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**Author**

Ana M. Gutiérrez - Hogan Lovells US LLP  
Dale T. Ratliff - Lewis, Bess, Williams & Weese P.C.

§ 28.01 Introduction[[1]](#footnote-2)1

Climate change currently sits at the forefront of environmental law, policy, and federal decision making. As discussed below, the National Environmental Policy Act of 1969 (NEPA)[[2]](#footnote-3)2 requires federal agencies to meaningfully consider the environmental impacts of their decisions. And over the past decade, federal courts and agencies have made it clear that climate change impacts fall "squarely within NEPA's focus."[[3]](#footnote-4)3 But the question still vexing both federal agencies and the courts is how to incorporate climate change considerations into the NEPA process in a meaningful way. The Trump administration's decision to rescind the Council on Environmental Quality's (CEQ) 2016 guidance on the consideration of climate change has put this issue squarely back in the hands of the courts. And in response to recent challenges to energy and infrastructure projects, courts have continued to expand the analysis required under NEPA to include not only a project's direct greenhouse gas (GHG) emissions, but also the downstream uses of energy produced from or transported by the proposed project. This chapter begins with an examination of the developing law regarding the level of climate change considerations required to satisfy NEPA's purpose of informed decision making in the context of ***oil*** and gas exploration and production, coal mining, natural gas pipeline, and export terminal projects.

Section 28.02 provides a high-level summary of obligations under NEPA applicable and relevant to climate change issues, and discusses the role of CEQ and the Trump administration in the conversation. Sections 28.03 and 28.04 focus on the two key developing areas of law relevant to the climate change analysis under NEPA that have served as the focal point of litigation in recent years: Section 28.03 discusses the obligation of federal agencies to analyze the indirect effects and cumulative impacts of GHG emissions from proposed federal actions. Section 28.04 discusses the required *method* for analyzing the potential climate change impacts of a proposed action once the appropriate scope of the analysis is determined (i.e., whether federal agencies must include a qualitative discussion of climate change impacts and a quantification of potential GHG emissions, and whether they must also attempt to quantify the externalized cost of those emissions using the "social cost of carbon" protocol or an equivalent tool). Sections 28.03 and 28.04, collectively, provide an analysis of the current state of the law in each of these areas as it relates to federal approvals of coal mining, ***oil*** and gas production, natural gas pipeline, and export terminal projects.

**§ 28.02 National Environmental Policy Act (NEPA) and Climate Change**

**[1] Applicable and Relevant Obligations Under NEPA**

NEPA mandates informed decision making predicated on a meaningful consideration of the environmental impacts of proposed federal actions by establishing a framework that requires federal agencies to fully examine the alternatives to, and environmental effects of, major federal actions.[[4]](#footnote-5)4 NEPA is a procedural statute; it mandates that certain federal decisions follow a prescribed process and framework, but it does not require a specific outcome.[[5]](#footnote-6)5 Despite criticism that NEPA lacks "teeth," the Act has become the country's "national charter for protection of the environment"[[6]](#footnote-7)6 and the process required by NEPA has frequently been used to promote, postpone, halt, and mitigate proposed projects.

At a high level, a federal agency satisfies its obligations under NEPA by taking a "hard look" at the environmental effects of a proposed action.[[7]](#footnote-8)7 Through this hard look evaluation, as long as "the adverse environmental effects of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs."[[8]](#footnote-9)8 The "'action-forcing' procedures" of NEPA require these evaluations be completed through an appropriate (and documented) level of review.[[9]](#footnote-10)9 For all "[f]ederal actions significantly affecting the quality of the human environment," the federal agency must prepare an environmental impact statement (EIS).[[10]](#footnote-11)10 If an agency is unsure whether its action rises to the level of "significant," the agency must prepare an environmental assessment (EA) to evaluate the impacts and ultimately inform the agency whether preparation of an EIS is necessary.[[11]](#footnote-12)11 While the EIS analysis is more rigorous than the abbreviated EA, through both processes the agency must fully and adequately consider the potential alternatives to and environmental effects of major federal actions. In fact, "[i]f an agency decides not to prepare an EIS, it must supply a 'convincing statement of reasons' to explain why a project's impacts are insignificant."[[12]](#footnote-13)12

Federal agencies must consider two primary factors when preparing an EIS: (1) the reasonable alternatives to the proposed action; and (2) the environmental impacts-including the direct, indirect, and cumulative impacts-of the proposed action.[[13]](#footnote-14)13 The alternatives analysis is the "heart of the [EIS]," requiring the agency to analyze a reasonable range of alternatives, including a "no action" alternative.[[14]](#footnote-15)14 For each alternative identified, the agency must then assess the direct, indirect, and cumulative impacts.[[15]](#footnote-16)15

"Direct effects and their significance" include those effects "caused by the action and [that] occur at the same time and place."[[16]](#footnote-17)16 Indirect effects[[17]](#footnote-18)17 are those effects caused by that action that "are later in time or farther removed in distance, but are still reasonably foreseeable."[[18]](#footnote-19)18 Indirect effects may include "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[[19]](#footnote-20)19 Cumulative impacts are the environmental impacts that result 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."[[20]](#footnote-21)20 Cumulative impacts may result from "individually minor but collectively significant actions" that take place over a period of time.[[21]](#footnote-22)21 NEPA's impact and alternative analyses are designed to ensure that the public and the decision makers are armed with useful and necessary information regarding the potential impacts, reasonable alternatives, and mitigation measures of proposed federal actions.[[22]](#footnote-23)22

The NEPA process is triggered when a federal agency develops or is presented with a "proposal" for a "federal action."[[23]](#footnote-24)23 NEPA is triggered in a variety of contexts, including projects that involve federal funding, adoption of federal land management actions, approval of infrastructure projects impacting federal lands, or publicly-owned facilities. This chapter focuses on a federal agency's NEPA obligations in the context of energy development, specifically with respect to ***oil*** and gas development and coal mining projects, and proposals regulated by the Federal Energy Regulatory Commission (FERC), including natural gas pipelines and liquefied natural gas (LNG) terminals.

Like other development proposals, in the energy context NEPA is required at various stages of project planning and the process is guided by both CEQ and the managing agency's regulations.[[24]](#footnote-25)24 For example, the Bureau of Land Management (BLM) is the primary federal agency tasked with managing minerals owned by the United States, and it also manages over 248 million acres of land in the West.[[25]](#footnote-26)25 Through this authority, BLM develops land use plans and proposes or approves actions to implement those plans. NEPA is triggered for BLM at three key stages of the ***oil*** and gas development process: land use planning, leasing, and the approval of an application for a permit to drill.[[26]](#footnote-27)26 Similarly, in the context of coal mining, NEPA is triggered at the land use planning stage, and the mineral leasing stage, and is required for most mining authorizations.[[27]](#footnote-28)27 Finally, FERC, in granting a certificate of public convenience and necessity for a natural gas pipeline or export terminal project, must comply with NEPA in support of its federal action.[[28]](#footnote-29)28

Subject to their respective regulatory regimes, each of these NEPA-triggering events must include an analysis of the direct and indirect effects of the proposed action, and the action's cumulative impacts. Over the last several years, an ever-growing body of NEPA case law has analyzed how these analyses should be applied to evaluate the potential climate change impacts of proposed federal actions. In many instances, this has created significant uncertainty for the federal government and project proponents alike, as federal agencies have worked to keep pace with this rapidly evolving area of law and identify the scope and level of review of potential climate change impacts necessary to satisfy NEPA procedural obligations. This chapter explores that precise question through evaluation of the most recent case law involving ***oil*** and gas, coal mining, natural gas pipeline, and export terminal projects.

**[2] Council on Environmental Quality and Climate Change: The 20-Year Guidance that Never Was**

In 1997, CEQ issued its first guidance document on climate change, "calling on federal agencies to consider, in the context of the NEPA process, . . . how major federal actions could influence the emissions and sinks of [GHGs] . . . ."[[29]](#footnote-30)29 Just over a decade later, the U.S. Court of Appeals for the Ninth Circuit became the first court to definitively hold that "[t]he impact of [GHG] emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct."[[30]](#footnote-31)30 Soon thereafter, CEQ again began the process of drafting guidance to help define the scope, limits, and processes for adequately analyzing climate change under NEPA. CEQ published its first draft guidance in 2010.[[31]](#footnote-32)31 Four years later, CEQ published revised draft guidance.[[32]](#footnote-33)32 CEQ's 2014 revised draft guidance made clear: "Climate change is a fundamental environmental issue, and the relation of Federal actions to it falls squarely within NEPA's focus."[[33]](#footnote-34)33 It also expanded the scope of the 2010 draft guidance to include "[f]ederal land and resource management actions."[[34]](#footnote-35)34

The CEQ guidance was non-regulatory, and in that manner, did not impose any binding obligations on federal agencies.[[35]](#footnote-36)35 But the guidance was intended to "facilitate compliance with existing legal requirements under NEPA," and promote "the efficiency and consistency of reviews of proposed Federal actions for agencies, decisionmakers, project proponents, and the interested public."[[36]](#footnote-37)36 Following publication of the original draft guidance in 2010, federal courts indicated that they would look to the guidance as persuasive authority to determine agency compliance with NEPA.[[37]](#footnote-38)37

CEQ published its final guidance on the consideration of climate change under NEPA in August 2016.[[38]](#footnote-39)38 On March 28, 2017, the Trump administration withdrew the final CEQ guidance through an executive order.[[39]](#footnote-40)39 As described below, federal courts already played the central role in defining the required scope of climate change analyses under NEPA. But the Trump administration's decision to rescind CEQ's 2016 guidance left an administrative void and put the issue squarely back in the hands of the courts.

On June 16, 2019, CEQ published draft guidance on how NEPA analysis and documentation should address considerations of GHG emissions.[[40]](#footnote-41)40 If finalized, this guidance would replace the 2016 guidance rescinded by the Trump administration. The guidance document offers little in the way of clarity, and as discussed below, the issues continue to be battled in the courts.

**§ 28.03 Frame of Reference: Analyzing Climate Change Under NEPA Through Indirect Effects and Cumulative Impacts**

**[1] Indirect Effects: Requirement to Consider Upstream and Downstream Emissions**

Following publication of the draft CEQ guidance, it soon became settled law that the federal agencies in charge of managing the development of federal minerals must include an analysis of the *direct* GHG emissions that would result from the development of those resources (e.g., the emissions associated with the actual coal mining process or the development of ***oil*** and gas).[[41]](#footnote-42)41 Less clear were the obligation and ability of these same agencies to analyze the indirect effects of their proposed actions to authorize leasing or development of federal minerals and resources.

The indirect effects of a project "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable."[[42]](#footnote-43)42 This includes "growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[[43]](#footnote-44)43 The phrase "reasonably foreseeable" is the operable term here, and means effects that are "sufficiently likely to occur that a person of ordinary prudence would take [them] into account in reaching a decision."[[44]](#footnote-45)44 This section discusses the scope of what the courts have deemed as the reasonably foreseeable GHG emissions impacts of proposed coal mining, ***oil*** and gas, natural gas pipeline, and export terminal projects.

**[a] Fossil Fuel Leasing and Production: Downstream Combustion Is Reasonably Foreseeable and Must Be Considered**

The U.S. District Court for the District of Columbia recently posed the question: "[A]t what point does the foreseeable effect of an agency decision become too attenuated to be an 'indirect effect' requiring NEPA analysis?"[[45]](#footnote-46)45 This question currently sits at the forefront of climate change case law under NEPA as it applies to coal mining and ***oil*** and gas development on federal lands. The specific issue: should the agencies in charge of approving the development of coal and ***oil*** and gas on federal lands be required to analyze the emissions that will result from the downstream use of those products? In recent years, federal courts have increasingly determined that the downstream, combustion-related effects of federal actions approving upstream mineral development are reasonably foreseeable and must be considered at the earliest time possible.

**[i] Combustion-Related Effects of Coal Production Are Reasonably Foreseeable, and Agencies Cannot Avoid These Impacts Under a Perfect Substitution Theory**

In 2014, in *High Country Conservation Advocates v. U.S. Forest Service* the U.S. District Court for the District of Colorado held that the U.S. Forest Service (Forest Service) and BLM must analyze the downstream, combustion-related effects of proposed coal mining under the Colorado Roadless Rule EIS.[[46]](#footnote-47)46 The court expressly rejected the agencies' arguments that the downstream emissions associated with the EIS's approval of certain lease expansions were too speculative to estimate because "power plants have varying degrees of efficiency, and therefore any prediction about carbon emissions associated with combustion would be speculative"; and "currently unavailable technology like carbon capture and sequestration might be widely adopted by the time the coal is burned."[[47]](#footnote-48)47

Following *High Country*, the District of Colorado issued two more decisions holding that the Office of Surface Mining Reclamation and Enforcement (OSMRE) must consider the combustion-related impacts of proposed mine expansions.[[48]](#footnote-49)48 These decisions both involved situations where the mine would be providing its coal directly to a single power plant.[[49]](#footnote-50)49 In the first of these decisions, the court appeared to endorse the fact that this unique context made the combustion-related effects of the agency's decision "reasonably foreseeable":

[G]iven the extreme interdependence of the Navajo Mine and the Four Corners Power Plant, Respondents concede that the combustion-related effects are reasonably foreseeable. . . . Unlike 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, there is virtually no uncertainty regarding when, where, and how the coal mined as a result of NTEC's proposed mine expansion will be combusted.[[50]](#footnote-51)50

But this perceived limiting principle was undercut somewhat by the district court's subsequent decision in *WildEarth Guardians v. Zinke*, in which the court acknowledged the unique situation created by mine-mouth power plants, but then included the following broad statements in regard to the agency's obligation to consider downstream emissions:

Agencies need not have perfect foresight when considering indirect effects, effects which by definition are later in time or farther removed in distance than direct ones. . . .

. . . . *If [OSMRE] can predict* how much coal will be produced, *it can likewise attempt to predict* the environmental effects of its combustion. Just because it does not possess perfect foresight as to the timing or rate of combustion or as to the state of future emissions technology does not mean that it can ignore the effects completely.[[51]](#footnote-52)51

The U.S. District Court for the District of Montana recently expanded the reasoning in the above cases beyond project approvals to apply to BLM's obligations to consider downstream impacts at the planning stage.

In *Western Organization of Resource Councils v. BLM*, the plaintiffs challenged BLM's adoption of two resource management plans (RMP) for the Buffalo and Miles City field offices in the Powder River Basin.[[52]](#footnote-53)52 The RMPs authorized acreage available for both coal and ***oil*** and gas leasing.[[53]](#footnote-54)53 And in the context of both, the district court held that the RMPs "'contained enough specifics' to permit a 'productive analysis' of the downstream burning of the coal, ***oil*** and gas open to potential development under the RMPs."[[54]](#footnote-55)54 According to the court, the "RMPs projected the quantity of recoverable fossil fuels to be extracted during the 20-year period of the RMPs . . . [and] acknowledged that the coal recovered from the planning areas will be burned to generate electricity."[[55]](#footnote-56)55

The District of Montana acknowledged that the existing case law on the subject-including the decision in *High Country*-"analyzed projects narrower in scope and of a more discrete nature than the RMPs at issue" because they analyzed discrete project approvals or, in the case of *High Country*, approvals at the leasing stage.[[56]](#footnote-57)56 In those contexts it is a fair argument that the downstream impacts associated with the agency's decisions are more concrete, less speculative, and generally more foreseeable. Still, the court held that an agency may not completely "'avoid' analysis of foreseeable environmental consequences in an RMP-level EIS 'by saying that the consequences are unclear or will be analyzed later when an EA is prepared for a site-specific program proposed pursuant to the RMP.'"[[57]](#footnote-58)57 Rather, "[d]eferral of such analysis 'based on a promise to perform a comparable analysis in connection with later site-specific projects' risks defeating entirely the purpose of completing an EIS at the RMP stage."[[58]](#footnote-59)58

Ultimately, the determination that BLM and OSMRE are required to estimate and analyze the emissions associated with upstream coal development is consistent with the guidance proposed by CEQ on the issue.[[59]](#footnote-60)59 And thus far, BLM and OSMRE have not actively contested their obligation to engage in some consideration of downstream GHG emissions under NEPA, at least at the leasing and mine approval stages.[[60]](#footnote-61)60

**[ii] Bureau of Land Management Must Consider Downstream Effects of *Oil* and Gas Leasing and Development Using Currently Available Models for Estimating Downstream Emissions**

The above demonstrates that it is now close to settled law that BLM and OSMRE must attempt to engage in some analysis of the downstream, combustion-related GHG emissions that may result from federal decisions approving the leasing and development of coal resources. However, as discussed above, the genesis of these early cases was limited to instances where the coal being mined was slated for use at a specific power plant. As explained by the District of Colorado, in this context "there is virtually no uncertainty regarding when, where, and how the coal mined" will later be combusted.[[61]](#footnote-62)61 And even when the courts expanded this rationale to coal being mined or leased outside the context of a mine-mouth relationship, there is still an argument that the variables in terms of ultimate downstream use of coal are somewhat limited. But the same cannot necessarily be said for ***oil*** and gas, which can be destined for a broad array of downstream uses, such as plastic production, fertilizers, transportation, and natural gas-fired power plants. As noted by early scholars on the subject, "quantifying GHG emissions that may result from the leasing of federal ***oil*** and gas resources is complicated by the fact that GHGs are emitted at every stage in the process, beginning with exploration, and continuing through the production, refining, storage, transportation, and end use of the resource."[[62]](#footnote-63)62 Thus, it was not-and still is not-clear how the holdings and rationale from the coal leasing and mining context should be applied to federal decisions to approve the leasing and development of ***oil*** and gas resources.

In fact, until 2018, we did not have any federal court decisions that definitively analyzed whether BLM is required to evaluate the downstream GHG emissions associated with federal ***oil*** and gas development. Then, in 2018, three federal district courts weighed in on the issue, and all arrived at the same conclusion: BLM must analyze the indirect climate change impacts resulting from the combustion of ***oil*** and gas prior to approving the leasing or development of federal ***oil*** and gas resources.[[63]](#footnote-64)63

The first of these decisions, *Western Organization of Resource Councils*, discussed above, analyzed an RMP that authorized both coal and ***oil*** and gas leasing. And the court simply lumped the two resources together, stating: "The Miles City RMP and the Buffalo RMP 'contained enough specifics' to permit a 'productive analysis' of the downstream burning of the coal, ***oil*** and gas open to potential development under the RMPs."[[64]](#footnote-65)64 Regarding what specific information made downstream emissions sufficiently foreseeable, the court relied on the fact that (1) "[t]he RMPs projected the quantity of recoverable fossil fuels to be extracted during the 20-year period of the RMPs" and (2) "[t]he RMPs . . . acknowledged that the coal recovered from the planning areas will be burned to generate electricity."[[65]](#footnote-66)65 Notably, the District of Montana did not address the type of information necessary to accurately estimate downstream emissions from ***oil*** and gas development, or how that may differ from coal.

Following the District of Montana's decision in *Western Organization of Resource Councils*, both the U.S. District Court for the District of New Mexico and the U.S. District Court for the District of Colorado held that BLM must analyze the foreseeable downstream emissions from ***oil*** and gas leasing decisions. Again, neither of these courts actively analyzed BLM's ability to reasonably forecast the end uses of ***oil*** and gas produced from federal leases. The courts instead relied on precedent developed in the mining and FERC contexts and generally held that if BLM can estimate the amount of potential ***oil*** and gas production, it can similarly estimate the indirect effects that may result from the use of that ***oil*** and gas.[[66]](#footnote-67)66

Under the above court decisions the mandate seems clear, but the process for achieving it is far less so. Nonetheless, BLM has begun the process of incorporating an analysis of indirect, downstream GHG emissions into its NEPA analyses, at both the leasing and RMP stages. For example, recent lease sale EAs from the Farmington and Carlsbad field offices in New Mexico-which sit in the heart of the Permian Basin-include indirect emission estimates using a GHG equivalency calculator developed by the U.S. Environmental Protection Agency (EPA).[[67]](#footnote-68)67 And in the recently published draft RMP/EIS for BLM's Carlsbad field office, BLM included a similar analysis at the RMP stage.[[68]](#footnote-69)68 BLM rightfully acknowledges in these analyses that it "does not direct or regulate the end use of produced ***oil*** and/or gas"[[69]](#footnote-70)69 and that because the end use can

include the combustion of transportation fuels, fuel ***oils*** for heating and electricity generation, the production of asphalt and road ***oil***, and the manufacturing of chemicals, plastics, and other synthetic materials . . . BLM can only provide an estimate of potential GHG emissions using national approximations of where or how the end use may occur.[[70]](#footnote-71)70

Recently, the U.S. District Court for the District of Columbia was the first to acknowledge that ***oil*** and gas leasing and development presents a potentially unique situation when compared to coal development. In *WildEarth Guardians*, in a challenge to federal coal leases in Wyoming, the court held that "BLM must strengthen its discussions of the environmental effects of downstream ***oil*** and gas use."[[71]](#footnote-72)71 But the court refused to "*require* that BLM quantify downstream emissions."[[72]](#footnote-73)72 And the court expressly noted the distinction between the coal cases cited by the plaintiffs, where "the coal had a single downstream use" and "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."[[73]](#footnote-74)73 The court, however, did require BLM to consider whether quantifying GHG emissions is possible through the use of the emissions calculator used by other BLM offices, or to explain (1) why quantification is not possible or helpful and (2) why any emissions estimates from outside parties "are unreliable or otherwise inappropriate to use in its decisionmaking."[[74]](#footnote-75)74

Faced with the court's mandate that it either use the tools currently available for estimating indirect GHG emissions or explain why they do not inform the decision-making process, BLM published a draft supplemental EA less than one month after the court's decision that included an estimate of downstream GHG emissions using EPA's GHG equivalency calculator.[[75]](#footnote-76)75 Shortly thereafter, BLM filed a motion for a voluntary remand to conduct additional NEPA analyses of the Colorado and Utah leases originally slated to be the subject of two later phases of the same lawsuit.[[76]](#footnote-77)76 Accordingly, BLM-at least for the time being-has apparently taken the position that it will attempt to consider the downstream emissions from authorized ***oil*** and gas production, even at the planning stage and even when both the level of production and end use of the ***oil*** and gas are uncertain.[[77]](#footnote-78)77 The question the courts will now likely have to answer is whether the estimation methods employed by BLM comply with its obligations under the law to evaluate foreseeable impacts when "there is incomplete or unavailable information."[[78]](#footnote-79)78

**[b] Federal Energy Regulatory Commission (FERC) Authority on Climate Change Impacts in the NEPA Context**

**[i] Downstream Emissions Resulting from Authorization of a Natural Gas Pipeline Are Reasonably Foreseeable When the Downstream User Is Known, but the Same Is Not True for Export Terminals**

The landmark case addressing the scope of climate change analyses as a part of the FERC NEPA approval process is a 2017 decision from the U.S. Court of Appeals for the D.C. Circuit, *Sierra Club v. FERC*.[[79]](#footnote-80)79 In some respects, this case is consistent with the cases in the fossil fuel leasing and production sector, although it reaches conclusions following a different line of case law. In *Sierra Club*, the D.C. Circuit held that FERC was required to reasonably estimate the amount of power plant carbon emissions that three new interstate natural gas pipelines would make possible as an indirect environmental effect of project approval, or explain specifically why it could not complete such analysis.[[80]](#footnote-81)80 The threshold question, of course, was: "What are the 'reasonably foreseeable' effects of authorizing a pipeline that will transport natural gas to Florida power plants?"[[81]](#footnote-82)81 The court responded:

First, that gas will be burned in those power plants. This is not just "reasonably foreseeable," it is the project's entire purpose, as the pipeline developers themselves explain. It is just as foreseeable, and FERC does not dispute, that burning natural gas will release into the atmosphere the sorts of carbon compounds that contribute to climate change.[[82]](#footnote-83)82

Finding, without hesitation, that the downstream emissions associated with FERC's approval of the pipelines' development were not too speculative to estimate, the result in *Sierra Club* aligns with the holding in *High Country*, discussed above.

*Sierra Club* followed on the heels of a trilogy of D.C. Circuit cases involving FERC-approved LNG export terminals.[[83]](#footnote-84)83 In the LNG cases, the environmental groups argued that FERC failed to consider the indirect effects from (1) inducing increased domestic gas production in response to the increased export capacity and (2) increasing reliance on coal as a fuel source by increasing export capacity, which in turn raises the domestic price of natural gas.[[84]](#footnote-85)84 The court disagreed on both fronts, noting that the U.S. Department of Energy (DOE), not FERC, has the sole authority to license the *export* of natural gas flowing through the terminals into the global marketplace and the two indirect effects alleged by Sierra Club could not "occur unless a greater volume of [LNG] is shipped from the Terminal and enters the international marketplace."[[85]](#footnote-86)85 Thus, relying on the U.S. Supreme Court's seminal decision in *Department of Transportation v. Public Citizen*,[[86]](#footnote-87)86 the court held that because "FERC had *no legal authority to prevent* the [significant] adverse environmental effects of [the] natural gas exports," the proposed action-approving the LNG terminals-could not be considered a legally relevant cause of the potential GHG effects for NEPA purposes.[[87]](#footnote-88)87 Under *Public Citizen* and its progeny, "an agency need not consider environmental effects that cannot influence its decision."[[88]](#footnote-89)88 Finally, in the three LNG export terminal cases, the D.C. Circuit also upheld FERC's basis for not analyzing the GHG impacts associated with increased natural gas production: that it "found no evidence that the Projects by themselves would lead to increased gas production because no specific shale-play [had] been identified as a source of natural gas for the Projects."[[89]](#footnote-90)89 While this was not central to the court's decisions in the LNG cases, the issue is again in front of FERC and the courts in the context of pipeline approvals.

Fast forward to 2017, when the project proponent in *Sierra Club* sought to leverage the chain-of-causation principle that favored FERC in the LNG export terminal cases, claiming that FERC would have no "legally relevant cause of any power plant carbon emissions, and thus . . . FERC had no obligation to consider those emissions in its NEPA analysis" with respect to the pipeline projects.[[90]](#footnote-91)90 The D.C. Circuit rejected this argument, and in doing so, refined how the holding in *Public Citizen* applies to LNG export terminals and FERC-approved projects more generally by clarifying that in the trilogy of cases involving LNG export terminals the court did not mean to broadly state that FERC had absolutely no authority with respect to the exports-noting that "FERC *did* have legal authority to deny an upgrade license for a natural gas export terminal"-but rather, "FERC was forbidden to rely on the effects of gas exports *as a justification for* denying an upgrade license."[[91]](#footnote-92)91 Thus, because FERC was acting under a narrow delegation from the DOE, and not its own statutory authority, "the agency would have acted unlawfully had it refused an upgrade license on grounds that it did not have delegated authority to [regulate]."[[92]](#footnote-93)92

Distinguishing FERC's authority between export terminals and pipeline projects, in 2017, the D.C. Circuit did not find similarly limiting circumstances because FERC's statutory authority to issue certificates of public convenience for pipelines requires FERC to "balance 'the public benefits against the adverse effects of the project,' including adverse environmental effects."[[93]](#footnote-94)93 Thus, "[b]ecause FERC could deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment, the agency is a 'legally relevant cause' of the direct and indirect environmental effects of pipelines it approves."[[94]](#footnote-95)94

In *Sierra Club*, the D.C. Circuit further held that quantifying the projected downstream emissions from the proposed pipeline "would permit the agency to compare the emissions from this project to emissions from other projects, to total emissions from the state or the region, or to regional or national emissions-control goals."[[95]](#footnote-96)95 The court even called into question whether the agency could engage in the "informed decision making" required by NEPA without such quantified comparisons.[[96]](#footnote-97)96 Leaving the door open and so as not to establish a bright-line rule, however, the D.C. Circuit made clear that it does "not hold that quantification of [GHG] emissions is required *every* time those emissions are an indirect effect of an agency action."[[97]](#footnote-98)97 That said, unless the agency provides a specific statutory justification for not estimating emissions as a reasonable proxy, the court will likely expect those estimates-even if they are "largely influenced by assumptions rather than direct parameters"-and an evaluation of the same.[[98]](#footnote-99)98 In short, the court concluded that FERC must either quantify and consider a proposed project's downstream GHG emissions during the NEPA evaluation, or explain in sufficient detail why it cannot do so.[[99]](#footnote-100)99

**[ii] Downstream Emissions May Not Be Foreseeable Where the End User Is Not Known**

In two cases recently decided by the D.C. Circuit, environmental groups sought to persuade the court to affirm its seminal 2017 ruling requiring FERC to consider downstream GHG emissions impacts resulting from natural gas pipeline projects: *Otsego 2000 v. FERC*[[100]](#footnote-101)100 and *Birckhead v. FERC*.[[101]](#footnote-102)101 In response, FERC sought to distinguish these cases from *Sierra Club* by arguing that NEPA does not require an assessment of GHG emissions from the downstream sources because the end users of the gas are not known:

Here, although the gas to be transported by the New Market Project will be received by two local distribution companies, no party - including Otsego, Dominion, or the shippers - has identified what the specific end use of the transported natural gas will be. Presuming the local distribution company shippers do not resell the gas into the market and instead use the gas to serve their industrial and residential customers, the range of possibilities include substitution for higher-emitting fuels, industrial feedstock for existing or potentially new customers, or other combustion.[[102]](#footnote-103)102

FERC took the position that the circumstances in these cases "are markedly different" from those in the 2017 *Sierra Club* case because the end users are unknown, and as a result, "it is impossible to assess whether the Project will result in increased emissions overall or offset emissions by reducing demand for other (perhaps dirtier) fuel sources."[[103]](#footnote-104)103 In an attempt to rein in the *Sierra Club* precedent, FERC claimed that, contrary to the petitioners' contentions, there is no bright-line rule that downstream GHG emissions are indirect effects of FERC's certificate authorizing a pipeline project, and that these cases should be decided on a case-by-case basis.

A three-judge panel of the D.C. Circuit heard oral arguments on both *Otsego* and *Birckhead* on April 11, 2019. The panel pressed FERC on its position regarding the scope of the agency's analysis of GHG emissions (as indirect effects) under NEPA. The judges' line of questioning focused on why FERC not only appeared to limit its scope of NEPA analyses, but why FERC appeared to be abandoning quantification of GHGs in NEPA reviews when it has done so in past cases.[[104]](#footnote-105)104 On May 9, 2019, the D.C. Circuit dismissed the petition for review in *Otsego* for lack of jurisdiction.[[105]](#footnote-106)105

In *Birckhead*, however, the D.C. Circuit issued a per curiam decision on June 4, 2019, denying the petition for review following a thorough analysis of the merits of the case. On the whole, the court was unpersuaded by the petitioners' contention that FERC violated NEPA for failure to consider the indirect effects of downstream emissions, but the opinion offers less than solid ground for FERC on a going-forward basis. The court decidedly points out that "[n]either side has it exactly right."[[106]](#footnote-107)106 The court disagreed with the petitioners that downstream gas combustion is always, as a matter of fact, a reasonably foreseeable indirect effect of a pipeline project.[[107]](#footnote-108)107 In turn, however, the court rejected FERC's "extreme position" that downstream emissions are an indirect effect only when the project's "entire purpose" is to transport gas to a specific, identified location.[[108]](#footnote-109)108 The court also found unpersuasive FERC's argument (stemming from the 2016 LNG export terminal cases) that FERC need not consider downstream GHG emissions because FERC is not the "legally relevant cause" of those emissions because FERC may in fact deny a pipeline certification on the basis of harm to the environment.[[109]](#footnote-110)109 Furthermore, the court reiterated a position it took in *Sierra Club*: even if the overall emissions calculations may be favorable, FERC must still conduct the evaluation in the first instance.[[110]](#footnote-111)110 Finally, and perhaps the crux of future litigation, the court expressed that it is "troubled" by the fact that FERC did not know (and analyze) the indirect effects of the downstream GHG emissions impacts because FERC did not ask for the necessary information.[[111]](#footnote-112)111 The court concluded, however, that "[d]espite our misgivings regarding [FERC's] decidedly less-than-dogged efforts to obtain the information it says it would need to determine that downstream [GHG] emissions qualify as a reasonably foreseeable indirect effect of the Project, [the petitioners] failed to raise this record-development issue in the proceedings before [FERC]."[[112]](#footnote-113)112 Thus, the court ultimately dismissed the case on procedural grounds, stating that it "therefore lack[s] jurisdiction to decide whether [FERC] acted arbitrarily or capriciously and violated NEPA by failing to further develop the record."[[113]](#footnote-114)113

Finally, adding fuel to the fire, FERC issued two decisions in April 2019 approving construction certificates for two LNG terminal projects (one in Texas and one in Louisiana).[[114]](#footnote-115)114 Notwithstanding the approvals, and as with many of FERC's decisions as of late, FERC was split on the appropriate scope of climate change analyses. In both decisions, FERC recognized that GHG emissions will contribute to climate change, but stated that

[t]he final EIS included a qualitative discussion that addressed various effects of climate change. The final EIS acknowledges that the quantified GHG emissions from the construction and operation of the projects will contribute incrementally to climate change. Further, [FERC] has previously concluded it could not determine a project's incremental physical impacts on the environment caused by GHG emissions. [FERC] has also previously concluded it could not determine whether a project's contribution to climate change would be significant.[[115]](#footnote-116)115

In both matters, Commissioner Cheryl LaFleur concurred, but issued a separate opinion clarifying her position. In her concurrence she states that FERC "summarily finds that because it cannot decide how to conduct a meaningful analysis of climate change impacts, it is not required to conduct *any* analysis of significance. I disagree."[[116]](#footnote-117)116 Taking an even stronger position, Commissioner Richard Glick dissented to both orders and issued a separate opinion: "I dissent from today's order because it violates both the Natural Gas Act . . . and [NEPA]."[[117]](#footnote-118)117 Glick balks at FERC's position that "[b]ased on this alleged inability to assess significance [of climate change impacts], [FERC] concludes that the Project will have no significant environmental impact."[[118]](#footnote-119)118 More bluntly, Glick asserts: "That is the equivalent of saying that an action that is known to be dangerous is actually safe because we do not know exactly how dangerous it is."[[119]](#footnote-120)119

**[iii] Upstream Emissions Resulting from Authorization of a Natural Gas Pipeline Are Not Reasonably Foreseeable, or Are They?**

In *Otsego, Birckhead*, and a third case still in the briefing stages, *Delaware Riverkeeper Network v. FERC*,[[120]](#footnote-121)120 the petitioners have revived an issue that was before the courts in 2016 in the context of LNG export terminal approvals: FERC should have also assessed the GHG emissions from the *upstream* natural gas exploration and production operations *induced* by the pipeline approvals.[[121]](#footnote-122)121 FERC firmly disputes this argument, asserting that a causal relationship between approval of a proposed pipeline project and an increase in gas production only exists "if the proposed pipeline would transport new production from a specified production area and that production would not occur in the absence of the proposed pipeline (i.e., there will be no other way to move the gas)."[[122]](#footnote-123)122 FERC also asserts that "[e]ven if a causal relationship between the proposed action here and upstream production was presumed, the scope of the impacts from any such production is too speculative and thus not reasonably foreseeable."[[123]](#footnote-124)123

In the LNG context, the D.C. Circuit previously agreed with FERC's rationale that the LNG terminals by themselves would not induce domestic natural gas production because no specific shale play had been identified as the source and the natural gas to be exported could potentially come from existing sources.[[124]](#footnote-125)124 While the court's finding on this point was not central to the holdings in those cases, and is thus arguably dictum, it perhaps provided at least some favorable precedent to support FERC's position in the current cases. As noted above, *Otsego* was dismissed on procedural grounds. *Delaware Riverkeeper* remains in the briefing stages. But the D.C. Circuit recently addressed this issue in its June 4, 2019, per curiam decision in *Birckhead*. The court recognized precedent holding that "a project applicant may demonstrate market need 'by presenting evidence of preconstruction contracts for gas transportation service'";[[125]](#footnote-126)125 however, the court held that "just because [FERC] is satisfied there is a market need for a given project does not necessarily mean that a shipper/producer 'would not have the ability to bring the gas to market' via another channel were [FERC] to deny a certificate for the project."[[126]](#footnote-127)126 The petitioners failed to present evidence supporting its broad allegation that the producer would otherwise be unable to bring its gas to market.[[127]](#footnote-128)127 In reaching this decision the court took the opportunity to express its concern with FERC's position that it would be "futile" to ask for additional information about the origin of the gas to inform an evaluation of indirect effects.[[128]](#footnote-129)128 Notwithstanding, because the petitioners "nowhere claim that [FERC's] failure to seek out additional information constitutes a violation of its obligations under NEPA," the court had "no basis" for concluding FERC violated NEPA in declining to consider the indirect effects of upstream gas production.[[129]](#footnote-130)129

**[iv] Complicating the Debate: Shifting Policy at FERC**

Further complicating the debate, FERC is actively challenging the D.C. Circuit's prior decisions regarding the necessary scope of indirect and cumulative effects under NEPA. The *Otsego* case was presumably more vulnerable than other FERC cases before the D.C. Circuit simply because in FERC's May 18, 2018, approval of the pipeline project FERC set forth a broad policy that arguably diverges from FERC's past practices and limits FERC's obligations to quantify and assess GHGs in most gas projects.[[130]](#footnote-131)130 In particular, FERC states:

For a short time, [FERC] went beyond that which is required by NEPA, providing the public with information regarding the potential impacts associated with unconventional natural gas production and downstream combustion of natural gas, even where such production and downstream use was not reasonably foreseeable nor causally related to the proposals at issue. That information was generic in nature and inherently speculative, providing upper-bound estimates of upstream and downstream effects using general shale gas well information and worst-case scenarios of peak use.

However, providing a broad analysis based on generalized assumptions rather than reasonably specific information does not meaningfully inform [FERC's] project-specific review. . . .

. . . .

Accordingly, to avoid confusion as to the scope of our obligations under NEPA and the factors that we find should be considered under NGA section 7(c), we will no longer prepare upper-bound estimates . . . where, as here, the upstream production and downstream use of natural gas are not cumulative or indirect impacts of the proposed pipeline project, and consequently are outside the scope of our NEPA analysis.[[131]](#footnote-132)131

The basis for FERC's declaration to limit the scope of its indirect effects analyses is that FERC "does not control the production or consumption of natural gas," and FERC only "certificates proposals by private entities to transport natural gas between those locations."[[132]](#footnote-133)132 FERC concludes by saying that its decision does not change or limit the ability of FERC to complete its environmental review. FERC also takes the position that it was not procedurally deficient in using the order in *Otsego* to provide clarification on the appropriate scope of its NEPA analyses. As noted above, however, on May 9, 2019, the D.C. Circuit dismissed *Otsego* because the plaintiffs failed to show standing.[[133]](#footnote-134)133 Whether or not FERC's placement of its policy shift inside of relatively low-profile proceedings was a strategic move, it was effective. The court did not decide the merits of the case and the FERC policy shift remains in place.

**[2] Cumulative Impacts: Compounding the Indirect Effects**

CEQ regulations define cumulative impacts as those impacts that result "from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what [entity] undertakes such other actions."[[134]](#footnote-135)134 However, like all components of a NEPA analysis, this seemingly broad mandate is guided by the "rule of reason."[[135]](#footnote-136)135 Thus, courts have consistently held that agencies need only analyze "the effect of the current project along with any other past, present, or likely future actions *in the same geographic area*."[[136]](#footnote-137)136 And "the agency must balance need for a comprehensive analysis versus considerations of practicality, while also keeping in mind that use of a larger analysis area can dilute the apparent magnitude of environmental impacts."[[137]](#footnote-138)137

Given the global scale of potential climate change impacts, this issue does not fit neatly into the cumulative impacts box.[[138]](#footnote-139)138 CEQ acknowledged this reality in its final guidance, stating that because all GHG emissions "contribute to cumulative climate change impacts," it would be inconsistent "with the rule of reason to require the preparation of an EIS for every Federal action that may cause GHG emissions regardless of the magnitude of those emissions."[[139]](#footnote-140)139 Based on this observation, CEQ provided that

for the purposes of NEPA, the analysis of the effects of GHG emissions is essentially a cumulative effects analysis that is subsumed within the general analysis and discussion of climate change impacts. Therefore, direct and indirect effects analysis for GHG emissions will adequately address the cumulative impacts for climate change from the proposed action and its alternatives and a separate cumulative effects analysis for GHG emissions is not needed.[[140]](#footnote-141)140

The above passage reflects the general approach of federal agencies in terms of analyzing the cumulative climate change impacts in the context of federal decisions related to energy projects.[[141]](#footnote-142)141

A few recent court cases, however, have raised the question of whether federal agencies must expand the scope of this analysis to include the impacts of the agencies' past, present, and reasonably foreseeable actions-under the specific program at issue-on both a regional and national basis;[[142]](#footnote-143)142 for example, whether BLM must include in its cumulative impacts analysis a quantification of GHG emissions from all minerals leased, and proposed to be leased, throughout the United States.[[143]](#footnote-144)143 Taken to its logical extreme, the argument suggests that BLM must prepare a programmatic EIS for its entire leasing program in order to comply with NEPA for any individual planning or leasing action. This argument, however, potentially conflicts with not only NEPA precedent governing the required scope of an agency's cumulative impacts analysis, but also longstanding NEPA precedent that BLM is entitled to rely on "practical considerations of feasibility" in determining the scope of the actions that it analyzes under NEPA and when to prepare a programmatic EIS.[[144]](#footnote-145)144 Thus far, the two courts to rule on this issue have reached differing conclusions, making this an interesting area to watch as this line of argument develops in future cases.[[145]](#footnote-146)145

**§ 28.04 Meaningful Consideration of a Proposed Action's Contributions to Climate Change**

Whether certain GHG emissions are considered the indirect and cumulative impacts of a proposed action determines the appropriate scope of an agency's review. Yet one question still being raised in the courts is how an agency fulfills its obligations to take a "hard look" at the measurable climate impacts, if any, of proposed federal actions.[[146]](#footnote-147)146 As CEQ noted in its draft guidance, the "*effective consideration* of climate change in NEPA reviews" is essential to improving the quality of agency decision making.[[147]](#footnote-148)147 Just what constitutes a meaningful consideration of a proposed action's impacts to climate change, such that it fulfills NEPA's purpose of informing the agency and the public? Specifically, does NEPA require only that federal agencies include a qualitative discussion of potential climate change impacts and a quantification of potential GHG emissions, or must agencies also quantify the externalized costs of those emissions using the social cost of carbon protocol or an equivalent tool?

**[1] Quantification as a Proxy for Impacts**

CEQ's 2010 draft guidance provided that because "it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions, as such direct linkage is difficult to isolate and to understand," the "estimated level of GHG emissions can serve as a reasonable proxy for assessing potential climate change impacts, and provide decision makers and the public with useful information for a reasoned choice among alternatives."[[148]](#footnote-149)148 The federal courts that initially addressed this question- primarily in the context of federal coal leasing-agreed.[[149]](#footnote-150)149 These court decisions upheld the agency's general approach, predicated on CEQ's draft guidance, of quantifying the projected GHG emissions that would result from the proposed action and then comparing those emissions to state, regional, and national GHG emissions. They also upheld the agency's rationale that the current state of science did not readily allow federal agencies to identify specific environmental effects that would result from an increase in GHG emissions.[[150]](#footnote-151)150

**[a] Social Cost of Carbon**

In 2014, the District of Colorado appeared to break with convention. In *High Country*, BLM, in consultation with the Forest Service, approved modifications to existing coal leases in western Colorado that would have resulted in production of an additional 3.3 million tons of coal from federal lands.[[151]](#footnote-152)151 The agencies estimated that the approval of the lease modifications would result in 1.23 million tons of CO2 -equivalent emissions from methane venting alone.[[152]](#footnote-153)152 The plaintiffs argued, however, that even though the agencies had quantified the projected emissions, the agencies had failed to comply with NEPA by failing "to disclose the social, environmental, and economic impacts" of those emissions.[[153]](#footnote-154)153 The court agreed, holding that "a tool is and was available: the social cost of carbon protocol."[[154]](#footnote-155)154

On its face, the *High Country* decision seemed to require that federal agencies go beyond mere quantification of projected emissions and include an express quantification of the estimated costs of those emissions as well. However, the decision contained two important limiting principles.

First, in the final EIS (FEIS) approving the lease modifications, the Forest Service had employed a formalized cost-benefit analysis that quantified the economic benefits that would be gained if the lease modifications were approved, and the "total economic impact that would not be realized" if the lease expansion were not approved.[[155]](#footnote-156)155 Accordingly, one of the bases for the court's decision was that it was arbitrary and capricious for the Forest Service to quantify the economic benefits of the lease modifications, but then omit a similar analysis of the costs.[[156]](#footnote-157)156 The court also expressly stated that while "NEPA does not require an explicit cost-benefit analysis to be included in an EIS. . . . where such an analysis is included it cannot be misleading."[[157]](#footnote-158)157 The court in *High Country* also based its decision on the fact that the Forest Service had actually included the social cost of carbon in the draft EIS, but then removed it from the FEIS without any explanation.[[158]](#footnote-159)158 In light of that fact, the court held that because the agency was clearly aware of the existence of the protocol, it was inherently arbitrary for the Forest Service to state that it was impossible to estimate climate impacts because no tool presently existed.[[159]](#footnote-160)159 The court made it clear that "[t]he agencies, of course, might have been able to offer non-arbitrary reasons why the protocol should not have been included in the FEIS."[[160]](#footnote-161)160 In *High Country*, they simply did not.[[161]](#footnote-162)161

In 2017, in an attempt to set the stage for the D.C. Circuit to fully endorse the social cost of carbon, the Sierra Club similarly took the baseline challenge a step further beyond mere quantification as a proxy, and demanded FERC specifically employ the social cost of carbon to evaluate concrete harms caused by the indirect effects.[[162]](#footnote-163)162 The court recognized that historically FERC has rejected utilization of the social cost of carbon, raising questions and concerns regarding the soundness of the methodology.[[163]](#footnote-164)163 In *Sierra Club*, the court made no express declaration regarding the appropriateness of the social cost of carbon because FERC did not include a social cost of carbon analysis in its EIS. Instead, the court directed FERC to explain in this EIS and future EISs "whether the position on the Social Cost of Carbon that the agency took in *EarthReports* still holds, and why."[[164]](#footnote-165)164

**[b] Quantification of Emissions Is Sufficient, but the Times May Be Changing**

Following the District of Colorado's decision in *High Country*, BLM, the Forest Service, FERC, and OSMRE adopted a narrow construction of the court's ruling and continued to assert that (1) quantification of emissions is a reasonable proxy for estimating climate change impacts and (2) agencies only need to employ the social cost of carbon when conducting a formal cost-benefit analysis.[[165]](#footnote-166)165 This position was also included in an internal BLM guidance memorandum and reflected in CEQ's final 2016 guidance.[[166]](#footnote-167)166

In the five years following the District of Colorado's decision in *High Country*, other federal courts have routinely upheld the agencies' position that they are not required to quantify climate change impacts using the social cost of carbon or an equivalent tool when making planning and project-level decisions.[[167]](#footnote-168)167 The weight of authority now holds that estimating projected GHG emissions, putting those GHG emissions into context with state, regional, and national emission levels, and providing a qualitative discussion of the impacts of climate change is a reasonable proxy for evaluating climate change impacts under NEPA.[[168]](#footnote-169)168

The courts that have directly addressed the *High Country* decision have thus far upheld its two limiting principles: the quantification of climate impacts through the social cost of carbon is only required when an agency conducts a formal cost-benefit analysis, and the agency is required only to offer a rational explanation for its decision not to utilize the protocol or a similar tool to quantify impacts.[[169]](#footnote-170)169 In doing so, these courts have also clarified one important point: the socioeconomic analysis contained in a NEPA document does not qualify as "the 'benefit' side of a cost-benefit analysis."[[170]](#footnote-171)170 The courts have generally upheld the agencies' rationale that outside a quantification of costs using the social cost of carbon, agencies currently lack "the ability to associate an action's contribution in a localized area to impacts on global climate change."[[171]](#footnote-172)171

This holds true in the FERC context as well. In a pipeline project recently approved by FERC, FERC learned from its prior experiences (i.e., *Sierra Club*) and actively addressed its position on the social cost of carbon in its NEPA analysis and project approval.[[172]](#footnote-173)172 Environmentalists nonetheless challenged FERC's order in the D.C. Circuit, claiming that FERC failed to take the next step and monetize the GHG emissions that it did consider in its NEPA review. In February 2019, in an unpublished opinion, the court upheld FERC's approval of the Mountain Valley Pipeline project and FERC's rationale for why the social cost of carbon is not an appropriate tool for assessing climate change impacts in project-level NEPA reviews. The court highlighted that in challenging FERC's decision not to utilize the social cost of carbon, the petitioners did not offer an alternative tool.[[173]](#footnote-174)173

A few of the recent cases upholding an agency decision not to incorporate a quantification of climate impacts, however, have also included broad language suggesting the agencies may need to consider whether such an analysis will be warranted in the future. In two recent District of Colorado cases, Judge Lewis Babcock specifically noted that his decisions did not "speak to the potential effectiveness of the [social cost of carbon protocol]."[[174]](#footnote-175)174

In *WildEarth Guardians*, after upholding BLM's rationale for not utilizing the protocol in the first instance, the U.S. District Court for the District of Columbia stated that "on remand, BLM must reassess whether the social cost of carbon or another methodology for quantifying climate change may contribute to informed decisionmaking."[[175]](#footnote-176)175 According to the court, because "NEPA requires an agency to ensure 'scientific integrity' in its [EAs] . . . BLM may not forgo using the social cost of carbon simply because courts have thus far been reluctant to mandate it."[[176]](#footnote-177)176 And "[g]iven that the [DOE] and other agencies consider the social cost of carbon reliable enough to support rulemakings, the protocol may one day soon be a necessary component of NEPA analyses."[[177]](#footnote-178)177 The court's reference to the requirement in 40 C.F.R. § 1502.24 that agencies "insure the professional integrity, including scientific integrity, of the discussions and analyses in [EISs]" is a first in this context and it will be interesting to watch whether it serves as the basis for future challenges advocating for use of the social cost of carbon or an equivalent tool.

**§ 28.05 Conclusion**

After a decade of ongoing federal court litigation and some substantial shifts in federal agency policies, the scope of the climate change analysis required by NEPA for fossil fuel projects is starting to come into focus. The issue is likely to remain at the center of NEPA litigation for some time as the science regarding potential climate change impacts develops further and federal agency policies become more settled. The level of analysis required for any individual project or action will vary by the nature of the proposal, the needs of the decision maker, the intensity of the effects, scientific uncertainty, controversy, and the public interest. What is now reasonably clear is that NEPA requires that federal agencies attempt to evaluate the reasonably foreseeable potential GHG emissions and impacts on climate change from proposed federal actions, and explain what practical limitations they face in doing so. Climate change may also affect an agency's obligations under NEPA insofar as it may well require the agency attempt to evaluate the effects of climate change on a proposed project and the affected environment (e.g., how climate change may exacerbate the potential environmental effects of a proposed project). We expect the latter category to become a more prominent topic of conversation and subject of litigation, implicating projects outside the fossil fuel industry, such as desert solar projects and water infrastructure projects, over the coming years.

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2. 242 U.S.C. §§ 4321-4347. [↑](#footnote-ref-3)
3. 3Revised Draft Guidance for Federal Departments and Agencies on Consideration of GHG Emissions and the Effects of Climate Change in NEPA Reviews, 79 Fed. Reg. 77,802, 77,823 (Dec. 24, 2014). [↑](#footnote-ref-4)
4. 442 U.S.C. §§ 4321, 4332(2)(C). [↑](#footnote-ref-5)
5. 5Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976); Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989). [↑](#footnote-ref-6)
6. 640 C.F.R. § 1500.1(a). [↑](#footnote-ref-7)
7. 7*Kleppe*, 427 U.S. at 410 n.21 (citing Natural Res. Def. Council, Inc. v. Morton, 458 F.2d 827, 838 (D.C. Cir. 1972)). [↑](#footnote-ref-8)
8. 8*Robertson*, 490 U.S. at 350. [↑](#footnote-ref-9)
9. 9*Id.* (quoting *Kleppe*, 427 U.S. at 409). [↑](#footnote-ref-10)
10. 1042 U.S.C. § 4332(2)(C). [↑](#footnote-ref-11)
11. 1140 C.F.R. § 1501.3. [↑](#footnote-ref-12)
12. 12Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1220 (9th Cir. 2008) (quoting Blue Mountains Biodiversity Project v. Blackwood, 161 F.3d 1208, 1212 (9th Cir. 2001)). [↑](#footnote-ref-13)
13. 13*See* Mark Squillace & Alexander Hood, "NEPA, Climate Change, and Public Lands Decision Making," 42 *Envtl. L.* 469, 475-76 (2012) (explaining that while the statute articulates five EIS requirements, CEQ reduced these requirements to two (citing 40 C.F.R. §§ 1502.14, .16)). [↑](#footnote-ref-14)
14. 1440 C.F.R. § 1502.14. [↑](#footnote-ref-15)
15. 15*Id.* § 1508.25(c). [↑](#footnote-ref-16)
16. 16*Id.* §§ 1502.16(a), 1508.8(a). [↑](#footnote-ref-17)
17. 17For purposes of the analysis, "effects" and "impacts" are synonymous. *Id.* § 1508.8. [↑](#footnote-ref-18)
18. 18*Id.* § 1508.8(b). [↑](#footnote-ref-19)
19. 19*Id.* [↑](#footnote-ref-20)
20. 20*Id.* § 1508.7. [↑](#footnote-ref-21)
21. 21*Id.* [↑](#footnote-ref-22)
22. 22*Id.* §§ 1508.20, .25 (alternatives include mitigation measures not included in the proposed action). [↑](#footnote-ref-23)
23. 2342 U.S.C. § 4332(2)(C). [↑](#footnote-ref-24)
24. 24Established in conjunction with the passage of NEPA, CEQ is the executive agency charged with implementing NEPA through regulations. *See* 40 C.F.R. § 1500.1. In 1978, CEQ issued binding regulations to help federal agencies comply with NEPA. *See* 40 C.F.R. pts. 1500-1508. Following issuance of those globally applicable regulations, most federal agencies have also developed (in concert with CEQ) their own, more nuanced, NEPA regulations to supplement CEQ's regulations. [↑](#footnote-ref-25)
25. 25*See* Carol Hardy Vincent, Laura A. Hanson & Carla N. Argueta, Cong. Research Serv., "Federal Land Ownership: Overview and Data" (CRS Report R42346 Mar. 3, 2017). [↑](#footnote-ref-26)
26. 26*See* 43 C.F.R. pt. 1600; WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 54 (D.D.C. 2019). [↑](#footnote-ref-27)
27. 27*See* 43 C.F.R. grp. 3400; W. Org. of Res. Councils v. Zinke, 892 F.3d 1234, 1239 (D.C. Cir. 2018). [↑](#footnote-ref-28)
28. 28*See* 15 U.S.C. § 717; *see also* 18 C.F.R. pt. 380 (FERC regulations implementing NEPA); Sierra Club v. FERC (*Freeport*), 827 F.3d 36, 41 (D.C. Cir. 2016). [↑](#footnote-ref-29)
29. 29Draft Memorandum from Kathleen A. McGinty, Chair, CEQ, to Heads of Federal Agencies, "Guidance Regarding Consideration of Global Climatic Change in Environmental Documents Prepared Pursuant to the National Environmental Policy Act," at 1 (Oct. 8, 1997). [↑](#footnote-ref-30)
30. 30Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1217 (9th Cir. 2008). [↑](#footnote-ref-31)
31. 31Memorandum from Nancy H. Sutley, Chair, CEQ, to Heads of Federal Departments and Agencies, "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions" (Feb. 18, 2010) (2010 Draft Guidance). [↑](#footnote-ref-32)
32. 32Revised Draft Guidance for Federal Departments and Agencies on Consideration of GHG Emissions and the Effects of Climate Change in NEPA Reviews, 79 Fed. Reg. 77,802 (Dec. 24, 2014). [↑](#footnote-ref-33)
33. 33*Id.* at 77,823. [↑](#footnote-ref-34)
34. 34*Id.* at 77,803. [↑](#footnote-ref-35)
35. 35*Id.* at 77,823 n.4. [↑](#footnote-ref-36)
36. 36*Id.* [↑](#footnote-ref-37)
37. 37*See* WildEarth Guardians v. Jewell, 738 F.3d 298, 309 n.5 (D.C. Cir. 2013) ("As the BLM concedes, the draft guidance is not an authoritative interpretation of NEPA's requirements entitled to deference but nevertheless we find it useful."). [↑](#footnote-ref-38)
38. 38CEQ, "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews" (Aug. 1, 2016) (2016 Final Guidance). [↑](#footnote-ref-39)
39. 39Exec. Order No. 13,783, "Promoting Energy Independence and Economic Growth," 82 Fed. Reg. 16,093 (Mar. 28, 2017); *see also* Withdrawal of Final Guidance for Federal Departments and Agencies on Consideration of GHG Emissions and the Effects of Climate Change in NEPA Reviews, 82 Fed. Reg. 16,576 (Apr. 5, 2017). [↑](#footnote-ref-40)
40. 40Draft NEPA Guidance on Consideration of GHG Emissions, 84 Fed. Reg. 30,097 (June 26, 2019). [↑](#footnote-ref-41)
41. 41*E.g., WildEarth Guardians*, 738 F.3d at 309. [↑](#footnote-ref-42)
42. 4240 C.F.R. § 1508.8(b). [↑](#footnote-ref-43)
43. 43*Id.* [↑](#footnote-ref-44)
44. 44Sierra Club v. FERC, 867 F.3d 1357, 1371 (D.C. Cir. 2017) (alteration in original) (quoting EarthReports, Inc. v. FERC (*Cove Point*), 828 F.3d 949, 955 (D.C. Cir. 2016)). [↑](#footnote-ref-45)
45. 45WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 72 (D.D.C. 2019). [↑](#footnote-ref-46)
46. 4652 F. Supp. 3d 1174, 1197 (D. Colo. 2014). [↑](#footnote-ref-47)
47. 47*Id.* at 1196. [↑](#footnote-ref-48)
48. 48Dine Citizens Against Ruining Our Env't v. OSMRE, 82 F. Supp. 3d 1201, 1214 (D. Colo. 2015), *vacated as moot*, 643 F. App'x 799 (10th Cir. 2016); WildEarth Guardians v. OSMRE, 104 F. Supp. 3d 1208, 1231 (D. Colo. 2015), *vacated as moot*, 652 F. App'x 717 (10th Cir. 2016). [↑](#footnote-ref-49)
49. 49*Diné Citizens*, 82 F. Supp. 3d at 1206; *WildEarth Guardians*, 104 F. Supp. 3d at 1230. [↑](#footnote-ref-50)
50. 50*Diné Citizens*, 82 F. Supp. 3d at 1213. [↑](#footnote-ref-51)
51. 51*WildEarth Guardians*, 104 F. Supp. 3d at 1230-31 (emphasis added). [↑](#footnote-ref-52)
52. 52No. 4:16-cv-00021, 2018 WL 1475470, at \*1 (D. Mont. Mar. 26, 2018). [↑](#footnote-ref-53)
53. 53*Id.* at \*13. [↑](#footnote-ref-54)
54. 54*Id.* (citing ***Kern*** v. BLM, 284 F.3d 1062, 1073 (9th Cir. 2002)). [↑](#footnote-ref-55)
55. 55*Id.* [↑](#footnote-ref-56)
56. 56*Id.* at \*12 (discussing High Country Conservation Advocates v. U.S. Forest Serv., 52 F. Supp. 3d 1174, 1189-90 (D. Colo. 2014); Mid States Coal. for Progress v. Surface Transp. Bd., 345 F.3d 520, 549-50 (8th Cir. 2003)). [↑](#footnote-ref-57)
57. 57*Id.* (quoting ***Kern***, 284 F.3d at 1072). [↑](#footnote-ref-58)
58. 58*Id.* (quoting ***Kern***, 284 F.3d at 1072). [↑](#footnote-ref-59)
59. 592016 Final Guidance, *supra* note 37, at 16 n.42 ("[W]here the proposed action involves fossil fuel extraction . . . . [t]he indirect effects of such an action that are reasonably foreseeable at the time would vary with the circumstances of the proposed action. For actions such as a Federal lease sale of coal for energy production, the impacts associated with the end-use of the fossil fuel being extracted would be the reasonably foreseeable combustion of that coal."). [↑](#footnote-ref-60)
60. 60For a time, the agencies did put forward the argument that approval of coal leases and mining plans will not increase coal consumption-and thus the combustion-related effects associated with coal production-because coal from other sources will replace the coal being approved for development. *See High Country*, 52 F. Supp. 3d at 1197-98; Mont. Envtl. Info. Ctr. v. OSMRE, 274 F. Supp. 3d 1074, 1098-99 (D. Mont. 2017). The agencies relied on this line of reasoning both to argue that they did not need to analyze combustion impacts at all, *see High Country*, 52 F. Supp. 3d at 1197-98 and *Mont. Envtl. Info. Ctr.*, 274 F. Supp. 3d at 1098-99, and to argue separately that the direct and indirect effects of the action (including combustion-related effects) would not differ from the no action alternative because the coal would be mined and burned regardless of its source, *see* WildEarth Guardians v. BLM, 870 F.3d 1222, 1234 (10th Cir. 2017). The U.S. Court of Appeals for the Tenth Circuit rejected this "perfect substitution" argument-seemingly settling the debate. *Id.* at 1237-38. [↑](#footnote-ref-61)
61. 61Diné Citizens Against Ruining Our Env't v. OSMRE, 82 F. Supp. 3d 1201, 1213 (D. Colo. 2015), *vacated as moot*, 643 F. App'x 799 (10th Cir. 2016). [↑](#footnote-ref-62)
62. 62Squillace & Hood, *supra* note 12, at 501. [↑](#footnote-ref-63)
63. 63Wilderness Workshop v. BLM, 342 F. Supp. 3d 1145, 1155 (D. Colo. 2018); San Juan Citizens Alliance v. BLM, 326 F. Supp. 3d 1227, 1244 (D.N.M. 2018); W. Org. of Res. Councils v. BLM, No. 4:16-cv-00021, 2018 WL 1475470, at \*13 (D. Mont. Mar. 26, 2018). [↑](#footnote-ref-64)
64. 64*W. Org. of Res. Councils*, 2018 WL 1475470, at \*13 (quoting ***Kern*** v. BLM, 284 F.3d 1062, 1073 (9th Cir. 2002)). [↑](#footnote-ref-65)
65. 65*Id.* [↑](#footnote-ref-66)
66. 66*Wilderness Workshop*, 342 F. Supp. 3d at 1155-56; *San Juan*, 326 F. Supp. 3d at 1243-44. [↑](#footnote-ref-67)
67. 67BLM, "Pecos District Carlsbad Field Office ***Oil*** and Gas Lease Sale, March 2019," at 24-25; BLM, "Farmington Field Office ***Oil*** and Gas Lease Sale, March 2019," at 31-32. [↑](#footnote-ref-68)
68. 68BLM, "Draft Resource Management Plan and Environmental Impact Statement: Carlsbad Field Office, Pecos District, New Mexico," at 4-269 to 4-270 (Aug. 2018). [↑](#footnote-ref-69)
69. 69*E.g.*, "Farmington Field Office ***Oil*** and Gas Lease Sale," *supra* note 66, at 30. [↑](#footnote-ref-70)
70. 70*Id.* [↑](#footnote-ref-71)
71. 71368 F. Supp. 3d 41, 75 (D.D.C. 2019). [↑](#footnote-ref-72)
72. 72*Id.* [↑](#footnote-ref-73)
73. 73*Id.* at 74. [↑](#footnote-ref-74)
74. 74*Id.* at 75; *see also* Citizens for a Healthy Cmty. v. BLM, 377 F. Supp. 3d 1223, 1237 (D. Colo. 2019) (citing Michael Burger & Jessica Wentz, "Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review," 41 *Harv. Envtl. L. Rev*. 109, 183 (2017), as a resource identifying "a variety of available . . . tools that can be used to estimate the indirect [GHG] emissions from fossil fuel production"). [↑](#footnote-ref-75)
75. 75BLM, "Supplemental Environmental Assessment for the May 2015-August 2016 Sold and Issued Leases," at 30-33 (Apr. 12, 2019) (Wyoming Supplemental EA). [↑](#footnote-ref-76)
76. 76*See* Defendants' Motion for Voluntary Remand and Memorandum in Support at 2, WildEarth Guardians v. Bernhardt, No. 1:16-cv-01724 (D.D.C. May 24, 2019). The court granted BLM's motion in a May 29, 2019, minute order. [↑](#footnote-ref-77)
77. 77*See also* Defendants' Opposition to Plaintiffs' Motion for Summary Judgment and Memorandum in Support of Cross-Motion for Summary Judgment at 21, WildEarth Guardians v. BLM, No. 4:18-cv-00073 (D. Mont. Apr. 8, 2019), 2019 WL 1772837 (noting that in a recent leasing EA for the Miles City field office, BLM "calculated the indirect emissions from combustion of ***oil*** and gas produced from the lease sales. . . . assuming 100 percent combustion of ***oil*** and gas produced from the lease sales, even though uses of ***oil*** and gas may vary"). [↑](#footnote-ref-78)
78. 78*See* 40 C.F.R. § 1502.22(b) (noting that when information related to foreseeable impacts is "incomplete or unavailable," the agency must simply make clear that the information is lacking and provide a summary of the "existing credible scientific evidence . . . relevant to evaluating the reasonably foreseeable significant adverse impacts on the human environment" and "the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community"). [↑](#footnote-ref-79)
79. 79867 F.3d 1357 (D.C. Cir. 2017). [↑](#footnote-ref-80)
80. 80*Id.* at 1373. [↑](#footnote-ref-81)
81. 81*Id.* at 1371-72. [↑](#footnote-ref-82)
82. 82*Id.* at 1372 (citation omitted). [↑](#footnote-ref-83)
83. 83*Id.* (citing Sierra Club v. FERC (*Freeport*), 827 F.3d 36 (D.C. Cir. 2016); Sierra Club v. FERC (*Sabine Pass*), 827 F.3d 59 (D.C. Cir. 2016); EarthReports, Inc. v. FERC (*Cove Point*), 828 F.3d 949 (D.C. Cir. 2016)). [↑](#footnote-ref-84)
84. 84*Sabine Pass*, 827 F.3d at 68; *Freeport*, 827 F.3d at 46. [↑](#footnote-ref-85)
85. 85*Sabine Pass*, 827 F.3d at 68. [↑](#footnote-ref-86)
86. 86541 U.S. 752 (2004). [↑](#footnote-ref-87)
87. 87*Sierra Club*, 867 F.3d at 1373 (citing *Freeport*, 827 F.3d at 47); *see also Sabine Pass*, 827 F.3d at 68 ("As [FERC] explained, the [DOE] alone has the legal authority to authorize Sabine Pass to increase commodity exports of [LNG]. The challenged [FERC] orders therefore are not the legally relevant cause of the indirect effects Sierra Club raises." (citations omitted)); *Cove Point*, 828 F.3d at 956 (same). [↑](#footnote-ref-88)
88. 88WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 73 (D.D.C. 2019). [↑](#footnote-ref-89)
89. 89*Freeport*, 827 F.3d at 47 (alteration in original) (internal quotation marks omitted); *see also Sabine Pass*, 827 F.3d at 69 (agreeing with FERC's conclusion that "the Terminal's liquefaction operations did not necessitate an increase in domestic natural gas production"). [↑](#footnote-ref-90)
90. 90*Sierra Club*, 867 F.3d at 1372. [↑](#footnote-ref-91)
91. 91*Id.* at 1373. [↑](#footnote-ref-92)
92. 92*Id.* [↑](#footnote-ref-93)
93. 93*Id.* (citations omitted) (quoting Minisink Residents for Envtl. Prot. & Safety v. FERC, 762 F.3d 97, 101 (D.C. Cir. 2014)). [↑](#footnote-ref-94)
94. 94*Id.* (quoting *Freeport*, 827 F.3d at 48); *see also id.* ("*Public Citizen* thus did not excuse FERC from considering these indirect effects."). [↑](#footnote-ref-95)
95. 95*Id.* at 1374. [↑](#footnote-ref-96)
96. 96*See id.* ("Without such comparisons, it is difficult to see how FERC could engage in 'informed decision making' with respect to the [GHG] effects of this project, or how 'informed public comment' could be possible."); *see also id.* (citing WildEarth Guardians v. Jewell, 738 F.3d 298, 309 (D.C. Cir. 2013) (the "estimated level of GHG emissions can serve as a reasonable proxy for assessing potential climate change impacts, and provide decision makers and the public with useful information for a reasoned choice among alternatives" (alteration omitted))). [↑](#footnote-ref-97)
97. 97*Id.* [↑](#footnote-ref-98)
98. 98*Id. Sierra Club* also addressed an argument similar to the one BLM has made in the coal context: that it need not make reasonable estimates of potential emissions impacts because the new natural gas pipeline would offer capacity for natural gas in a way that would allow utilities to retire "dirtier, coal-fired plants." *Id.* at 1375. The D.C. Circuit did not buy it. Instead, the court concluded not only that FERC is not "absolved from estimating carbon emissions" as a result of potential "offset" emissions reductions, *id.*, but also that FERC must include such offset emissions as a part of the overall analysis on the basis that NEPA requires an EIS address "those [effects] resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial," *id.* (quoting 40 C.F.R. § 1508.8). Thus, even where there may be perfect (or partial) substitution of GHG emissions, "the agency still needs to discuss both the good and the bad." *Id.* [↑](#footnote-ref-99)
99. 99This principle was recently put to the test in a case before the D.C. Circuit involving the Atlantic Sunrise pipeline project. *See* Allegheny Def. Project v. FERC, 932 F.3d 940 (D.C. Cir. 2019). In that case, during oral arguments, the court did not seem entirely satisfied with the petitioners' answers to what *exactly* FERC failed to do when considering the quantification of emissions that it did develop as proxy. Oral arguments were held in late 2018, and in August 2019 the D.C. Circuit held that FERC satisfied its NEPA obligations and adequately addressed the indirect effects of downstream GHG emissions by "estimat[ing] the amount of CO2 emissions resulting from the gas that the Project would transport and predict[ing] that those emissions would be partially offset by reductions in higher carbon-emitting fuel that the Project's natural gas would replace." *Id.* at 946; *see also id.* ("Neither the Homeowners nor the Environmental Associations have identified what more [FERC] should have said."). [↑](#footnote-ref-100)
100. 100767 F. App'x 19 (D.C. Cir. 2019) (dismissing for lack of jurisdiction). [↑](#footnote-ref-101)
101. 101925 F.3d 510 (D.C. Cir. 2019) (denying the petition for review). [↑](#footnote-ref-102)
102. 102Dominion Transmission, Inc., 163 FERC ¶ 61,128, at P 62 (2018). [↑](#footnote-ref-103)
103. 103*Birckhead*, 925 F.3d at 518; *see also id.* ("According to [FERC], then, unlike in *Sierra Club*, '[a]ny attempt to quantify downstream . . . emissions on the record before us' in this case 'would result in a number so imprecise as to be meaningless.'" (second alteration in original) (quoting Tenn. Gas Pipeline Co., 163 FERC ¶ 61,190, at P 61 (2018))). [↑](#footnote-ref-104)
104. 104Oral Argument, *Birckhead*, 925 F.3d 510 (No. 18-1218), https://www.courtlistener.com/audio/62837/lori-birckhead-v-federal-energy-regulatory-commission/; Oral Argument, *Otsego*, 767 F. App'x 19 (No. 18-1188), https://www.courtlistener.com/audio/62836/otsego-2000-v-federal-energy-regulatory-commission/. [↑](#footnote-ref-105)
105. 105*Otsego*, 767 F. App'x 19. In particular, the court held that Otsego "failed to demonstrate Article III standing," on the basis that "Otsego's affidavits do not identify any injury other than the organization's expenditure of time and money related to this litigation." *Id.* at 21. [↑](#footnote-ref-106)
106. 106*Birckhead*, 925 F.3d at 518. [↑](#footnote-ref-107)
107. 107*Id.* at 519. [↑](#footnote-ref-108)
108. 108*Id.* [↑](#footnote-ref-109)
109. 109*Id.* [↑](#footnote-ref-110)
110. 110*Id.* at 518 ("[FERC] is wrong to suggest that downstream emissions are not reasonably foreseeable simply because the gas transported by the Project may displace existing natural gas supplies or higher-emitting fuels"). [↑](#footnote-ref-111)
111. 111Oral Argument at 12:34, *Otsego*, 767 F. App'x 19 (No. 18-1188). [↑](#footnote-ref-112)
112. 112*Birckhead*, 925 F.3d at 520. [↑](#footnote-ref-113)
113. 113*Id.* [↑](#footnote-ref-114)
114. 114Port Arthur LNG, LLC, 167 FERC ¶ 61,052 (2019); Driftwood LNG LLC, 167 FERC ¶ 61,054 (2019). [↑](#footnote-ref-115)
115. 115*Driftwood*, 167 FERC ¶ 61,054, at P 100 (footnotes omitted); *see also Port Arthur*, 167 FERC ¶ 61,052, at P 138. [↑](#footnote-ref-116)
116. 116*Driftwood*, 167 FERC ¶ 61,054, at P 7 (LaFleur, Comm'r, concurring); *Port Arthur*, 167 FERC ¶ 61,052, at P 8 (LaFleur, Comm'r, concurring). [↑](#footnote-ref-117)
117. 117*Driftwood*, 167 FERC ¶ 61,054, at P 1 (Glick, Comm'r, dissenting); *Port Arthur*, 167 FERC ¶ 61,052, at P 1 (Glick, Comm'r, dissenting). [↑](#footnote-ref-118)
118. 118*Driftwood*, 167 FERC ¶ 61,054, at P 4; *Port Arthur*, 167 FERC ¶ 61,052, at P 4. [↑](#footnote-ref-119)
119. 119*Driftwood*, 167 FERC ¶ 61,054, at P 4; *Port Arthur*, 167 FERC ¶ 61,052, at P 4. [↑](#footnote-ref-120)
120. 120No. 18-1128 (D.C. Cir. filed May 9, 2018). [↑](#footnote-ref-121)
121. 121Otsego 2000 v. FERC, 767 F. App'x 19 (D.C. Cir. 2019); Birckhead v. FERC, 925 F.3d 510 (D.C. Cir. 2019); Brief of Respondent FERC at 49, *Delaware Riverkeeper*, No. 18-1128 (D.C. Cir. June 6, 2019) ("The record before FERC lacked sufficient information both as to the origin of the gas to be transported and forecasts to allow any meaningful prediction of production-related impacts."). [↑](#footnote-ref-122)
122. 122Dominion Transmission, Inc., 163 FERC ¶ 61,128, at P 28 (2018). [↑](#footnote-ref-123)
123. 123*Id.* at P 29; *see also* Brief of Respondent FERC at 37, *Birckhead*, 925 F.3d 510 (No. 18-1218), 2019 WL 1103222. [↑](#footnote-ref-124)
124. 124Sierra Club v. FERC (*Freeport*), 827 F.3d 36, 47 (D.C. Cir. 2016); Sierra Club v. FERC (*Sabine Pass*), 827 F.3d 59, 69 (D.C. Cir. 2016). [↑](#footnote-ref-125)
125. 125*Birckhead*, 925 F.3d at 517-18 (quoting Sierra Club v. FERC, 867 F.3d 1357, 1379 (D.C. Cir. 2017)). [↑](#footnote-ref-126)
126. 126*Id.* at 518. [↑](#footnote-ref-127)
127. 127*Id.* at 517. [↑](#footnote-ref-128)
128. 128*Id.* at 518. [↑](#footnote-ref-129)
129. 129*Id.* [↑](#footnote-ref-130)
130. 130Dominion Transmission, Inc., 163 FERC P 61,128 (2018). [↑](#footnote-ref-131)
131. 131*Id.* at PP 41-42, 44 (footnotes omitted). [↑](#footnote-ref-132)
132. 132*Id.* at P 43. [↑](#footnote-ref-133)
133. 133Otsego 2000 v. FERC, 767 F. App'x 19, 21 (D.C. Cir. 2019) ("We do not reach the merits of Petitioner's challenge because it failed to demonstrate Article III standing to petition this Court."). [↑](#footnote-ref-134)
134. 13440 C.F.R. § 1508.7. [↑](#footnote-ref-135)
135. 135*E.g.*, ***Kern*** v. BLM, 284 F.3d 1062, 1072 (9th Cir. 2002). [↑](#footnote-ref-136)
136. 136TOMAC, Taxpayers of Mich. Against Casinos v. Norton, 433 F.3d 852, 864 (D.C. Cir. 2006) (emphasis added); *see also* Sierra Club v. FERC, 867 F.3d 1357, 1370 (D.C. Cir. 2017) (finding FERC satisfied the demands of a NEPA cumulative impacts analysis where "[t]he EIS acknowledged that the Sabal Trail project will generate air pollution and noise pollution in Albany, and it projected cumulative levels of both of these types of pollution from all sources in the vicinity of the compressor station, finding that both would remain below harmful thresholds"); Sierra Club v. FERC (*Freeport*), 827 F.3d 36, 49-50 (D.C. Cir. 2016). [↑](#footnote-ref-137)
137. 137Friends of the Wild Swan v. Weber, 767 F.3d 936, 943 (9th Cir. 2014). [↑](#footnote-ref-138)
138. 138*See, e.g.*, Squillace & Hood, *supra* note 12, at 481-82 ("[T]he required analysis of cumulative GHG impacts on the environment in general makes much less sense. The smallest GHG emission-along with the emissions of other reasonably foreseeable actions-incrementally leads to global climate change. This arguably requires a full-scale analysis of global climate change generally for every action that triggers NEPA compliance. A literal application of the cumulative impacts requirement to climate change seems not only impractical, but also unhelpful to the decision-making process . . . ." (footnotes omitted)). [↑](#footnote-ref-139)
139. 1392016 Final Guidance, *supra* note 37, at 17. [↑](#footnote-ref-140)
140. 140*Id.* [↑](#footnote-ref-141)
141. 141Dominion Transmission, Inc., 163 FERC P 61,128, at P 31 (2018) ("The requirement that an impact must be 'reasonably foreseeable' to be considered in a NEPA analysis applies to both indirect and cumulative impacts."). [↑](#footnote-ref-142)
142. 142*See* WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 77 (D.D.C. 2019); Citizens for a Healthy Cmty. v. BLM, 377 F. Supp. 3d 1223, 1242 (D. Colo. 2019). [↑](#footnote-ref-143)
143. 143*See* Plaintiffs' Opening Merits Brief at 17, *Citizens for a Healthy Cmty.*, 377 F. Supp. 3d 1223 (No. 1:17-cv-02519), ECF No. 47 ("BLM and [the Forest Service] failed to discuss the cumulative impact of the Projects' emissions on climate change when added to emissions from BLM-managed lands on a regional and national scale."); Plaintiffs' Motion for Summary Judgment at 41, *WildEarth Guardians*, 368 F. Supp. 3d 41 (No. 1:16-cv-01724), ECF No. 55 ("Failing to account for the cumulative impacts of emissions from Wyoming leases (as well as the Utah and Colorado leases also challenged in this case), together with emissions from the 700 million acres of federal onshore subsurface minerals managed by BLM, violates NEPA . . . ."). [↑](#footnote-ref-144)
144. 144Kleppe v. Sierra Club, 427 U.S. 390, 414 (1976). [↑](#footnote-ref-145)
145. 145Most notably, in *WildEarth Guardians*, the U.S. District Court for the District of Columbia included broad language stating that as part of its cumulative impacts analysis, BLM must "consider the cumulative impact of GHG emissions generated by past, present, or reasonably foreseeable BLM lease sales in the region and nation." 368 F. Supp. 3d at 77. And as noted above, BLM subsequently published a revised EA for the Wyoming leases at issue. *See* Wyoming Supplemental EA, *supra* note 74. That EA includes an analysis of cumulative GHG emissions from federal leasing in Wyoming and compares those emissions to regional and national leasing and development trends. *Id.* at 39-48. The analysis appears to be the first of its kind and it will thus be interesting to watch if (1) BLM's methodology is subsequently challenged or (2) BLM begins to incorporate a similar analysis into all leasing documents going forward. [↑](#footnote-ref-146)
146. 146*E.g.*, Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc., 462 U.S. 87, 97-100 (1983). [↑](#footnote-ref-147)
147. 14779 Fed. Reg. 77,802, 77,823 (Dec. 24, 2014) (emphasis added). [↑](#footnote-ref-148)
148. 1482010 Draft Guidance, *supra* note 30, at 3. [↑](#footnote-ref-149)
149. 149*See* WildEarth Guardians v. U.S. Forest Serv., 828 F. Supp. 2d 1223, 1239 (D. Colo. 2011); WildEarth Guardians v. Jewell, 738 F.3d 298, 309 (D.C. Cir. 2013); WildEarth Guardians v. BLM, 8 F. Supp. 3d 17, 35 (D.D.C. 2014). [↑](#footnote-ref-150)
150. 150*E.g., WildEarth Guardians*, 738 F.3d at 309. [↑](#footnote-ref-151)
151. 151High Country Conservation Advocates v. U.S. Forest Serv., 52 F. Supp. 3d 1174, 1188 (D. Colo. 2014). [↑](#footnote-ref-152)
152. 152*Id.* at 1191. [↑](#footnote-ref-153)
153. 153*Id.* at 1187. [↑](#footnote-ref-154)
154. 154*Id.* at 1190. The social cost of carbon protocol "is an estimate of the monetized damages associated with an incremental increase in carbon emissions in a given year." Interagency Working Grp. on Social Cost of Carbon, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866," at 2 (May 2013). [↑](#footnote-ref-155)
155. 155U.S. Forest Serv., "Final Environmental Impact Statement: Federal Coal Lease Modifications COC-1362 & COC-67232," at 190 (Aug. 2012). [↑](#footnote-ref-156)
156. 156*High Country*, 52 F. Supp. 3d at 1191. [↑](#footnote-ref-157)
157. 157*Id.* at 1182. [↑](#footnote-ref-158)
158. 158*Id.* at 1190-91. [↑](#footnote-ref-159)
159. 159*Id.* at 1191. [↑](#footnote-ref-160)
160. 160*Id.* at 1191-92. [↑](#footnote-ref-161)
161. 161*Id.* at 1192. [↑](#footnote-ref-162)
162. 162Sierra Club v. FERC, 867 F.3d at 1375 (D.C. Cir. 2017) (explaining the social cost of carbon as a "tool, developed by an interagency working group, [that] attempts to value in dollars the long-term harm done by each ton of carbon emitted"). [↑](#footnote-ref-163)
163. 163*See* EarthReports, Inc. v. FERC (*Cove Point*), 828 F.3d 949, 956 (D.C. Cir. 2016) ("[FERC] acknowledged the availability of the 'social cost of carbon' tool, but in its opinion concluded that 'it would not be appropriate or informative to use for this project' for three reasons: the lack of consensus on the appropriate discount rate leads to 'significant variation in output[,]' the tool 'does not measure the actual incremental impacts of a project on the environment[,]' and 'there are no established criteria identifying the monetized values that are to be considered significant for NEPA purposes.' " (alterations in original) (quoting Dominion Cove Point LNG, LP, 151 FERC P 61,095, at P 54 (2015))). [↑](#footnote-ref-164)
164. 164*Sierra Club*, 867 F.3d at 1375. [↑](#footnote-ref-165)
165. 165*See, e.g.*, BLM, "Final Socioeconomics Summary Report: Greens Hollow Coal Lease Tract," at 8 (2015); OSMRE, "Bull Mountains Mine No. 1 Federal Mining Plan Modification Environmental Assessment," at app. C cmt. 22 (Jan. 2015); Fla. Se. Connection, LLC, 164 FERC P 61,099, at P 27 (2018) ("NEPA does not require agencies to conduct a cost-benefit analysis or use the Social Cost of Carbon to monetize the climate change effects related to a project."); *see also* DTE Midstream Appalachia, LLC, 162 FERC P 61,238, at P 79 (2018) (explaining that FERC's "policy on the use of the Social Cost of Carbon has been to recognize the availability of this tool, while concluding that it is not appropriate for use in project-level NEPA reviews"); Fla. Se. Connection, LLC, 162 FERC P 61,233, at PP 30-51 (2018) (discussing determination not to employ the social cost of carbon in FERC proceedings). [↑](#footnote-ref-166)
166. 166*See* BLM, Internal Memorandum, "UPDATE Addressing Climate Change Under NEPA," at 1 (Apr. 2015), https://www.eenews.net/assets/2015/04/15/document\_gw\_01.pdf ("No court case . . . currently requires that estimates of the [social cost of carbon] associated with potential GHG emissions be included in a NEPA context . . . ."); 2016 Final Guidance, *supra* note 37, at 32-33. [↑](#footnote-ref-167)
167. 167This is compared to rulemakings where federal courts have upheld agency decisions to utilize the social cost of carbon to calculate environmental costs of a proposed rule. *See* Zero Zone, Inc. v. U.S. Dep't of Energy, 832 F.3d 654, 678 (7th Cir. 2016). [↑](#footnote-ref-168)
168. 168*See, e.g.*, Citizens for a Healthy Cmty. v. BLM, 377 F. Supp. 3d 1223 (D. Colo. Mar. 27, 2019); WildEarth Guardians v. Zinke, 368 F. Supp. 3d 41, 77 (D.D.C. 2019); San Juan Citizens Alliance v. BLM, 326 F. Supp. 3d 1227, 1241 (D.N.M. 2018); Wilderness Workshop v. BLM, 342 F. Supp. 3d 1145, 1159-60 (D. Colo. 2018); W. Org. of Res. Councils v. BLM, No. 4:16-cv-00021, 2018 WL 1475470, at \*14 (D. Mont. Mar. 26, 2018); WildEarth Guardians v. Jewell, No. 1:16-cv-00605, 2017 WL 3442922, at \*13 (D.N.M. Feb. 16, 2017); Fla. Se. Connection, LLC, 164 FERC P 61,099, at P 27 (2018) ("It is appropriate to qualitatively discuss climate change effects, which, as discussed above, we did, and to quantify GHG emissions as a proxy for climate change effects when the emissions are related to the project."). [↑](#footnote-ref-169)
169. 169*E.g., WildEarth Guardians*, 368 F. Supp. 3d at 78-79; *W. Org. of Res. Councils*, 2018 WL 1475470, at \*14; *Wilderness Workshop*, 342 F. Supp. 3d at 1159-60. [↑](#footnote-ref-170)
170. 170*E.g., Wilderness Workshop*, 342 F. Supp. 3d at 1159. Only one recent case took the opposite position, though it did not expressly articulate its rationale nor acknowledge the potential distinction between a NEPA socioeconomic analysis and a formalized cost-benefit analysis. *See* Mont. Envtl. Info. Ctr. v. OSMRE, 274 F. Supp. 3d 1074, 1098-99 (D. Mont. 2017) (relying, in part, on agency's inclusion of socioeconomic benefits in EA to hold that agency arbitrarily failed to quantify the costs of GHG emissions). [↑](#footnote-ref-171)
171. 171*See San Juan*, 326 F. Supp. 3d at 1241; *see also WildEarth Guardians*, 368 F. Supp. 3d at 79 (" '[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.' 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.' " (alteration in original) (citations omitted) (quoting WildEarth Guardians v. BLM, 8 F. Supp. 3d 17, 35 (D.D.C. 2014); Sierra Club v. FERC, 867 F.3d 1357, 1368 (D.C. Cir. 2017))). [↑](#footnote-ref-172)
172. 172Appalachian Voices v. FERC, No. 17-1271, 2019 WL 847199, at \*2 (D.C. Cir. Feb. 19, 2019) (unpublished); Brief of Respondent FERC at 51-52, *Appalachian Voices*, 2019 WL 847199 (No. 17-1271), 2018 WL 6119933. [↑](#footnote-ref-173)
173. 173*Appalachian Voices*, 2019 WL 847199, at \*2 ("In the absence of any explanation as to how FERC should have considered adverse impacts from downstream [GHG] emissions in its public interest determination under the Natural Gas Act using something other than the Social Cost of Carbon, we have no basis for saying that FERC's treatment of the issue in the Certificate Order was inadequate, unreasonable, or otherwise contrary to NEPA or the Natural Gas Act."); *see also id.* (citing *Sierra Club*, 867 F.3d at 1375 ("FERC must either quantify and consider the project's downstream carbon emissions or explain in more detail why it cannot do so.")). [↑](#footnote-ref-174)
174. 174Citizens for a Healthy Cmty. v. BLM, 377 F. Supp. 3d 1223, 1241 (D. Colo. 2019); *Wilderness Workshop*, 342 F. Supp. 3d at 1159. [↑](#footnote-ref-175)
175. 175368 F. Supp. 3d at 79 n.31. [↑](#footnote-ref-176)
176. 176*Id.* [↑](#footnote-ref-177)
177. 177*Id.* (citation omitted). [↑](#footnote-ref-178)