. The EAs also state that “BLM cannot determine at the leasing stage whether or not a nominated parcel will actually be leased, or if it is leased, whether or not the lease would be explored or developed.” AR3382; *see also* AR13718; AR19458–59. They note that

BLM cannot determine exactly where a well or wells may be drilled or what technology that [sic] may be used to drill, complete and produce wells, so the impacts listed [in the EA] are more generic, rather than site-specific. Additional NEPA and technical engineering analysis would be conducted prior to approval of an APD to ensure that the proposal is compliant with all Federal and/or state rules and regulations.

AR3426; *see also* AR13744; AR19518; AR55008. Accordingly, the EAs conclude that the “filing of an [APD] may be the first useful point at which a site-specific environmental appraisal [of a lease parcel] can be undertaken.” AR3382; *see also* AR13718; AR19458; AR28179.

* * *

In summary, according to Plaintiffs, NEPA required BLM to conduct a more piercing consideration of the consequences of oil and gas drilling before it authorized the Wyoming Lease Sales. More specifically, Plaintiffs argue that the EAs and FONSIIs issued in conjunction with the Wyoming Lease Sales violated NEPA because BLM failed to take a “hard look” at GHG emissions and the climate change impact of those emissions. *See generally* Am. Compl; Pls. Mem. at 2. Plaintiffs ask the Court to (1) declare that the leasing authorizations violated NEPA; (2) vacate the leases; and (3) enjoin BLM from approving APDs for those leases until new NEPA analyses have been conducted. Am. Compl. at 39–40. Defendants, on the other hand, argue that Plaintiffs lack standing to challenge one of the lease sales, and that BLM’s environmental analyses were sufficient. *See generally* Pls. Mem.; BLM Mem.; Mem. American Petroleum Opp’n Pls. Mem. Supp. Cross-Mot. Summ. J. (“API Mem.”), ECF No. 60-1; Western Alliance Statement P. & A. Supp. Cross-Mot. Summ. J. Opp’n Pls. Mem. (“Western Alliance Mem.”), ECF No. 61-1; Mem. Supp. Wyo. Colo. & Utah’s Cross-Mot. Summ. J. Resp. Pls. Mem. (“States Mem.”), ECF No. 62.

Now before the Court are the parties’ ripe cross-motions for summary judgment. *See* Pls. Mem.; BLM Mem.; API Mem.; Western Alliance Mem.; States Mem. As explained below, the Court concludes that Plaintiffs have standing to bring this action, and that BLM did not properly discharge its NEPA obligations. Accordingly, the Court grants Plaintiffs’ motion for summary judgment in part and denies Defendants’ motions for summary judgment. The Court also denies

the Institute's motion to file an amicus brief, because the Institute's arguments largely mirror Plaintiffs' arguments.¹³

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. ("CREW") 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."¹⁴ *Id.* (citing 5 U.S.C. § 706).

An agency action is arbitrary and capricious if:

¹³ Plaintiffs have requested oral argument on the pending summary judgment motions. *See* Pls. Mot. Summ. J. at 2, ECF No. 55. Because the Court finds the parties' written submissions to be thorough and sufficient to resolve those motions, Plaintiffs' request is denied. *See* LCvR 7(f) (stating that the decision to allow oral argument is "within the discretion of the Court.").

¹⁴ The Court thus declines to consider Plaintiffs' extra-record exhibits. *See Commercial Drapery Contractors, Inc. v. United States*, 133 F.3d 1, 7 (D.C. Cir. 1998) (holding that APA review is limited to the "administrative record . . . except when there has been a strong showing of bad faith or improper behavior or when the record is so bare that it prevents effective judicial review"). As explained below, however, the Court will consider Plaintiffs' declarations in support of their standing argument.

the 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* (“*Sierra Club (Freeport)*”), 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. INSTITUTE FOR POLICY INTEGRITY’S AMICUS BRIEF

Courts have wide discretion in deciding whether to grant a third party leave to file an amicus brief. *In the Matter of the Search of Info. Associated with [redacted]@mac.com that is Stored at Premises Controlled by Apple, Inc.*, 13 F. Supp. 3d 157, 167 (D.D.C. 2014) (citing *Nat’l Ass’n of Home Builders v. U.S. Army Corps of Eng’rs*, 519 F. Supp. 2d 89, 93

(D.D.C. 2007)). An amicus brief is appropriate where “the brief will assist the judges by presenting ideas, arguments, theories, insights, facts, or data that are not to be found in the parties’ briefs.” *Voices for Choices v. Ill. Bell Tel. Co.*, 339 F.3d 542, 545 (7th Cir. 2003); *see also Jin v. Ministry of State Sec’y*, 557 F. Supp. 2d 131, 137 (D.D.C. 2008) (holding that an amicus brief is appropriate where “the amicus has unique information or perspective that can help the court beyond the help that the lawyers for the parties are able to provide” (quoting *Ryan v. CFTC*, 125 F.3d 1062, 1064 (7th Cir. 1997))).

Here, while the Institute clearly has expertise regarding the use of economic analysis in conducting environmental assessments, the Court does not believe that its amicus brief presents arguments that are not already found in the parties’ briefs. The Institute seeks to present three arguments: (1) BLM incorrectly calculated the per-well emissions estimates cited in the EAs; (2) BLM improperly failed to monetize the impact of climate change resulting from GHG emissions; and (3) BLM improperly failed to “follow basic economic logic” and account for the increased demand for oil and gas that would result from production on the leased parcels. Br. Institute Supp. Pls. Mem. at 3, ECF No. 71-1. Plaintiffs raised the first two arguments in their briefing, albeit in slightly less detail, and the Court will address those arguments below. The third argument is a slight variation of Plaintiffs’ argument that BLM failed to account for the GHG emissions generated by downstream consumption of oil and gas. The Court will also address this argument below.

Moreover, it does not appear that the Institute participated in the public comment periods for any of the challenged EAs. The Court finds it unhelpful to consider its third argument now, past the point when BLM could have considered the argument in its decisionmaking process, and after the parties negotiated a briefing schedule without the Institute’s participation. Because the

Institute's amicus brief does not have "unique information or perspective that can help the [C]ourt," the Court denies the Institute's motion to file that brief. *Jin*, 557 F.Supp.2d at 137.

V. ANALYSIS

Plaintiffs challenge nine separate EAs, arguing that "[e]ach of these EAs share common deficiencies, and none took a hard look at the impacts of GHG pollution and climate change impacts, as required by NEPA." Pls. Mem. at 1. Defendants contend that the EAs' GHG emissions assessments were sufficient, given that they were conducted at the leasing stage when development of the parcels was uncertain. Defendants also contend that Plaintiffs lack standing to challenge the August 2016 lease sale. The Court will discuss Plaintiffs' standing, then the merits of the parties' cross-motions for summary judgment. It concludes that Plaintiffs have standing to challenge all five lease sales, and that BLM's leasing stage environmental assessments were inadequate under NEPA. The Court therefore grants Plaintiffs' motion for summary judgment in part and denies Defendants' motions.

A. Standing

The Court begins, as it must, by confirming that Plaintiffs have standing to bring this action. *Al-Zahrani v. Rodriguez*, 669 F.3d 315, 318 (D.C. Cir. 2012). The doctrine of standing derives from Article III of the U.S. Constitution, which confines the federal courts to adjudicating actual "Cases" and "Controversies," U.S. Const. art. III, § 2, cl. 1, and from "the separation-of-powers principles underlying that limitation." *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 134 S. Ct. 1377, 1386 (2014). Thus, a showing of standing "is an essential and unchanging" predicate to any exercise of this Court's jurisdiction. *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 560 (1992).

Ordinarily, a party has established standing if it shows that, at the time the complaint was filed: (1) “the party has suffered an ‘injury in fact,’” (2) “the injury is ‘fairly traceable’ to the challenged action of the defendant,” and (3) “it is ‘likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.’” *Grocery Mfrs. Ass’n v. EPA*, 693 F.3d 169, 174 (D.C. Cir. 2012) (quoting *Lujan*, 504 U.S. at 560–61). The standing inquiry is modified, however, in cases where a plaintiff alleges a violation of his or her procedural rights, as when a plaintiff sues over an agency’s failure to conduct an EIS under NEPA. In such cases, the plaintiff must “show that the interest asserted is more than a mere ‘general interest [in the alleged procedural violation] common to all members of the public,’ the plaintiff must show that the government act performed without the procedure in question will cause a distinct risk to a particularized interest of the plaintiff.” *Fla. Audubon Soc’y v. Bentsen*, 94 F.3d 658, 664 (D.C. Cir. 1996) (alteration in original) (quoting *Ex parte Levitt*, 302 U.S. 633, 634 (1937)). Although such plaintiffs need not show that, but-for the procedural defect, the agency would have reached a different decision, they must establish “a causal relationship between the final agency action and the alleged injuries.” *Ctr. for Law & Educ. v. U.S. Dep’t of Educ.*, 396 F.3d 1152, 1160 (D.C. Cir. 2005). This causation prong of the standing inquiry looks to the “causal nexus between the agency action and the asserted injury, while redressability centers on the causal connection between the asserted injury and judicial relief.” *Id.* at 1160 n.2 (quoting *Freedom Republicans v. FEC*, 13 F.3d 412, 418 (D.C. Cir. 1994)).

Plaintiffs, as the parties invoking this Court’s jurisdiction, bear the burden of establishing all three elements of standing. *WildEarth Guardians v. Jewell*, 738 F.3d at 305. At the summary judgment stage, Plaintiffs must show that, taking their facts as true and drawing all reasonable inferences in their favor, a reasonable juror could find that they have standing. *See Dominguez v.*

UAL Corp., 666 F.3d 1359, 1362 (D.C. Cir. 2012). To meet this burden, Plaintiffs must put forth specific facts—not mere allegations—that show a “substantial probability” that Plaintiffs were injured, that Defendants caused the injury, and that a favorable decision of this Court could redress that injury. *Sierra Club v. EPA*, 292 F.3d 895, 898–99 (D.C. Cir. 2002).

Where a plaintiff is an organization suing on behalf of its members—as is the case here—the organization has “representative” or “associational” standing if: “(1) at least one of its members would have standing to sue in his own right; (2) the interests the association seeks to protect are germane to its purpose, and (3) neither the claim asserted nor the relief requested requires that an individual member of the association participate in the lawsuit.” *Id.* at 898.¹⁵ Ultimately, the Court need only find that one plaintiff has standing to allow a case to proceed to the merits. *See Comcast Corp. v. FCC*, 579 F.3d 1, 6 (D.C. Cir. 2009) (“[I]f one party has standing in an action, a court need not reach the issue of the standing of other parties when it makes no difference to the merits of the case.”).

Moreover, although judicial review of agency action is typically confined to the administrative record, where there is insufficient evidence of standing in the record because the question was not before the agency, plaintiffs may submit extra-record evidence to establish standing. *Sierra Club*, 292 F.3d at 899. Here, WildEarth has submitted the declarations of Erik Molvar and Jeremy Nichols to support its standing. *See* Decl. Erik Molvar (“Molvar Decl.”), Pls. Mem. Ex 6, ECF No. 55-6; Decl. Jeremy Nichols (“Nichols Decl.”), Pls. Mem. Ex 7, ECF No. 55-7. Defendants contend that the declarations do not establish that the August 2016 lease

¹⁵ The Court has no reason to doubt that the interests Plaintiffs seek to protect in this action are germane to their purposes, and the relief requested does not require that one of Plaintiffs’ individual members participate in the action. The Court will therefore focus on whether one of Plaintiffs’ members would have standing to sue.

sale caused Plaintiffs injury in fact. BLM Mem. at 13; API Mem. at 22.¹⁶ Having reviewed the declarations, the Court disagrees.

“[E]nvironmental plaintiffs adequately allege injury in fact when they aver that they use the affected area and are persons ‘for whom the aesthetic and recreational values of the area will be lessened’ by the challenged activity.” *Friends of the Earth, Inc. v. Laidlaw Env'tl. Servs. (TOC), Inc.*, 528 U.S. 167, 183 (2000) (quoting *Sierra Club v. Morton*, 405 U.S. 727, 735 (1972)). The plaintiffs must show “concrete and particularized injury which has occurred or is imminent *due to* geographic proximity to the action challenged.” *City of Olmsted Falls v. FAA*, 292 F.3d 261, 267 (D.C. Cir. 2002). While Plaintiffs’ declarations are slightly ambiguous, they do state that the declarants have visited areas impacted by the August 2016 lease sale, and that they plan to return to those areas. The August 2016 sale covered land parcels in BLM’s High Plains and Wind River-Bighorn Basin (“Wind River”) districts. Decl. of Merry E. Gamper (“Gamper Decl.”) ¶ 6, ECF No. 68-1. Mr. Molvar states that he annually visits the Red Desert, Bighorn Basin, and Wind River Basin of Wyoming—each of which contain land falling within one or both of the High Plains and Wind River districts—and he provides concrete plans to return to those areas within the year. Molvar Decl. ¶ 8; Gamper Decl. ¶¶ 3, 7. Mr. Nichols’s declaration is more precise. He states that he “regularly visit[s] lands,” including land “between Rawlins and Rock Spring north and south of Interstate 80,” that he “often visit[s] and hike[s] in lands that are within the Great Divide Basin,” that he visits these lands “at least once a year and ha[s] since 2001,” and that he intended to visit them again in August 2017. Nichols Decl. ¶ 14.

¹⁶ Defendants concede that the declarations support standing to challenge the first four Wyoming Lease Sales. *See* BLM Mem. at 13–14; API Mem. at 22. The Court agrees, for the same reasons that it concludes Plaintiffs have standing to challenge the August 2016 sale.

BLM's declarant, Merry E. Gamper, admits that two parcels within the Great Divide Basin were offered at the August 2016 sale. *See* Gamper Decl. ¶ 3.

In arguing that Plaintiffs' declarations fail to demonstrate injury in fact for the August 2016 sale, Defendants have failed to fully parse those declarations. Focusing on the declarants' statements that they regularly visit the Red Desert, Defendants contend that the declarations lack sufficient "geographic specificity" with respect to the August 2016 sale, because the areas referenced are "vast." BLM Mem. 14; API Mem. 22. Defendants thus analogize this case to *Summers v. Earth Island Institute*, which involved a challenge to United States Forest Service regulations that would impact development projects in national forests. 555 U.S. 488, 493–94 (2009). In asserting injury in fact, the plaintiff organizations' declarant stated that he "visited many national forests and plan[ne]d to visit several unnamed forests in the future." *Id.* at 495. The Supreme Court held that this declaration was insufficient to establish the plaintiffs' injury in fact. *Id.* "[N]ational forests occupy more than 190 million acres, an area larger than Texas"; it was highly unlikely that the declarant's "wanderings w[ould] bring him to a parcel about to be affected" by a project subject to the challenged regulations. *Id.* at 495–96. The declarant—and the plaintiffs—thus could not demonstrate a sufficient likelihood of concrete harm from the challenged regulations to convey standing. *Id.* at 496.

The ambiguous declaration at issue at *Summers* was far less specific than the declarations at issue here. Here, rather than generally asserting that they visit BLM lands, or even that they visit BLM lands within Wyoming, WildEarth's declarants state that they have visited and will visit specific areas within Wyoming that will be impacted by the lease sales. *See* Molvar Decl. ¶¶ 8, 14, 15 (listing specific lease parcels, and identifying the Red Desert, Adobe Town, Bighorn Basin, and Wind River Basin areas); Nichols Decl. ¶¶ 14, 22 (identifying specific areas within

the Red Desert, including the Great Divide Basin and areas north of interstate 80). While it is true that Mr. Molvar and Mr. Nichols do not state that they have visited or plan to visit *specific parcels* offered in the August 2016 lease sale, API Mem. at 22, the Court concludes that such specificity is not necessary here, where the parcels at issue cover thousands of acres of open, undeveloped landscape, and where oil and gas development prompts “drilling rigs that rise above the land” and create “haze and dust in the air” that can be seen “up to a hundred miles” away. Nichols Decl. ¶¶ 16–18; *see also id.* at 8–14 (attaching photographs demonstrating the juxtaposition of oil and gas drilling rigs against the open landscape). Mr. Nichols’s declaration indicates that development of “particular” parcels offered in the August 2016 lease sale would “impede a specific and concrete plan of [his] to enjoy the [Great Divide Basin].” *Summers*, 555 U.S. at 495. This is sufficient to establish Mr. Nichols’s injury in fact. *Sierra Club v. EPA*, 292 F.3d at 898; *WildEarth Guardians v. Jewell*, 738 F.3d at 307 (holding that while the plaintiffs challenging a BLM leasing decision could not “establish standing based on the effects of global climate change,” they “established a separate injury in fact not caused by climate change—the harm to their members’ recreational and aesthetic interests from *local* pollution”); *WildEarth Guardians v. Salazar*, 880 F. Supp. 2d 77, 86–87 (D.D.C. 2012) (holding that the plaintiffs had standing where they alleged that “BLM’s failure to take full stock of the environmental impacts of NO₂ emissions during mining operations will lead to haze, smog, and dust clouds in the areas immediately adjacent to the [mining] tracts”).¹⁷

¹⁷ Because the Court holds that Mr. Nichols’s declaration was sufficient to demonstrate Plaintiffs’ standing, the Court will not address Mr. Molvar’s supplemental declaration offering “further clarification and details of his visits to the August 2016 leases.” Pls. Reply Supp. Pls. Mem. (“Pls. Reply”) at 1, ECF No. 76; Suppl. Decl. Erik Molvar, Pls. Reply Ex. 9, ECF No. 76-1.

The aesthetic injuries suffered by Mr. Nichols and Mr. Molvar also satisfy the two remaining elements of standing: the injuries are “fairly traceable” to BLM’s allegedly deficient NEPA reviews and they would “be redressed by a favorable decision.” *Grocery Mfrs. Ass’n*, 693 F.3d at 174. In NEPA procedural-injury cases, an “adequate causal chain” contains two links: “one connecting the omitted EIS to some substantive government decision that may have been wrongly decided because of the lack of an [adequate] EIS,” and “one connecting that substantive decision to the plaintiff’s particularized injury.” *Fla. Audubon Soc’y*, 94 F.3d at 668. Here, BLM’s alleged failure to discharge its NEPA obligation led directly to authorization of the Wyoming Lease Sales, which will enable the oil and gas development causing Plaintiffs’ injuries. “The proof is in the pudding: if [the Court] were to vacate [BLM’s] order authorizing the [Wyoming Lease Sales] for violating NEPA, not only would [the injuries of Mr. Nichols and Mr. Molvar] be redressed, the remedy would also be limited to the inadequacy—here, [deficient EAs]—that produced the injury in fact that [Plaintiffs] ha[ve] established.” *Sierra Club (Freeport)*, 827 F.3d at 44. Accordingly, because at least one of WildEarth’s members would have standing to bring this action, Plaintiffs have standing to challenge all five Wyoming Lease Sales. *Sierra Club v. EPA*, 292 F.3d at 898.

B. Merits

Because Plaintiffs have standing, the Court will assess the merits of Plaintiffs’ arguments with respect to each sale. The gravamen of Plaintiffs’ motion for summary judgment is that (1) BLM failed to take a “hard look” at GHG emissions from potential oil and gas drilling on the leased parcels; and (2) its FONSIIs were deficient. As explained below, the Court concludes that BLM did not take a hard look at drilling-related and downstream GHG emissions from the leased parcels, and it failed to sufficiently compare those emissions to regional and national emissions.

These shortcomings also rendered the challenged FONSIIs deficient, because the FONSIIs could not convincingly state that BLM’s leasing decisions would not significantly affect the quality of the environment.

1. BLM Failed to Take a “Hard Look” at Greenhouse Gas Emissions

Plaintiffs’ first core argument is that BLM “universally failed” to “take a hard look at the impacts of GHG pollution and climate change resulting from its leasing decisions . . . in EAs for the [Wyoming Lease Sales].” Pls. Mem. at 11. More specifically, Plaintiffs contend that “BLM arbitrarily failed to analyze the direct, indirect, and cumulative impacts of GHG emissions of oil and gas leasing—an omission admitted by the agency that requires no flyspecking of the record.” Pls. Mem. at 11–12. The Court agrees that BLM’s leasing stage analyses of GHG emissions were inadequate, but it does not hold that those analyses required the degree of detail demanded by Plaintiffs.

Again, NEPA requires that an agency consider the direct, indirect, and cumulative impacts of its proposed projects. 40 C.F.R. § 1508.25(c). Direct impacts are “caused by the action and occur at the same time and place.” *Id.* § 1508.8(a). Indirect impacts are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” *Id.* § 1508.8(b). A cumulative impact is an “impact on the environment which results from 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. “Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” *Id.*

The Court will consider BLM’s evaluation of each type of impact in turn. First, however, it must address an issue that pervades the parties’ briefs: whether BLM could defer certain

environmental impact analyses to the drilling stage, rather than conducting them at the leasing stage. *See* AR3458 (“Emissions of all regulated pollutants (including GHGs) and their impacts will be quantified and evaluated at the time that a specific development project is proposed.”). In short, because BLM cannot fully prevent GHG emissions from oil and gas drilling once leases have been issued, BLM was required to assess the reasonably foreseeable impacts of drilling, at the leasing stage. BLM’s assessments fell short of NEPA’s requirements.

a. Leasing is an Irrevocable Commitment to Oil and Gas Drilling

In evaluating BLM’s EAs the Court must assure itself that “the agency took a ‘hard look’ at the environmental consequences of its decision[s].” *Conner v. Burford*, 848 F.2d 1441, 1446 (9th Cir. 1988) (citing *Kleppe*, 427 U.S. at 410 n.21; *California v. Block*, 690 F.2d 753, 761 (9th Cir. 1982)); *accord TOMAC, Taxpayers of Mich. Against Casinos v. Norton*, 433 F.3d 852, 861 (D.C. Cir. 2006). A hard look requires that BLM assess the “reasonably foreseeable” impacts of a proposed action before an “irretrievable commitment[] of resources” is made that would trigger those impacts. 42 U.S.C. § 4332(2)(C)(v); *see also Wyo. Outdoor Council v. U.S. Forest Serv.*, 165 F.3d 43, 49 (D.C. Cir. 1999) (“[T]he law does not require an agency to prepare an EIS until it reaches the critical stage of a decision which will result in ‘irreversible and irretrievable commitments of resources’ to an action that will affect the environment.” (quoting *Mobil Oil Corp. v. FTC*, 562 F.2d 70, 173 (2d Cir. 1977))). “[T]he appropriate time for preparing an EIS is *prior* to a decision, when the decisionmaker retains a maximum range of options.” *Sierra Club v. Peterson*, 717 F.2d 1409, 1414 (D.C. Cir. 1983) (citations omitted). While the parties seem to agree on this standard, they dispute whether BLM’s decision to proceed with the Wyoming Lease Sales was the critical stage of the oil and gas leasing program, beyond which BLM could not defer more detailed environmental analyses.

Relying primarily on a thirty-year-old D.C. Circuit opinion, *Peterson*, and a thirty-year-old Ninth Circuit opinion, *Conner*, Plaintiffs argue that BLM could not defer analyzing the reasonably foreseeable impacts of oil and gas drilling past the Wyoming Lease Sale stage. Pls. Mem. at 16. This is because, according to Plaintiffs, after the leasing stage BLM could no longer fully prevent drilling and its environmental consequences. *Id.* While *Peterson* and *Conner* have been supplemented by decades of NEPA-related law, their core holdings have stood the test of time. They dictate the Court’s conclusion here.

Both cases involved a challenge to the United States Forest Service’s decision to issue oil and gas leases over large swaths of National Forest. *Peterson*, 717 F.2d at 1410; *Conner*, 848 F.2d at 1443–44. Certain of the leases contained No Surface Occupancy (“NSO”) stipulations—which forbid a lessee from conducting surface-level activity on a leased parcel without additional agency approval—while other leases allowed for some surface-disturbing activity without agency authorization. *See Peterson*, 717 F.2d at 1411; *Conner*, 848 F.2d at 1444. At the leasing stage, the Forest Service drafted an EA and a FONSI that declined to fully assess the reasonably foreseeable impacts of each leasing decision—including the impacts of surface-disturbing activities—because “any impacts which might result from the act of leasing would either be insignificant or, if significant, could be mitigated by exercising the controls provided in the lease stipulations.” *Peterson*, 717 F.2d at 1413–14; *see also Conner*, 848 F.2d at 1443–44. Thus, the agency’s finding of “no significant impact” was “premised upon the conclusion that the lease stipulations w[ould] prevent any significant environmental impacts until a site-specific plan for exploration and development [was] submitted by the lessee.” *Peterson*, 717 F.2d at 1413.

The D.C. and Ninth Circuits held that this conclusion fell short of NEPA’s requirements with respect to leases lacking NSO stipulations. The Forest Service could not defer assessing the

impacts of surface-disturbing activities on the leased parcels, because at the leasing stage “the [agency] made an irrevocable commitment to allow *some* surface-disturbing activities,” and it was therefore required to analyze those activities before it could no longer preclude them.

Peterson, 717 F.2d at 1414; *see also Conner*, 848 F.2d at 1449–50. In other words, an agency “may delay preparation of an EIS provided that it reserves both the authority to *preclude* all activities pending submission of site-specific proposals and the authority to *prevent* proposed activities if the environmental consequences are unacceptable.” *Peterson*, 717 F.2d at 1415; *see also N.M. ex rel. Richardson v. BLM*, 565 F.3d 683, 718–19 (10th Cir. 2009) (holding that BLM “was required to analyze any foreseeable impacts of [surface-disturbing activity on an oil and gas lease] before committing the resources”); *Conner*, 848 F.2d at 1451.

These cases establish that an agency cannot defer analyzing the reasonably foreseeable environmental impacts of an activity past the point when that activity can be precluded. This principle, and the parties’ briefing, raises a threshold question for the Court here: can BLM preclude oil and gas drilling even after having sold leases authorizing such drilling? The regulatory framework and Defendants’ supplemental briefing make clear that the answer is no.

Prior to a lease sale, BLM has the authority to impose conditions, such as NSO stipulations, dictating steps leaseholders must take to protect the environment. 43 C.F.R. § 3101.1-3. After the lease sale, however, the leaseholder has “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.” *Id.* § 3101.1-2. As Plaintiffs note, Pls. Mem. at 16, and as some of the EAs at issue make clear, the Wyoming Leases do not contain stipulations preventing oil and gas drilling without further post-lease approval by BLM. Moreover, BLM’s fluid minerals planning handbook states that “[b]y law, [direct, indirect and cumulative] impacts must be

analyzed before the agency makes an irreversible commitment,” which, for oil and gas drilling, “occurs at the point of lease issuance.” AR55446 (quoting the BLM Handbook H-1624-1).

Finally, Defendants themselves concede that once the Wyoming Leases were issued, BLM could no longer prevent the lease-holders from exploring the parcels and drilling for oil and gas, producing GHG emissions. *See* States Suppl. Br. at 2–3, ECF No. 93; API Suppl. Br. at 2, ECF No. 94; BLM Suppl. Br. at 2,¹⁸ ECF No. 95; Western Alliance Suppl. Br. at 1, ECF No. 96.

While it may be true that after the leasing stage BLM can impose conditions to *limit* and *mitigate* GHG emissions and other environmental impacts, *see, e.g.*, States Suppl. Br. at 3–4; API Suppl. Br. at 2–4, the leasing stage is the point of no return with respect to emissions. Thus, in issuing the leases BLM “made an irrevocable commitment to allow *some*” GHG emissions. *Peterson*, 717 F.2d at 1414.¹⁹ BLM was therefore required to fully analyze the reasonably foreseeable impacts of those emissions at the leasing stage. *Id.*; *see also Conner*, 848 F.2d at 1449–50. “[T]he next question is whether any environmental impacts were reasonably foreseeable at the leasing stage.” *Richardson*, 565 F.3d at 718.

b. BLM Need Not Conduct Site-Specific Assessments at the Leasing Stage

Plaintiffs seem to suggest that because the leasing stage represents an irretrievable commitment to oil and gas drilling, BLM was required to undertake certain “site-specific” analyses of individual lease parcels at that stage. *See* Pls. Mem. at 15. Defendants counter that

¹⁸ Because this brief does not include internal page numbers, the Court refers to the page numbers automatically generated by CM/ECF.

¹⁹ Defendants note certain factual distinctions between *Peterson*, *Conner*, and this case, but they are distinctions without a difference. For instance, BLM notes that unlike here, the leasing decisions in *Peterson* and *Conner* “were based entirely on EAs and FONSI—no EISs were ever prepared.” BLM Mem. at 20. But as discussed below, BLM’s analyses in EISs generated at the land use planning stage did not absolve it of the duty to conduct more specific analyses at the leasing stage, when it made an irretrievable commitment of resources.

site-specific analyses at the leasing stage without access to “key [site-specific] variables would be speculative at best, would not aid in BLM’s decision-making, and would undoubtedly be fruitless or impossible.” Western Alliance Mem. at 20. Defendants have the stronger argument.

At the leasing stage, BLM could not reasonably foresee the projects to be undertaken on specific leased parcels, nor could it evaluate the impacts of those projects on a parcel-by-parcel basis. As the EAs explain, BLM did not know “whether or not [a given] lease would be explored or developed.” AR3426. And even if BLM assumed that a given lease would be developed, it could not know the resource to be extracted from the lease—oil or gas—the type of wells to be drilled, and the technology that would be used to drill those wells. *See* AR11957; AR35366. NEPA does not require an agency to issue these types of wholly speculative assessments at the leasing stage, even assuming an irretrievable commitment of resources. *See Park County*, 817 F.2d at 623 (holding that “[t]o require a cumulative EIS contemplating full field development” at the leasing stage would “result in a gross misallocation of resources, ‘would trivialize NEPA and would diminish its utility in providing useful environmental analysis for major federal actions that truly affect the environment.’” (quoting *Cabinet Mountains Wilderness v. Peterson*, 685 F.2d 678, 682 (D.C. Cir. 1982)));²⁰ *Chihuahuan Grasslands All. v. Norton*, 507 F. Supp. 2d 1216, 1231 (D.N.M. 2007), *vacated and remanded on other grounds*, 545 F.3d 884 (10th Cir. 2008) (holding that “site-specific analysis would be impractical, speculative and unduly expensive” at the leasing stage, especially where “BLM has conceded that further analysis is

²⁰ *Park County* applied a reasonableness standard to its NEPA review that the Tenth Circuit overruled in *Village of Los Ranchos*, in favor of the APA’s arbitrary and capricious standard. 956 F.2d at 973. However, the Tenth Circuit left *Park County*’s substantive NEPA analysis intact, noting that “the difference between the arbitrary and capricious and reasonableness standards is not of great pragmatic consequence; therefore, changing to the former will not require a substantial reworking of long-established NEPA law.” *Id.* (quoting *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 377–78, 77 n.23 (1989)).

necessary, and will be done, prior to site-specific activities in order to fully comply with its NEPA obligations”); *accord San Juan Citizens All. v. BLM*, 326 F. Supp. 3d 1227, 1246 (D.N.M. 2018) (holding that “BLM acted within its discretion to defer consideration of site-specific mitigation measures [for oil and gas development] until the APD stage”); *Oceana v. Bureau of Ocean Energy Mgmt.*, 37 F. Supp. 3d 147, 166–67 (D.D.C. 2014) (at the leasing stage, allowing an agency to defer discussion of “high pressure and high temperature” off-shore oil wells “because these are postlease operational issues that cannot be reasonably predicted at the lease stage without site-specific information”). “That [BLM] may continue to assess impacts as more information becomes available does not indicate that [it] failed to take a ‘hard look’ at the environmental consequences of its proposed action” here. *Wilderness Soc’y v. Salazar*, 603 F. Supp. 2d 52, 62 (D.D.C. 2009).

***c. BLM Must Quantify Drilling-Related GHG Emissions in Aggregate*²¹**

While BLM could not, at the leasing stage, reasonably foresee the environmental impacts of specific drilling projects, it could reasonably foresee and forecast the impacts of oil and gas drilling across the leased parcels as a whole. “In determining what effects are ‘reasonably foreseeable,’ an agency must engage in ‘reasonable forecasting and speculation,’ with *reasonable* being the operative word.” *Sierra Club v. U.S. Dep’t of Energy* (“*Sierra Club I*”),

²¹ This section refers to GHG emissions resulting from oil and gas drilling on the lease parcels, as opposed to emissions resulting from the downstream combustion of that oil and gas. *See* AR34665 (“Oil and gas development activities can generate [GHGs] (during processing).”). Defendants take different positions regarding whether drilling-related GHG emissions are the “direct,” or “indirect” effects of BLM’s leasing decisions. *See* AR34682 (“The administrative act of leasing . . . would not result in any direct GHG emissions.”); *Western Alliance Mem.* at 21 (“BLM reasonably determined that no direct GHG emission or climate change effects would result from the” leasing decisions); *BLM Mem.* at 16 (stating, in its discussion of “direct effects,” that “all nine EAs at issue in this case considered GHG emissions and climate”). But all parties agree that BLM was required to analyze drilling-related emissions.

867 F.3d 189, 198 (D.C. Cir. 2017) (quoting *Del. Riverkeeper*, 753 F.3d at 1310). “The agency ‘need not foresee the unforeseeable, but by the same token neither can it avoid drafting an impact statement simply because describing the environmental effects of and alternatives to particular agency action involves some degree of forecasting.’” *Id.* (quoting *Scientists’ Inst. for Pub. Info., Inc. v. Atomic Energy Comm’n*, 481 F.2d 1079, 1092 (D.C. Cir. 1973)). Plaintiffs contend that GHG emissions from oil and gas drilling were reasonably foreseeable at the leasing stage here, and that BLM could have reasonably quantified and forecasted those emissions. *See* Pls. Mem. at 13–16. They argue that BLM’s failure to quantify GHG emissions was thus contrary to NEPA. *See id.* The Court agrees.

Defendants vigorously assert that quantifying GHG emissions at the leasing stage would be overly speculative,²² but that assertion is belied by an administrative record replete with information on oil and gas development and GHG emissions. The EAs include raw data that would allow BLM to project the pace and scope of oil and gas development on the leased parcels. *See* AR28179 (stating, in the May 2016 High Plains EA, that from 1960 through 2011, “6.5 percent of the [oil and gas] leases sold and 5.3 percent of the acreage was actually developed into production”); AR28217 (calculating the number of active oil and gas wells in the High Plains District as of 2010, and the average annual number of APDs approved by each field office in that District from 2000 through 2010); AR28220 (noting that in 2010, the High Plains District “accounted for approximately 59 percent of the total Federal wells in Wyoming and 66 percent of the total wells”); AR3430–31 (approximating the number of oil and gas wells spudded

²² Defendants admit in the administrative record and in their briefing that *some* level of GHG emissions were reasonably foreseeable at the leasing stage. *See, e.g.*, BLM Mem. at 25; AR3411 (stating that “[s]everal activities that occur in the” relevant field office planning areas “contribute to the phenomena of climate change,” including “emissions of greenhouse gases (GHGs) . . . from fossil fuel development”).

annually in the relevant planning areas). And the EAs demonstrate that BLM could project GHG emissions resulting from that development. *See* AR28220 (calculating the total and per-well GHG emissions from wells in the High Plains District in 2010); AR55016 (calculating an approximate per-well GHG emissions figure);²³ *see also* Western Alliance Mem. at 26–29 (summarizing the data contained in the EAs).

The EAs also incorporate studies quantifying and categorizing GHG emissions more generally. For instance, several EAs cite the Wyoming GHG Inventory, *see* AR3412; AR19503, which quantifies and forecasts the state’s consumption-based GHG emissions through 2020. AR83658–60. Similarly, the May 2015 High Desert EA includes a chart projecting methane emissions from fossil fuel development. AR3435.

Finally, the EAs tier to EISs containing “thousands of pages of quantitative . . . analyses, including additional analys[e]s of GHG emission and climate change impacts.” Western Alliance Mem. at 34. For instance, several EAs tier to the GHG emissions assessments conducted for the Wyoming Greater Sage-Grouse EIS, *see* AR19457; AR28442; AR35284; AR54979, which projects oil and gas development in certain field office planning areas and quantifies and projects GHG emissions for those planning areas. *See* AR86687–87309. This EIS also projects GHG emissions for specific oil and gas well types. *See* AR87264–65, tbl.4-4. Several EAs also tier to the Rawlins Resource Management Plan Air Quality Impact Technical

²³ Plaintiffs dispute the EAs’ per-well GHG emissions estimates in their EA protests, *see* AR12518, and in their briefing, *see* Pls. Reply at 9–10. However, BLM explained in the EAs how it derived this estimate. *See* AR13753–54. And 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). The Court thus declines to wade into this debate. That said, Plaintiffs have raised valid questions regarding whether BLM’s figure is mathematically correct. *See* Pls. Reply at 9 (identifying record evidence suggesting that BLM erroneously interpreted certain data). On remand, BLM must confirm the estimates’ accuracy.

Support Document, which projects short-term and long-term annual GHG emissions and analyzes potential emissions mitigation measures based on those measures' costs, limitations and effectiveness. *See* AR68747–67. And multiple EAs tier to the May 2015 Buffalo EIS, which estimates 2024 GHG emissions in the Buffalo field office planning area for various oil, gas, and coal development alternatives, and compares those estimates to the projected state-wide GHG emissions. *See* ECF No. 63-1 at 16–30;²⁴ *see also* AR78456–604 (Bighorn Basin EIS containing similar projections).

In sum, given the mix of information available to BLM at the leasing stage, NEPA required that BLM reasonably quantify the GHG emissions resulting from oil and gas development on the leased parcels in the aggregate. BLM had at its disposal estimates of (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. With this data, BLM could have reasonably forecasted, by multiple methods, the GHG emissions to be produced by wells on the leased parcels. *See Sierra Club II*, 867 F.3d at 1374 (holding that an agency was required to make “educated assumptions” in quantifying GHG emissions, where the agency possessed information allowing for reasonable forecasting); *Wilderness Workshop v. BLM*, 342 F. Supp. 3d 1145, 1156 (D. Colo. 2018) (“It is arbitrary and capricious for a government agency to use estimates of energy output for one portion of an EIS, but then state that it is too speculative to forecast effects based on those very outputs.”). BLM places the burden of analyzing the data on the public, stating that “[a]n interested citizen would be able to draw a number of useful conclusions” from the information

²⁴ This EIS was “inadvertently omitted from the administrative record” submitted to the Court. BLM Mem. at 9 n.4. It was instead filed in conjunction with BLM’s motion for summary judgment. Plaintiffs do not challenge its authenticity.

provided. BLM Mem. at 27. That may be true, but it did not relieve BLM of its burden to consolidate the available data as part of its “informed decisionmaking,” before issuing the leases and irretrievably committing to drilling on the parcels. *WildEarth Guardians v. Jewell*, 738 F.3d at 303 (quoting *New York v. Nuclear Regulatory Comm’n*, 681 F.3d 471, 476 (D.C. Cir. 2012)).

Defendants’ explanations for why BLM was not required to quantify GHG emissions at the leasing stage are unpersuasive because they do not address the volume of information available to BLM. First, Defendants argue—and the EAs assert—that GHG emissions from oil and gas drilling were too difficult to forecast at the leasing stage, given (1) the mix of economic drivers that could change future demand for oil and gas; (2) possible technological changes; (3) the heterogenous land composition across the leased parcels; and (4) the various methods by which wells may be spaced and drilled. *See* BLM Mem. at 22–24; Western Alliance Mem. at 24–26; AR11957; AR13989; AR18656; AR19524.²⁵ But as discussed above, BLM did in fact have information allowing it to forecast GHG emissions. BLM could have expressed the forecasts as ranges, and it could have explained the uncertainties underlying the forecasts, but it was not entitled to simply throw up its hands and ascribe any effort at quantification to “a crystal ball inquiry.” *Scientists’ Inst. for Pub. Info.*, 481 F.2d at 1092; *see also Sierra Club II*, 867 F.3d

²⁵ For instance, the July 2015 BLM Decision greenlighting the agency’s August 2015 lease sale noted “the substantial uncertainty that exists at the time the BLM offers a lease for sale regarding crucial factors that will affect potential GHG emissions,” including:

well density; geological conditions; development type (vertical, directional, horizontal); hydrocarbon characteristics; equipment to be used . . . ; and potential regulatory changes pertaining to GHGs over the life of the 10-year primary lease term.

AR12516. And the May 2015 High Desert EA noted that “[t]he degree of [environmental] impact will also vary according to the characteristics of the geologic formations from which production occurs.” AR3430.

at 1374 (“We understand that emission estimates would be largely influenced by assumptions rather than direct parameters about the project, but some educated assumptions are inevitable in the NEPA process.” (citing *Scientists’ Inst. for Pub. Info.*, 481 F.2d at 1092)).²⁶

Second, and relatedly, Defendants argue that the EAs’ qualitative discussions of GHG emissions and the possible environmental impacts of those emissions were sufficient under NEPA. *See* Western Alliance Mem. at 30–33; API Mem. at 32. The EAs acknowledge that GHGs from the leased parcels will contribute to climate change, they summarize current local and regional climates, and they discuss how climate change may affect those climates. *See, e.g.*, AR18634–36 (“Temperature in western Wyoming is expected to increase by 0.25 to 0.40 degrees Fahrenheit per decade while temperatures in surrounding locations in Utah, Wyoming, and Colorado are expected to increase by 0.40 to 1.2 degrees Fahrenheit per decade.”); AR34683–85 (listing “potential [climate] changes identified by the EPA that are expected to occur at the regional scale, where the proposed action and its alternatives are to take place”). They also tier to EISs containing similar qualitative analyses. *See, e.g.*, AR76493–96 (discussing the likely impacts of rising temperatures in the Bighorn Basin field office planning area). While “qualitative analyses are acceptable in an [EA] where an agency . . . provides a reasonable ‘justification regarding why more definitive information could not be provided,’” *League of Wilderness Defs.-Blue Mountains Biodiversity Project v. U.S. Forest Serv.*, 689 F.3d 1060, 1076 (9th Cir. 2012) (citations omitted), BLM’s justification here—quantification would be overly speculative and not helpful in conducting informed decisionmaking—was not reasonable given

²⁶ In addition to the points made above, it should not be overlooked that there was enough information at the leasing stage to allow the oil and gas industry to determine that certain leases were sound long-term investments. If the industry had enough information to forecast the leases’ production, BLM should have had enough information to do the same.

the data available to BLM.²⁷ Thus, while BLM’s qualitative discussions of GHG emissions and climate change no doubt contributed to informed decisionmaking, they alone were not enough.

Third, Defendants note that the challenged EAs tier to EISs issued at the land use planning stage that engage in more robust quantitative and qualitative discussions of GHG emissions. *See* Western Alliance Mem. at 33–37. But BLM admits that “the EISs tiered to for the first and second lease sales [at issue] did not discuss GHGs and climate.” BLM Mem. at 16–17. Moreover, GHG analyses conducted in EISs issued at the land use planning stage are necessarily more general than analyses conducted at the leasing stage, and in some cases rely on outdated data and methodologies. BLM at least implicitly acknowledges this in the record, stating that the EISs’ oil and gas development projections were both “too coarse,” AR12518, and too broad, AR28814, to support GHG emissions forecasts at the leasing stage. Under BLM’s own regulations, because the EISs were not “adequate to support” BLM’s leasing stage GHG

²⁷ Defendants also rely on various agency policy statements to support this argument. For instance, Western Alliance cites 2008 and 2011 draft BLM guidance permitting BLM field offices to forgo quantitative analyses of climate change. *See* Western Alliance Mem. at 17 (citing AR56279; AR56464). Western Alliance also cites a 2010 memorandum issued by BLM’s Wyoming state office instructing BLM field offices to qualitatively discuss GHG emissions and climate change. *Id.* at 18 (citing AR81582). But BLM’s draft guidance is not binding or persuasive authority for this Court, *see S. Utah Wilderness All. v. Dabney*, 222 F.3d 819, 829 (10th Cir. 2000) (holding that draft agency guidance that has not been “finalized or adopted by the agency” is afforded no judicial deference), and BLM’s ability to reliably project and analyze GHG emissions has presumably improved in the years since the guidance and memorandum were issued, *cf. City of Dall. v. Hall*, 562 F.3d 712, 720 (5th Cir. 2009) (“Properly analyzing the risks of an action requires an agency to use updated information or data . . .”). Similarly, American Petroleum cites 2014 draft CEQ guidance providing BLM field offices with “discretion, based on their expertise and experience, to determine whether and to what extent to prepare an analysis” of climate change. *See* API Mem. at 13 (citing AR56910). But again, the 2014 CEQ draft guidance was never formalized and is not binding on this Court; BLM at times explicitly disavowed reliance on that guidance, *see* AR34585 (noting that the guidance “has not been formalized” as a NEPA requirement, in response to a WildEarth comment relying on the guidance); and whatever discretion the draft guidance grants, it cannot give BLM field offices discretion to ignore NEPA’s “hard look” requirement. The policy statements cited in Defendants’ briefs and the EAs do not alter the Court’s conclusions.

emissions projections, BLM was required to “provide any [additional] necessary analysis.” 43 C.F.R. § 46.140(b). Accordingly, BLM failed to take a hard look at the environmental impacts of leasing because it failed to quantify and forecast aggregate GHG emissions from oil and gas development.

d. BLM Must Discuss Downstream GHG Emissions in Greater Detail

Plaintiffs also argue that BLM failed to sufficiently consider another potential effect of leasing: the GHG emissions generated by the use of oil and gas pulled from the leased parcels. NEPA requires an agency to evaluate the indirect effects of a proposed action, “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” 40 C.F.R. § 1508.8(b). Again, “[i]n determining what effects are ‘reasonably foreseeable,’ an agency must engage in reasonable forecasting and speculation,” *Sierra Club I*, 867 F.3d at 198 (quoting *Del. Riverkeeper*, 753 F.3d at 1310), but it “need not foresee the unforeseeable.” *Scientists’ Inst. for Pub. Info.*, 481 F.2d at 1092. NEPA thus “‘requires a reasonably close causal relationship between the environmental effect and the alleged cause,’ analogous to proximate causation from tort law.” *Sierra Club I*, 867 F.3d at 198 (quoting *Sierra Club (Freeport)*, 827 F.3d at 47). Building on that standard, in determining whether an agency must consider particular types of information in its NEPA analyses, a court must consider the “usefulness of any new potential information to the decisionmaking process.” *Pub. Citizen*, 541 U.S. at 767 (citation omitted). Thus, just as baseless speculation is unhelpful, so too is information that the agency “lacks [any] power to act on.” *Sierra Club I*, 867 F.3d at 198 (quoting *Pub. Citizen*, 541 U.S. at 768).

Plaintiffs contend that GHG emissions from “downstream” use of oil and gas were an indirect effect of BLM’s leasing decisions that BLM “failed to even acknowledge.” *See* Pls.

Mem. at 20–21.²⁸ Defendants respond that (1) downstream GHG emissions are not an indirect effect of oil and gas leasing, *see* Western Alliance Reply at 12–14, ECF No. 83; API Mem. at 33–36; and (2) even if they are an indirect effect, the EAs’ qualitative discussions of GHG emissions and climate change were sufficient, *see* BLM’s Mem. at 22–27, States Mem. at 16–20. These responses raise a simple, but nuanced, question: at what point does the foreseeable effect of an agency decision become too attenuated to be an “indirect effect” requiring NEPA analysis?

²⁸ BLM argues that Plaintiffs waived this argument “with respect to the first three [lease] sales, all in 2015,” because Plaintiffs failed to “call[] BLM’s attention” to them at the time the sales were authorized. BLM Mem. at 22. BLM is correct that “[a] party will normally forfeit an opportunity to challenge an agency [decision] on a ground that was not first presented to the agency for its initial consideration.” *Guindon v. Pritzker*, 31 F. Supp. 3d 169, 189 (D.D.C. 2014) (quoting *Flaherty v. Bryson*, 850 F. Supp. 2d 38, 57 (D.D.C. 2012)); *accord Pub. Citizen*, 541 U.S. at 764; *Vt. Yankee*, 435 U.S. at 553–54. However, an argument is not forfeited when “the agency has had an opportunity to consider the identical issues presented to the court but which were raised by other parties” in the administrative proceeding. *CTIA-The Wireless Ass’n v. FCC*, 466 F.3d 105, 117 (D.C. Cir. 2006) (quoting *Nat. Res. Def. Council, Inc. v. EPA*, 824 F.2d 1146, 1151 (D.C. Cir. 1987)); *see also Guindon*, 31 F. Supp. 3d at 189. Thus, so long as BLM was aware during its 2015 leasing decisions that certain stakeholders believed it should consider downstream GHG emissions in its environmental analyses, it is irrelevant whether Plaintiffs themselves raised the issue. *See CTIA*, 466 F.3d at 117 (holding that the plaintiff could assert an argument raised by third parties’ comments to the defendant agency); *Wyo. Lodging & Rest. Ass’n v. U.S. Dep’t of Interior*, 398 F. Supp. 2d 1197, 1208, 1210–11 (D. Wyo. 2005) (holding that the plaintiffs could challenge an EA despite not providing “meaningful participation in the public processes” by which the EA was drafted, because non-parties submitted comments addressing the issues raised by the plaintiffs).

Here, the record indicates that BLM was aware, when drafting its EAs for the 2015 lease sales, that downstream GHG emissions would be an issue for stakeholders. In its response to comments to the draft May 2015 EA, BLM acknowledged that it did not attempt to “quantify costs and benefits associated with drilling, possible production or *eventual combustion of fluid minerals from the lease parcel*.” AR3337 (emphasis added). Three commenters, including WildEarth, requested that downstream combustion of oil and gas play a role in BLM’s two August 2015 EAs. *See* AR12093; AR12257–58; AR12329–30 (“The very purpose of oil and gas leasing is the production, and subsequent combustion, of hydrocarbon fossil fuels.”). And WildEarth requested that BLM consider “both emissions produced onsite and those created from the burning of the oil and gas likely to be produced” on the leased parcels, in its November 2015 EA. AR16834. Because BLM had notice of this issue when drafting the 2015 EAs, Plaintiffs may raise it now.

The Supreme Court considered this very question in *Public Citizen*, in which it addressed the NEPA obligations of an agency setting safety standards for Mexican trucks operating in the United States. 541 U.S. at 765. Once the agency established the standards, Mexican trucking companies would be authorized by statute to perform cross-border services. *Id.* at 765–66. Although the relevant statutory provision would be triggered only by the agency’s action, the Court held that the agency, in taking that action, was not required to address the environmental effects of increased Mexican truck traffic. *Id.* at 766–69. Because the agency itself had no statutory authority to *exclude* Mexican trucks from the United States, the agency had no obligation to gather data on the environmental harms of *admitting* them. *Id.*

Applying that principle in more analogous circumstances, the D.C. Circuit recently held that FERC, in authorizing upgrades to natural gas shipping terminals, was not required to address the environmental effects of gas exports flowing through the terminals. *See Sierra Club (Freeport)*, 827 F.3d at 47–48; *Sierra Club v. FERC*, 827 F.3d 59, 68–69 (D.C. Cir. 2016); *EarthReports*, 828 F.3d at 955–56. Those exports could be authorized only by a different agency, and FERC could not refuse to approve a terminal upgrade based on the effects of a decision “over which [it] [had] no regulatory authority.” *Sierra Club (Freeport)*, 827 F.3d at 48. The touchstone of these cases is that an agency need not consider environmental effects that cannot influence its decision. *See Sierra Club II*, 867 F.3d at 1373.

Even under the heightened causation standard established by *Public Citizen* and *Sierra Club (Freeport)*, downstream GHG emissions from fossil fuel use are an indirect effect of BLM’s oil and gas leasing program at issue here. The D.C. Circuit reached the same conclusion under similar circumstances in *Sierra Club II*, a case debated heavily by the parties. *Sierra Club II* required the Circuit to address whether FERC was obligated to consider, in an EA evaluating a

proposed natural gas pipeline, the GHG emissions from the use of the gas transported by that pipeline. 867 F.3d at 1371. First, the Circuit noted that a reasonably foreseeable effect of authorizing a pipeline to transport natural gas is the burning of that gas and the generation of GHGs. *Id.* at 1371–72. Second, the Circuit concluded that FERC could decline to approve the pipeline “on the ground that [it] would be too harmful to the environment.” *Id.* at 1373. Given those factors, the Circuit held that FERC’s pipeline authorization was a “legally relevant cause” of downstream GHG emissions from gas transported by the pipeline, and NEPA required FERC’s EA to consider those emissions. *Id.* (quoting *Sierra Club (Freeport)*, 827 F.3d at 47).

Sierra Club II’s logic applies equally here to the Wyoming Lease Sales. Producing oil and gas for consumption “is the [leasing] project’s entire purpose.” *Sierra Club II*, 867 F.3d at 1372. Downstream use of oil and gas, and the resulting GHG emissions, are thus reasonably foreseeable effects of oil and gas leasing. And just as FERC could decline to approve a pipeline on environmental grounds, BLM could decline to sell the oil and gas leases at issue here if the environmental impact of those leases—including use of the oil and gas produced—would not be in the public’s long-term interest. *See* 30 U.S.C. § 226(a) (holding the Secretary responsible for oil and gas leasing); 43 U.S.C. § 1732(a) (stating that the Secretary shall manage public lands “under principles of multiple use and sustained yield”); *id.* § 1712(c)(7) (requiring the Secretary to “weigh long-term benefits to the public against short-term benefits” when developing land use plans).²⁹ Thus, the lease sales are a “legally relevant cause” of downstream GHG emissions, and BLM was required to consider those emissions as indirect effects of oil and gas leasing. *See*

²⁹ Defendants’ supplemental briefing indicates that BLM cannot categorically halt all oil and gas leasing as a matter of policy. *See* API Suppl. Br. at 2–4. Defendants do not argue, however, that BLM cannot withhold certain oil and gas leases based on the environmental impacts of those specific leases. The EAs themselves anticipate this possibility; they discuss “No Action” alternatives in which BLM does not offer any parcels for sale. *See* AR18593.

Wilderness Workshop, 342 F. Supp. 3d at 1155 (“[C]ombustion emissions are an indirect effect of an agency’s decision to extract . . . natural resources.”); *San Juan Citizens All.*, 326 F. Supp. 3d at 1242–43 (same, collecting cases). Defendants’ reliance on *Public Citizen*, *Sierra Club (Freeport)*, and their progeny is unpersuasive because unlike the agencies in those cases, here BLM could act on information regarding downstream GHG emissions.

Although it is clear that BLM was obligated to discuss downstream GHG emissions in its EAs, the level of detail required in those discussions is less clear. Plaintiffs imply that BLM should have quantified and forecasted downstream emissions in the same manner that it should have quantified and forecasted emissions from drilling itself. Pls. Mem. at 21; Pls. Reply at 11–13, ECF No. 76. However, several of the cases that Plaintiffs cite in support of that argument are distinguishable on their facts. They involved applications to expand existing coal mining operations, where each operation existed for the “sole purpose” of supplying a nearby power plant. See *Dine Citizens Against Ruining Our Env’t (“Dine CARE”) v. U.S. Office of Surface Mining Reclamation and Enf’t (“OSMRE”)*, 82 F. Supp. 3d 1201, 1212–14 (D. Colo. 2015); *WildEarth Guardians v. OSMRE*, 104 F. Supp. 3d 1208, 1230 (D. Colo. 2015). Under those circumstances, where the mine and the power plant were “interdependent,” it was “possible to predict with certainty the combustion-related environmental impacts” of the downstream emissions, and NEPA required such an analysis at the application stage. *Dine CARE*, 82 F. Supp. 3d at 1212–13; *WildEarth Guardians*, 104 F. Supp. 3d at 1230. Because the coal had a single downstream use, its downstream environmental impact could be estimated to a greater degree of certainty than the downstream impact of oil and gas from the Wyoming Leases sold on the open market.

Defendants, unsurprisingly, argue that the EAs' current discussions are sufficient under NEPA. The EAs acknowledge that oil and gas combustion increases GHG emissions and contributes to climate change. *See* AR3396; AR12369; AR28195. Several EAs also reference the Wyoming GHG Inventory, which projects consumption-based GHG emissions in the state. *See* AR11959–60; AR28219. Much like their approach to GHG emissions from oil and gas drilling, Defendants claim that uncertainty regarding technology, well characteristics, market forces, and regulation would render any further quantification of downstream GHG emissions unhelpful at the leasing stage. *See* BLM Mem. at 22–23. BLM provided a similar explanation to WildEarth at various points in the administrative proceedings:

[H]ow crude oil will be used, whether any or all of the oil will be refined for plastics or other products that will not be burned; the possible mix of ultimate uses with disparate carbon emissions (e.g. auto fuel, bunker oil, diesel, kerosene); and the market forces that November [sic] replace lost BLM production with production from other sources are all uncertain. Therefore, the greenhouse gas emissions that [may] ultimately result from the consumption of products derived from the crude oil generated on BLM lands would not be reasonably foreseeable

AR19283–84; *see also* AR12518.

Defendants rely primarily on *Sierra Club I* in support of their argument that BLM need not conduct any further analyses of downstream GHG emissions. But like Plaintiffs' reliance on the coal mining cases, Defendants' reliance on *Sierra Club I* suffers from a clear difference in the agency's ability to forecast the indirect effect at issue. *Sierra Club I* involved the Department of Energy's NEPA analysis of its decision to approve natural gas exports. 867 F.3d at 195. Authorizing exports would trigger increased domestic natural gas production, and the agency could consider that indirect effect in its decisionmaking. *Id.* at 196–97. Notwithstanding this causal connection, the D.C. Circuit held that the agency was not required to quantify the domestic production increase or its environmental effects at the local level. *Id.* at 198–99. Quantification would require the agency to speculate as to where in the country increased natural

gas production would occur, based on local geology, regulations, land use patterns, and the development of supporting infrastructure. *Id.* at 199. Thus, “an economic model estimating localized impacts would be far too speculative to be useful.” *Id.* (citation omitted). While *Sierra Club I* illustrates that an agency need not “foresee the unforeseeable,” *Scientists’ Inst. for Pub. Info.*, 481 F.2d at 1092, projecting nationwide natural gas production and its localized effects is a far cry from projecting the consumption of a reasonably forecastable amount of oil and gas.

The Court lands in the middle of the parties’ arguments. The EAs’ sparse discussions of downstream GHG emissions are insufficient under NEPA, given BLM’s ability to forecast oil and gas production and given that the entire purpose of oil and gas leasing is to generate a greater supply of oil and gas for downstream use. That said, the Court will not *require* that BLM quantify downstream emissions. *See Sierra Club II*, 867 F.3d at 1374 (holding that that “quantification of [GHG emissions] is [not] required *every* time those emissions are an indirect effect of an agency action,” so long as the agency provides “a satisfactory explanation for why” quantification is not useful); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 550 (8th Cir. 2003) (holding that an agency violated NEPA when it “completely ignored the effects of increased coal consumption” on air quality, but that the agency was not required to quantify those effects in detail); *Dine CARE*, 82 F. Supp. 3d at 1213 (noting that in “a scenario in which a coal mine markets its coal freely to multiple buyers, each of whom uses that coal in different applications under different constraints,” an agency need not necessarily quantify downstream emissions).

On remand, BLM must strengthen its discussions of the environmental effects of downstream oil and gas use. It must also consider whether quantifying GHG emissions from that use is reasonably possible, including through the use of the emissions calculator suggested by

Plaintiffs. *See* Pls. Mem. at 21.³⁰ If BLM decides that quantification is not possible or helpful, it must thoroughly explain that decision. And, if BLM receives estimates from outside parties based on the use of such calculators, it must assess those estimates and explain why they are unreliable or otherwise inappropriate to use in its decisionmaking.

e. BLM Must Discuss the Cumulative Effects of GHG Emissions in Greater Detail

Finally, Plaintiffs contend that “BLM failed to provide any quantified or detailed information on cumulative GHG impacts . . . which is far below the threshold of meaningful analysis this Circuit demands.” Pls. Mem. at 22 (citations and internal quotation marks omitted). “NEPA’s implementing regulations require an agency to evaluate ‘cumulative impacts’ along with the direct and indirect impacts of a proposed action.” *TOMAC*, 433 F.3d at 864 (citing *Grand Canyon Trust 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 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; *see also id.* § 1508.25(c) (stating that actions should be considered together when they have significant

³⁰ The Court does not mandate the calculator’s use, just its consideration. *Cf. Or. Envtl. Council v. Kunzman*, 817 F.2d 484, 496 (9th Cir. 1987) (“NEPA does not require that we decide whether an [EIS] is based on the best scientific methodology available, nor does NEPA require us to resolve disagreements among various scientists as to methodology.” (quoting *Friends of Endangered Species, Inc. v. Jantzen*, 760 F.2d 976, 986 (9th Cir. 1985))); *Cape Hatteras Access Pres. All. v. U.S. Dep’t of Interior*, 731 F. Supp. 2d 15, 35 (D.D.C. 2010) (holding that “NEPA allows the agency the discretion of what methodology to use and does not require the use of the best scientific methodology available”); *City of Williams v. Dombeck*, 151 F. Supp. 2d 9, 23 (D.D.C. 2001) (holding that the Forest Service did not violate NEPA by failing to apply the plaintiffs’ preferred methodology, where the plaintiffs did “not demonstrate[] that the Forest Service’s methodology violated agency regulations or were somehow beyond agency discretion”).

combined impacts). In the D.C. Circuit, a proper NEPA cumulative impact analysis involves a discussion of:

(1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, present, and proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the individual impacts are allowed to accumulate.

Grand Canyon Trust, 290 F.3d at 345.

Plaintiffs mount a two-pronged challenge to the EAs' cumulative impacts analyses. First, Plaintiffs claim that BLM failed to discuss the projected GHG emissions from the leased parcels, “added to other past, present, and reasonably foreseeable BLM-managed oil and gas emissions on a regional, national, and global scale,” as NEPA required. Pls. Mem. at 23–24. Second, Plaintiffs claim that after quantifying GHG emissions, BLM should have applied a tool to quantify the emissions' cumulative impact on climate change. *Id.* at 26. Plaintiffs are correct in part. BLM's failure to quantify GHG emissions rendered the EAs' cumulative impact analyses inadequate, but BLM was not required to apply Plaintiffs' proposed climate change protocols.

i. BLM's Cumulative Effect Analyses Lacked Adequate GHG Quantification

Plaintiffs contend that NEPA required the challenged EAs to compare GHG emissions from the leased parcels to emissions from other BLM-managed projects in the region and across the country. *Id.* at 23–24. Thus, according to Plaintiffs, BLM's refusal to quantify GHG emissions rendered the EAs' cumulative impacts analyses inadequate. The Court agrees.

The EAs and Defendants' briefs acknowledge the cumulative, global nature of climate change. For instance, the November 2015 High Desert EA states that selling leases “may contribute to the effects of climate change through GHG emissions.” AR19551. It also states that climate change occurs at the “global,” “regional,” and “local” scales. AR19528; *see also*

BLM Mem. at 28 (“GHG emissions and their effect on the climate . . . are necessarily cumulative, and necessarily global in nature.”). It lists the number of active wells in the district. AR19551; *see also* AR13763 (comparing the number of active wells in the High Plains district to the number of active wells in Wyoming). Finally, it states that “[t]he average number of oil and gas wells drilled annually in the [district] and probable GHG emission levels, when compared to the total GHG emission estimates from the total number of federal oil and gas wells in the state, represent an incremental contribution to the total regional and global GHG emission levels.” AR19552; *see also* AR13763; AR28503. This conclusion, however, is not supported by any data because BLM declined to quantify the “probable GHG emission levels” arising from the leased parcels. Each challenged EA suffers from this deficiency.

True, the EAs tiered to EISs conducted at the land use planning stages that, at least in some cases, quantify and forecast GHG emissions at the regional level and compare those forecasts to state and national forecasts. *See* AR19552 (citing the Wyoming Greater Sage-Grouse EIS). However, the lease sales included parcels from multiple planning areas covered by different resource management plans, some of which do not quantify and forecast GHG emissions. *See* AR28503 (tiering to the 1988 Grass Creek Resource Management Plan and the 1998 Washakie Resource Management Plan in its “Cumulative Impact Analysis” discussion). Without access to a data-driven comparison of GHG emissions from the leased parcels to regional and national GHG emissions, the public and agency decisionmakers had no context for the EAs’ conclusions that GHG emissions from the leased parcels would represent only an “incremental” contribution to climate change. Likewise, they could not conceptualize the extent to which the lease sales would contribute to the local, regional, and global climate change

discussed qualitatively in the EAs and tiered EISs. *See, e.g.*, AR3411–12; AR19552–53; AR76493–96.

BLM protests that under Plaintiffs’ view, it “would be required to identify any past, present, or reasonably foreseeable GHG-emitting projects *worldwide*,” an “impossible” scope of analysis. BLM Mem. at 28. BLM is correct that NEPA does not require the impossible. It does, however, require 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. To 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. Likewise, on remand, if BLM may reasonably quantify downstream GHG emissions, it must place those emissions in the context of local and regional oil and gas consumption. These quantitative analyses, combined with a robust qualitative discussion of local, regional, and national climate change, would satisfy NEPA’s hard look requirement. *See WildEarth Guardians v. Jewell*, 738 F.3d at 310 (holding that BLM properly considered a proposed coal mine’s cumulative climate change impact where it “evaluated GHG emissions as a percentage of state—and nation-wide emissions.”); *WildEarth Guardians v. BLM*, 8 F. Supp. 3d 17, 35–36 (D.D.C. 2014) (holding that BLM sufficiently examined the cumulative impact of a proposed lease sale where it quantified the GHG emissions from the leased parcels and compared them to state-wide and nation-wide emissions). Although BLM may determine that each lease sale individually has a de minimis impact on climate change, 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.

ii. BLM's Choice of Methodology was Appropriate

Plaintiffs also offer that BLM could have used certain protocols to quantify the climate change impact of GHG emissions from the leased parcels. More specifically, Plaintiffs argue that by not utilizing the “social cost of carbon” and the “global carbon budget,” BLM “arbitrarily dismissed the need to analyze cumulative GHG impacts.” Pls. Mem. at 26. Plaintiffs are correct that NEPA required BLM to undertake a more robust discussion of GHG emissions at the leasing stage. Plaintiffs’ contentions regarding their suggested protocols, however, are of the flyspecking variety. BLM’s decision to forgo the protocols’ use does not rise to the level of a NEPA violation.

The social cost of carbon protocol monetizes GHG emissions. *See* Pls. Mem at 32. Plaintiffs claim that BLM was required to utilize this protocol because the agency “include[d] the economic benefits of oil and gas leasing and production in its leasing decisions.” Pls. Mem. at 32 (citing AR3425; AR13737; AR19518; AR28459; AR35335–36). According to Plaintiffs, it was arbitrary and capricious for BLM to discuss the economic benefits of oil and gas drilling without quantifying their economic costs.

Although the EAs briefly mention the economic benefits of oil and gas drilling, the sparseness of those discussions differentiates this case from *High Country Conservation Advocates v. United States Forest Service*, on which Plaintiffs rely. The *High Country* court held that it was arbitrary for BLM to forgo using the social cost of carbon when the agency’s challenged EIS stated that “nearly a billion dollars in lost revenues, royalties, payroll and local payment for goods and services would be foregone by” declining to approve a proposed coal mine. 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014). BLM’s decision was particularly inappropriate because the agency had included the social cost of carbon in a draft EIS, and the

final draft contained the “factually inaccurate justification” that no tool existed to quantify the climate change impact resulting from the mine’s approval. *Id.*

The EIS at issue in *High Country* suffered from deficiencies not present in the EAs challenged here. First, while the *High Country* EIS touted its “economic objectives” and the “billion dollars” to be gained by approving the coal mine, here, the EAs’ discussions of economic benefits were abbreviated and involved little quantification. *See* AR18650–51 (listing profits from previous lease sales and calculating that the November 2015 sale would yield \$152,364); AR28459 (stating that “the State of Wyoming receives a percentage of the Federal oil and gas lease sale receipts,” without calculating the dollar value of that percentage). Second, BLM explained here that “because of the speculative nature of development [it did] not attempt to quantify costs and benefits associated with drilling, possible production or eventual combustion of fluid minerals.” AR2827. The Court does not agree that the EAs’ cursory discussion of the economic benefits of oil and gas development obligated BLM to specifically monetize climate change at the leasing stage. *See* 40 C.F.R. § 1502.23 (“[T]he weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis . . .”).

Also, unlike the misleading explanation flagged by the *High Country* court, BLM here provided reasoned explanations for why it declined to use the social cost of carbon protocol. *See, e.g.* AR8920–23; AR12993–98. BLM explained that in the context of each lease sale, “calculating the [social cost of carbon] from CO₂ emissions from the combustion of an unknown quantity of produced oil and gas would be highly speculative,” AR2827, and that the range provided by WildEarth’s comments and protests “represents a 4,000% difference in potential [social cost of carbon] estimates.” AR12520; *see also* AR1986 (estimating that “[u]sing 2015

social cost of carbon values, the costs to society of the federal fossil fuel leasing program is between \$18 and \$177 billion per year”). BLM reasonably determined that a 4,000 percent range in potential costs would be “less than helpful in informing the public and the decision-maker.” AR12520; *see also* AR19285 (“While we agree that some level of uncertainty is unavoidable in assessing impacts from complex environmental systems, in this case that uncertainty is compounded by basing any potential [social cost of carbon] estimates on speculative GHG emissions.”).

That reasoned determination is entitled to deference. *See EarthReports*, 828 F.3d at 956 (deferring to the agency’s decision to not utilize the social cost of carbon given, among other reasons, the methodology’s “significant variation in output”). And Plaintiffs have identified no case law—outside of situations in which an agency quantified the economic benefits of an action—suggesting that BLM violates NEPA when it fails to include the social cost of carbon in an EIS or an EA. *See Wilderness Workshop*, 342 f. Supp. 3d at 1159–60 (“[BLM] chose not to [apply the social cost of carbon], provided sufficient support in the record to show this, and thus satisfied NEPA in this respect.”); *W. Org. of Res. Councils v. BLM*, No. 16-21-GF-BMM, 2018 WL 1475470, at *14 (D. Mont. Mar. 26, 2018) (“[D]espite the benefits of the social cost of carbon protocol, NEPA does not require a cost-benefit analysis under these circumstances.”).

Moreover, while Plaintiffs make a policy argument for the use of the global carbon budget, Pls. Mem. at 27–30, they cite no case law or statute suggesting that BLM must implement that protocol at the leasing stage. While an agency must apply a sufficient level of rigor to its NEPA analyses, it is within “the expertise and discretion of the agency” to determine the methodologies underlying those analyses. *Sierra Club v. U.S. Dep’t of Transp.*, 753 F.2d 120, 128 (D.C. Cir. 1985). Accordingly, BLM did not act arbitrarily and capriciously in not

utilizing the global carbon budget. “[B]ecause current climate science is uncertain (and does not allow for specific linkage between particular GHG emissions and particular climate impacts) . . . evaluating GHG emissions as a percentage of state-wide and nation-wide emissions . . . is a permissible and adequate approach.” *WildEarth Guardians v. BLM*, 8 F. Supp. 3d at 35 (citing *WildEarth Guardians v. Jewell*, 738 F.3d at 309); *see also Barnes v. U.S. Dep’t of Transp.*, 655 F.3d 1124, 1139 (9th Cir. 2011) (“the effect of [GHGs] on climate is a *global* problem[,] a discussion in terms of percentages is therefore adequate for [GHG] effects”) (citation omitted). While BLM could have utilized one of Plaintiffs’ suggested protocols, and there may have been good policy reasons to do so, its failure to do so here based on the record presented did not run afoul of NEPA’s “rule of reason.”³¹ *Sierra Club II*, 867 F.3d at 1368.³²

2. BLM’s FONSI’s Were Inadequate

Plaintiffs’ second core argument is that the FONSI’s accompanying the challenged EAs were deficient, as were BLM’s decisions to not issue EISs. As a reminder, an agency must draft and issue an EIS—a robust environmental analysis—for every major federal action that will “significantly affect” the quality of the human environment. 42 U.S.C. § 4332(C). To determine if an action will significantly affect the environment, an agency generates an EA. 40 C.F.R. § 1508.9. And if the agency concludes, based on the EA, that it need not prepare an EIS, the

³¹ That said, on remand, BLM must reassess whether the social cost of carbon or another methodology for quantifying climate change may contribute to informed decisionmaking. “Accurate scientific analysis” is “essential to implementing NEPA.” 40 C.F.R. § 1500.1(b). And NEPA requires an agency to ensure “scientific integrity” in its environmental assessments. *Id.* § 1502.24. BLM may not forgo using the social cost of carbon simply because courts have thus far been reluctant to mandate it. Given that the Department of Energy and other agencies consider the social cost of carbon reliable enough to support rulemakings, *see Zero Zone, Inc. v. U.S. Dep’t of Energy*, 832 F.3d 654, 677 (7th Cir. 2016), the protocol may one day soon be a necessary component of NEPA analyses.

³² The Court does not determine here whether climate change quantification is appropriate or required at the drilling stage.

agency must issue a FONSI explaining its reasoning. *Id.* § 1508.13. BLM decided not to prepare EISs for the Wyoming Lease Sales, and instead issued EAs and FONSI. ³³

A court’s role in “reviewing an agency’s decision not to prepare an EIS is a limited one, designed primarily to ensure that no arguably significant consequences have been ignored.”

Mayo v. Reynolds, 875 F.3d 11, 20 (D.C. Cir. 2017). 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) (alteration in original)

(quoting *TOMAC*, 661 433 F.3d at 861). “The D.C. Circuit makes clear that although the phrase ‘convincing case’ (found in factor three above) has appeared in the case law, 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*, 2019 WL 983691 (D.C. Cir. Mar. 1, 2019).

Environmental significance is a function of a proposed agency action’s “context and intensity.” 40 C.F.R. § 1508.27. “Context” requires that the action be “analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests,

³³ Each FONSI incorporated the environmental analysis contained in its corresponding EA. *See* AR34719; *see also* 40 C.F.R. § 1508.13 (stating that if an EA is included with a FONSI, the FONSI “need not repeat any of the discussion in the [EA] but may incorporate it by reference”). The FONSI did not engage in independent analyses, aside from brief discussions of certain criteria mandated by agency regulations. *See* AR34720 (citing 40 C.F.R. § 1508.27)). Thus, the EAs’ flaws discussed above also apply to the FONSI.

and the locality.” *Id.* § 1508.27(a). And “intensity” refers “to the severity of impact.” *Id.* § 1508.27(b). Among other factors, CEQ regulations identify the following “significance factors” that should be considered in evaluating intensity:

1. The degree to which the effects on the quality of the human environment are likely to be highly controversial.
2. The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.
3. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

Id. § 1508.27(b)(4), (5), (7).

“Implicating any one of [those] factors may be sufficient to require development of an EIS.” *Nat’l Parks Conservation Ass’n v. Semonite*, No. 18-5179, 2019 WL 983691, at *5 (D.C. Cir. Mar. 1, 2019) (citing *Grand Canyon Trust*, 290 F.3d at 347). Plaintiffs contend that the Wyoming Lease Sales implicated all three. *Pls. Mem.* at 35–36 (citing 40 C.F.R. § 1508.27(b)(4), (5), (7)).³⁴ In other words, Plaintiffs argue that the lease sales’ effects were highly controversial, uncertain, and cumulatively significant, and that BLM failed to provide a convincing case to the contrary. As discussed above, BLM’s EAs did not take a sufficient hard look at the cumulative effects of GHG emissions from the leased parcels. The Court thus cannot determine whether those effects were so significant that they warranted the creation of EISs. The other two significance factors cited by Plaintiffs do not, standing alone, require BLM to generate EISs here.

³⁴ Plaintiffs concede that the challenged EAs properly identified climate change as a relevant environmental concern. *Pls. Mem.* at 35.

a. The Court Cannot Conclude that the Effects of Leasing are Highly Controversial

First, Plaintiffs claim that the parties' disputes regarding the size of the lease sales' environmental effects, and BLM's refusal to apply Plaintiffs' suggested climate change protocols, rendered the lease sales' effects highly controversial. 40 C.F.R. § 1508.27(b)(4). Controversy in this context is not measured merely by the intensity of the opposition. As the D.C. Circuit recently noted, "'certainly something more is required' for a highly controversial finding 'besides the fact that some people may be highly agitated and be willing to go to court over the matter.'" *Nat'l Parks Conservation Ass'n*, 2019 WL 983691, at *6 (emphasis in original) (quoting *Fund for Animals v. Frizzel*, 530 F.2d 982, 988 n.15 (D.C. Cir. 1975) (per curiam)). Rather, an action is highly controversial only if there is, at minimum, "a substantial dispute . . . as to the size, nature, or effect of the major federal action." *Town of Cave Creek*, 325 F.3d at 331 (quoting *Found. for N. Am. Wild Sheep v. U.S. Dep't of Agric.*, 681 F.2d 1172, 1182 (9th Cir. 1982)). Courts in this jurisdiction suggest that even a substantial dispute may not suffice; there must be "scientific or other evidence that reveals flaws in the methods or data relied upon by the agency in reaching its conclusions." *Nat'l Parks Conservation Ass'n v. United States*, 177 F. Supp. 3d 1, 33 (D.D.C. 2016) (citations omitted); *see also Sierra Club v. Van Antwerp*, 719 F. Supp. 2d 58, 67–68 (D.D.C. 2010) ("While declarations were submitted to the Corps from numerous experts who claimed that [the development project] will have significant adverse impacts on Cypress Creek and its wetlands, these declarations alone fail to rise to the level of 'controversy' under NEPA."), *aff'd in part, rev'd in part on other grounds*, 661 F.3d 1147 (D.C. Cir. 2011), *as amended*, (Jan. 30, 2012); *Fund for Animals v. Norton*, 281 F. Supp. 2d 209, 235 (D.D.C. 2003) ("While plaintiffs have identified serious gaps in defendants' assessment of the local effects of the proposed action, they do not appear to have

identified any scientific controversy *per se* as to the extent of the effects.”); *cf. Humane Soc’y of U.S. v. Dep’t of Commerce*, 432 F. Supp. 2d 4, 19–20 (D.D.C. 2006) (holding that the potential environmental effects of an agency decision were highly controversial where the defendant agency’s own leadership expressed “an appreciation of the degree of controversy surrounding” the effects).

Applying these principles, the Court cannot conclude at this point that the Wyoming Lease Sales were highly controversial. First, although Plaintiffs have shown that BLM failed to sufficiently analyze the environmental effects of its leasing decisions, they have not shown that the magnitude of those effects is significantly higher than BLM represented. Presumably, BLM’s environmental analyses on remand will more fully illustrate that magnitude. Second, Plaintiffs have not identified record evidence suggesting that BLM faced opposition from other government agencies with stakes or “special expertise” in the leasing decisions; a factor that weighs heavily in many decisions finding agency actions to be highly controversial. *See Nat’l Parks Conservation Ass’n*, 2019 WL 983691, at *7 (holding an agency project to be highly controversial where the project faced “repeated criticism from many agencies who serve as stewards of the exact resources at issue, not to mention consultants and organizations with on-point expertise”); *N. Am. Wild Sheep*, 681 F.2d at 1182 (holding that criticism from conservationists, biologists, two state agencies, and “other knowledgeable individuals” represented “precisely the type of ‘controversial’ action for which an EIS must be prepared”); *Friends of the Earth, Inc. v. U.S. Army Corps of Eng’rs*, 109 F. Supp. 2d 30, 43 (D.D.C. 2000) (holding an agency project to be “genuinely and extremely controversial” where three federal agencies, one state agency, and the public “all disputed the Corps evaluation,” and “the Corps’ own leadership recognized that” the project at issue “engendered considerable controversy”).

And third, although WildEarth and other organizations raised concerns about the climate change methodologies—or lack thereof—employed by BLM, *see* AR12984–88, BLM considered Plaintiffs’ suggested methodologies and explained why it did not use them. Those explanations were not flawed.

Ultimately, BLM “is entrusted with the responsibility of considering the various modes of scientific evaluation and theory and choosing the one appropriate for the given circumstances.” *Sierra Club v. U.S. Dep’t of Transp.*, 753 F.2d at 129. It was not “required to accept every possible method of . . . analyzing data” here, *id.*, and it was not required to “follow [WildEarth’s] comments slavishly—it just [had] to take them seriously,” *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 201 (D.C. Cir. 1991). Because BLM “considered the various methodological challenges raised by the interested parties and addressed their concerns appropriately,” and because Plaintiffs did not otherwise identify serious flaws in BLM’s methods, the Wyoming Lease Sales’ environmental effects were not “highly controversial.” *Nat’l Parks Conservation Ass’n*, 311 F. Supp. 3d at 365.

b. The Effects of Leasing are Not Highly Uncertain

Second, Plaintiffs claim that the Wyoming Lease Sales’ effects were “highly uncertain or involve[d] unique or unknown risks,” such that an EIS was necessary. 40 C.F.R. § 1508.27(b)(5). As Defendants point out, case law, including the case cited by Plaintiffs, suggest that this factor is implicated when an action involves new science, or when an action’s impact on a species is unknown. *See, e.g., Anderson v. Evans*, 371 F.3d 475, 492 (9th Cir. 2004) (holding that the impact of first ever whale hunt on local whale population and ecosystem was highly uncertain); *Found. On Econ. Trends v. Heckler*, 756 F.2d 143, 153 (D.C. Cir. 1985) (holding that the impact of dispersing genetically altered organisms was highly uncertain); *Humane Soc’y of*

U.S. v. U.S. Dep't of Commerce, 432 F. Supp. 2d 4, 8–9, 20–21 (D.D.C. 2006) (holding that the impact of first ever “harassing” studies of endangered sea lion populations was highly uncertain).

Those circumstances are not present here. Defendants correctly note that “oil and gas leasing is commonplace in the mountain west,” and that the “uncertainties Plaintiffs point to concerning *quantity* of GHG emissions . . . do not establish uncertainty as to the *effect* of GHG emissions.” BLM Mem. at 32. The parties agree that oil and gas development on the Wyoming Leases will produce GHG emissions. They agree that GHG emissions contribute to climate change. Thus, while the parties debate the usefulness and accuracy of tools by which GHG emissions and their precise environmental impacts may be measured, the risks of GHG emissions are not “unique or unknown,” and the EAs adequately summarized those risks.

* * *

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. By asserting that these crucial environmental analyses are overly speculative at the leasing stage and more appropriate for later, site-specific assessments, BLM risks relegating the analyses to the “tyranny of small decisions.” *Kern v. BLM*, 284 F.3d 1062, 1078 (9th Cir. 2002) (quoting CEQ, *Considering Cumulative Effects Under NEPA* at 1 (Jan. 1997), https://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDont/G-CEQ-ConsidCumulEffects.pdf); *see also* 40 C.F.R. § 1508.27(b)(7) (“Significance cannot be avoided by . . . breaking [an action] down into small component parts.”). NEPA is intended to avoid that

outcome. Given the national, cumulative nature of climate change, considering each individual drilling project in a vacuum deprives the agency and the public of the context necessary to evaluate oil and gas drilling on federal land before irretrievably committing to that drilling. *See Grand Canyon Trust*, 290 F.3d at 342.

Simply put, NEPA required more robust analyses of GHG emissions from oil and gas drilling and downstream use. Accordingly, BLM's EAs and FONSI's for the Wyoming Lease Sales are inadequate. That said, the challenged EAs were not—at least at the time they were issued—required to apply the social cost of carbon or global carbon budget protocols to quantify the climate change impact of GHG emissions. Given these conclusions, the Court must determine how to proceed.

3. Remedy

Plaintiffs ask this Court to, among other relief, “void the issued leases, and suspend and enjoin BLM from any further leasing authorizations pending BLM’s full compliance with NEPA.” Pls. Mem. at 38. Plaintiffs cite case law in this jurisdiction indicating that “vacating a rule or action promulgated in violation of NEPA is the standard remedy.” *Humane Soc’y of U.S. v. Johanns*, 520 F. Supp. 2d 8, 37 (D.D.C. 2007) (citing *Am. Bioscience, Inc. v. Thompson*, 269 F.3d 1077, 1084 (D.C. Cir. 2001)). However, this Court has discretion to leave the Wyoming Leases in place while BLM attempts to cure the deficiencies raised. *See Oglala Sioux Tribe v. U.S. Nuclear Regulatory Comm’n*, 896 F.3d 520, 538 (D.C. Cir. 2018). Ultimately, “[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.’” *Allied-Signal v. U.S. Nuclear Regulatory Comm’n*, 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)).

Allied-Signal dictates that remand is most appropriate here. Plaintiffs challenge only one aspect of nine lease sales that otherwise complied with NEPA. BLM’s NEPA violation consists merely of a failure to fully discuss the environmental effects of those lease sales; nothing in the record indicates that on remand the agency will necessarily fail to justify its decisions to issue EAs and FONSI. Thus “though the disruptive consequences of vacatur might not be great,³⁵ the probability that [BLM] will be able to justify retaining [its prior leasing decisions] is sufficiently high that vacatur . . . is not appropriate.” *Fox Television Stations, Inc. v. FCC*, 280 F.3d 1027, 1049 (D.C. Cir. 2002) (citing *U.S. Telecom Ass’n v. FBI*, 276 F.3d 620, 627 (D.C.

³⁵ Defendants argue that vacatur here would significantly disrupt both public and private economic interests. See API Mem. at 43–44. Oil and gas leasing generates revenues for state and local governments “through the bonus bids paid at lease auctions and annual rents collected on leased parcels.” *Id.* at 43 (quoting AR3425). And, in reliance on BLM’s leasing decisions, private oil and gas companies bought at least some of the Wyoming Leases and have spent time and money exploring those leases. *Id.* at 44; Western Alliance Reply at 20. If the Court were to vacate the Wyoming Leases, Wyoming and its local governments, according to API, would be deprived of revenue streams from resource development, and the private leaseholders would “lose the opportunity to seek BLM approval to explore for, and eventually produce, valuable mineral deposits.” API Mem. at 43–44. Defendants, however, provide no empirical bases for their assertions that vacatur would cause significant economic disruption. And as another court in this jurisdiction recently stated, the risk of economic harm from procedural delay and industrial inconvenience “is the nature of doing business, especially in an area fraught with bureaucracy and litigation.” *Standing Rock*, 282 F. Supp. 3d at 104. The Court thus does not deny vacatur here on the basis of alleged economic harm alone.

Cir. 2002)). Instead, the Court remands the EAs and FONSIIs to BLM so that the agency may address the deficiencies identified by the Court above. 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)); *Standing Rock*, 282 F. Supp. 3d at 109 (remanding a deficient EA to the agency without vacating its decision “[i]n light of the ‘serious possibility’ that the [agency] [would] be able to substantiate its prior conclusions”).

That said, BLM’s “lack of a reasoned explanation is 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 (quoting *AARP v. EEOC*, 267 F. Supp. 3d 14, 37 (D.D.C. 2017)). To guard against the possibility that BLM did not choose correctly the first time around, the Court enjoins BLM from issuing any APDs for the Wyoming Leases while the agency works to substantiate its EAs and FONSIIs. Until BLM sufficiently explains its conclusion that the Wyoming Lease Sales did not significantly affect the environment, BLM may not authorize new drilling on the leased parcels.

VI. CONCLUSION

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. BLM must supplement those documents, addressing the deficiencies identified by the Court above. However, in light of the serious possibility that BLM may be able to substantiate the conclusions drawn in its EAs and FONSIIs, the Court declines to vacate the Wyoming Leases. That determination does not excuse BLM from giving serious consideration to the Court’s concerns. “Compliance with NEPA cannot be reduced to a bureaucratic formality, and the Court expects

[BLM] not to treat remand as an exercise in filling out the proper paperwork *post hac*.” *Standing Rock*, 282 F. Supp. 3d at 109. After BLM’s work on remand, Plaintiffs may again address whether BLM fulfilled its NEPA obligations. The Court will retain jurisdiction over this matter until those obligations are satisfied.

For the foregoing reasons, it is hereby **ORDERED** that:

1. Plaintiffs’ Motion for Summary Judgment (ECF No. 55) is **GRANTED IN PART**.
2. Defendants’ Motions for Summary Judgment (ECF Nos. 60–63) are **DENIED**.
3. The Institute’s Motion for Leave to File an Amicus Curiae Brief (ECF No. 71) is **DENIED**.

It is **FURTHER ORDERED** that the nine EAs and FONSIIs associated with the Wyoming Lease Sales challenged in Plaintiffs’ complaint 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 drilling on the Wyoming Leases. An order consistent with this Memorandum Opinion is separately and contemporaneously issued.

Dated: March 19, 2019

RUDOLPH CONTRERAS
United States District Judge