



Institute for
Policy Integrity

NEW YORK UNIVERSITY SCHOOL OF LAW

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To: Office of Energy Projects, Federal Energy Regulatory Commission, Department of Energy

Subject: Failure to Project Indirect Greenhouse Gas Emissions or Monetize Emissions in Draft Environmental Assessment for the Enhancement by Compression Project (Docket No. CP20-48-000)

The Institute for Policy Integrity at New York University School of Law (“Policy Integrity”)¹ respectfully submits these comments on the Federal Energy Regulatory Commission’s (“FERC” or “the Commission”) Draft Environmental Assessment for the Iroquois Gas Transmission System’s Enhancement by Compression Project (“Project”).² Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy. Policy Integrity regularly submits comments to federal agencies on the social cost of greenhouse gases and assessments under the National Environmental Policy Act (“NEPA”) and the Natural Gas Act (“NGA”).

In the Environmental Assessment, FERC projects that the Project—which calls for the construction and operation of four natural-gas compressor stations in New York and Connecticut—will “provide a total of 125,000 Dekatherms per day of incremental firm transportation service” to existing customers of Iroquois, the Consolidated Edison Company of New York, and National Grid.³ Although FERC does not acknowledge this, basic calculations demonstrate that the combustion of this volume of natural gas could result in the emission of over 2.4 million metric tons of downstream emissions in carbon-dioxide equivalent per year.⁴

¹ This document does not purport to represent the views, if any, of New York University School of Law.

² FED. ENERGY REG. COMM’N, ENHANCEMENT BY COMPRESSION PROJECT ENV’T ASSESSMENT (Docket No. CP20-48-000) (Sept. 2020) [hereinafter “EA”].

³ *Id.* at A-1.

⁴ The 125,000 dekatherms per day that the Project would transport is equivalent to 6,614 metric tons of carbon dioxide equivalent per day. See EPA Greenhouse Gases Equivalencies Calculator, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>. Multiplying that total by 365 equals 24.14 million metric tons per year. Note that these calculations do not endorse FERC’s estimates of natural gas transportation.

This is a substantial amount of emissions that vastly exceeds the annual operational emissions from the Project that FERC does disclose, which total approximately 424,000 metric tons per year.⁵ Should FERC finalize the Environmental Assessment and approve the Project without disclosing and considering its downstream and other indirect emissions, it would risk violating NEPA and the NGA.

Moreover, both the quantified and unquantified emissions from the Project will produce substantial climate-related damages such as sea-level rise, greater incidence of coastal storms and extreme weather events, and human health impacts and mortality from heat-related illness. While NEPA and the NGA require FERC to disclose and assess the significance of the contributions of its actions to such environmental impacts—and an available metric, the social cost of greenhouse gases, allows the agency to do just that—FERC fails to estimate such actual, real-world climate impacts. Yet, as these social cost metrics reveal, approving the Project could result in \$160 million or more in annual climate costs from both direct and downstream emissions.⁶ This substantial cost bears heavily on assessing whether the Project is in fact in the public interest, and FERC’s failure to consider the severity and magnitude of the Project’s climate impacts is insufficient under NEPA and the NGA.

By measuring only a small fraction of the Project’s greenhouse gas emissions and failing to assess the significance of the emissions it does quantify, the Commission lacks a reasonable basis to conclude that the Project will have “no significant impact” on the environment.⁷ Should the Commission approve the Project based on such a cursory review, its determination that the Project is in the public interest would therefore be arbitrary and capricious.

Upstream and Downstream Emissions

Natural-gas transport projects regularly and foreseeably produce emissions beyond so-called “direct emissions”—i.e., those directly emitted from the construction and operation of transport infrastructure. Natural-gas transport also produces two types of indirect emissions, widely referred to as “upstream” and “downstream” emissions.

“Upstream” emissions are greenhouse gases that result from the production of natural gas, including emissions spewed by production equipment and fugitive methane that escapes into the atmosphere through leaks or intentional release.⁸ Because natural-gas transport projects make it easier to supply natural gas, the commodity becomes cheaper, and so these projects make natural gas more competitive in the market and therefore drive an increase in natural-gas

⁵ EA at B-72.

⁶ Annual operational and downstream emissions collectively total approximately 2.84 million metric tons of carbon dioxide equivalent. *See supra* notes 4–5 and accompanying text. The Interagency Working Group’s central estimate of the social cost of carbon for year 2025 emissions is \$46 in 2007\$. Interagency Working Group on the Social Cost of Carbon, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis* 4 (2016). Adjusted for inflation, that equals approximately \$57 in 2019\$. 2.84 million tons of CO₂e* \$57 = \$161.88 million. In a proper cost-benefit analysis, that calculation of costs from year 2025 emissions would be discounted back to present value. Note that this calculation does not account for the Project’s upstream emissions, and assumes full burn of all transported gas.

⁷ EA at C-10; *see also id.* at B-111 (“[I]mpacts associated with the Project would be relatively minor.”).

⁸ EPA, *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2018* at 3-85 (2020) (describing emissions associated with production), <https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf>.

production and associated emissions.⁹ A natural-gas pipeline and its related infrastructure thus predictably causes upstream emissions, and numerous tools are available to estimate the volume of these emissions.

“Downstream” emissions are those unleashed by the combustion of natural gas when converted into energy. Such combustion is a natural-gas transport project’s “entire purpose,”¹⁰ as the “vast majority, 97 percent, of all natural gas consumed [domestically] is combusted.”¹¹ Total combustion-related emissions can be calculated from a pipeline project’s transport,¹² and typically far surpass the project’s direct emissions.¹³

The NGA and NEPA require FERC to consider a pipeline’s total emissions—not just direct emissions—before approving a project. The NGA requires FERC to consider such emissions because FERC must ensure that a project is “required by the present or future public convenience and necessity.”¹⁴ This determination requires FERC to “balance the public benefits against the adverse effects of the project ... including adverse environmental effects”—requiring it to fully assess the “environmental effects of pipelines it approves” including indirect effects like downstream emissions.¹⁵ NEPA also requires FERC to meaningfully consider total emissions as part of the “hard look” agencies must take at environmental impacts when considering major projects.¹⁶

Yet confronted with its statutory obligations to consider both upstream and downstream greenhouse gas emissions, the Commission quantifies only the Project’s direct emissions from construction and operation.¹⁷ FERC does not mention or acknowledge the possibility of upstream emissions, nor offer any justifications for its failure to project these emissions. With regard to downstream emissions, the Commission presents no quantification or analysis of its own, but states without endorsement that the applicant believes that the Project may “result in a reduction of [greenhouse gas] emissions” because it “would provide natural gas to local distribution

⁹ Jayni Hein et al., Inst. for Pol’y Integrity, *Pipeline Approvals and Greenhouse Gas Emissions* (2019) (“Basic principles of supply and demand predict that lowering the cost of supply of a commodity like natural gas will increase the supply of that product; that increasing the supply of gas will lower the market price of gas to the consumer; and that lowering the price will lead to increased consumer demand for and consumption of that commodity.”).

¹⁰ *Sierra Club v. FERC*, 867 F.3d 1357, 1372 (D.C. Cir. 2017) [hereinafter “*Sabal Trail*”].

¹¹ *Tennessee Gas Pipeline Co., LLC*, 170 FERC ¶ 61,142, at P 8 (Feb. 21, 2020) (Glick, Comm’r, dissenting in part).

¹² See EPA, *Greenhouse Gas Equivalencies Calculator—Calculations and References*, <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references> (last updated May 27, 2020).

¹³ James Bradbury et al., Dep’t of Energy, *Greenhouse Gas Emissions and Fuel Use Within the Natural Gas Supply Chain* 4 (2015) (attributing roughly 80 percent of all greenhouse emissions generated by natural-gas supply chain to combustion).

¹⁴ *Sabal Trail*, 867 F.3d at 1379 (quoting 15 U.S.C. § 717f(e)).

¹⁵ *Id.* at 1373 (internal quotation marks omitted).

¹⁶ *Id.* at 1373–74; see also *N. Plains Res. Council, Inc. v. Surface Transp. Bd.*, 668 F.3d 1067, 1082 (9th Cir. 2011) (requiring agency to consider upstream emissions from coal production due to construction of coal railroad); see generally *Balt. Gas & Elec. Co. v. NRDC*, 462 U.S. 87, 97 (1983) (mandating “hard look” assessment under NEPA).

¹⁷ See EA at B-67 to -73 (estimating construction and operational emissions).

companies to replace fuel oil, which has higher [greenhouse gas] emissions” than natural gas.¹⁸ FERC’s analysis of both impacts is insufficient.

Although the Commission offers no justification for failing to assess upstream emissions, it has previously alleged when approving other natural-gas transport projects that such quantification is not possible.¹⁹ But other agencies use models to predict how a project will affect the national energy mix and associated emissions, allowing them to forecast total upstream emissions. For instance, the Bureau of Ocean Energy Management uses MarketSim, “a relatively simple partial-equilibrium model of U.S. energy markets” that “models the supply and demand of multiple energy resources (coal, natural gas, oil) and energy use by four domestic sectors (residential, commercial, industrial, and transportation) at the national scale” to assess the impacts of proposed changes to the energy mix.²⁰ The Energy Information Administration, Surface Transportation Board, and other government offices have all used NEMS, a general equilibrium electricity model to capture effects on the global electricity market.²¹ And the Environmental Protection Agency makes use of a similar model known as the Integrated Planning Model.²²

With regard to downstream emissions, while FERC amplifies (without adopting) the applicant’s claim that the natural gas provided by the Project would fully substitute for other sources of energy, namely fuel oil and electricity,²³ this claim deserves further scrutiny and assessment. For one, two out of the three baseline scenarios assessed by the applicant apply unrealistically high estimates of offset fuel oil, with one scenario assuming 100 percent fuel oil offset and another assuming between 26–46 percent offset in 2043.²⁴ But local law calls for fuel oil to be phased out quicker than these scenarios contemplate. For instance, New York City Local Law 97 calls for drastic emission reductions for buildings larger than 25,000 square feet starting in 2024, with reductions reaching 80 percent by 2050.²⁵ Compliance with the law will require owners of existing buildings to do a combination of two things that undercut the

¹⁸ *Id.* at B-110.

¹⁹ *See, e.g., Tennessee Gas Pipeline Co., LLC*, 170 FERC ¶ 61,142, at P 62 (Feb. 21, 2020).

²⁰ BOEM, *Consumer Surplus and Energy Substitutes for OCS Oil and Gas Production: The 2015 Revised Market Simulation Model (MarketSim)* (2015), <https://www.boem.gov/sites/default/files/oil-and-gas-energy-program/Leasing/Five-Year-Program/2017-2022/Market-Sim-Model.pdf>. *See also* Peter Howard, Inst. for Pol’y Integrity, *The Bureau of Land Management’s Modeling Choice for the Federal Coal Programmatic Review* 6 (2016) [hereinafter “Modeling Choice”], https://policyintegrity.org/files/publications/BLM_Model_Choice.pdf.

²¹ EIA, *Coal Market Module of the National Energy Modeling System: Model Documentation 2020* (2020), [https://www.eia.gov/outlooks/aeo/nems/documentation/coal/pdf/m060\(2020\).pdf](https://www.eia.gov/outlooks/aeo/nems/documentation/coal/pdf/m060(2020).pdf); *see also Mayo Found. v. Surface Transp. Bd.*, 472 F.3d 545, 555 (8th Cir. 2006) (discussing Board’s use of NEMS); *Modeling Choice* at 8 (highlighting other uses).

²² EPA, *Integrated Planning Model (IPM) Results Viewer*, <https://www.epa.gov/airmarkets/integrated-planning-model-ipm-results-viewer> (last updated Mar. 6, 2020); *Modeling Choice* at 10–11.

²³ EA at B-110.

²⁴ MJB&A, *End-Use Greenhouse Gas Analysis of the Enhancement by Compression (ExC) Project 5–7* (May 18, 2020). This analysis, which was entered into the record by the applicant, concludes that the Project would reduce net downstream greenhouse gas emissions by 7.1–8.2 million metric tons of carbon dioxide equivalent under the 100% fuel oil scenario, but just 220,000–600,000 metric tons under the mixed scenario. Under a third scenario, which assumes 100% electricity, the Project would increase downstream greenhouse gas emissions by 7.8 million metric tons. *Id.* at 6–7. Notably, this analysis does not model upstream emissions. *Id.* at 4.

²⁵ *See* N.Y.C. Admin. Code § 24-803(1).

applicant's assumptions.²⁶ First, owners will adopt less polluting fuels than the heating oil currently in use, including through conversion to fully electrical systems, meaning that continued widespread use of heating oil in the future is highly unlikely. Second, owners will adopt energy conservation measures, meaning that regardless of what resource buildings use, they will use less of it.²⁷ Moreover, local law requires the phase-out of all but No. 2 heating oil by 2030 and imposes increasingly stringent biodiesel requirements for fuel oil,²⁸ which will make fuel oil more expensive and thereby further limit its use. In light of these legal requirements, the 100% heating oil scenario is entirely unrealistic, and the "utility heat pump targets" scenario also likely applies conservative assumptions about electricity penetration.

Furthermore, the applicant's analysis entirely disregards the economic reality that demand for energy will increase as supply also increases, and therefore the Project will not produce perfect substitution of one energy source for another. As the U.S. Court of Appeals for the Tenth Circuit has explained, the assumption of perfect substitution is "contrary to basic supply and demand principles" because it assumes that the price of the target resource will remain constant as supply expands.²⁹ Accordingly, FERC should use substitution analysis to assess the Project's effects on the supply and demand of various energy sources, and therefore on cumulative greenhouse gas emissions. As the D.C. Circuit has explained, FERC must "at least *attempt* to obtain the information necessary" to enable "reasonable forecasting" of emissions,³⁰ yet here FERC provides no independent analysis or forecasting of downstream emissions.

By disregarding the Project's upstream and downstream emissions, FERC fails to capture the Project's full environmental effects. Without a more complete analysis, the Commission cannot reasonably determine that the Project is "required by the present or future public convenience and necessity,"³¹ nor can it fulfill NEPA's twin aims to consider and disclose all significant environmental impacts.³² FERC must conduct such an analysis before concluding whether the Project is in the public interest.

Environmental Impacts from Greenhouse Gas Emissions

On top of failing to assess the Project's indirect emissions, the Commission also fails to meaningfully evaluate the climate-related harms from the emissions it does consider. Despite claiming agnosticism of the Project's climate harms,³³ the Commission somehow concludes

²⁶ Building owners can alternately purchase greenhouse gas offsets/renewable energy credits. *Id.* § 26-651.8. Noncompliance results in a civil penalty. *Id.* § 28-320.6.

²⁷ In addition to local New York City law, New York state law will also drive building owners to retrofit for energy conservation and electrification. *See, e.g.*, New York State Public Service Commission Order Adopting Accelerated Energy Efficiency Targets, In the Matter of a Comprehensive Energy Efficiency Initiative, CASE 18-M-0084 ("With over 40% of the state's [greenhouse gas] emissions coming from building occupancy, [greenhouse gas] reduction will require a combination of end-use electrification and comprehensive building efficiency improvements.").

²⁸ N.Y.C. Admin. Code § 24-168.1.

²⁹ *WildEarth Guardians v. BLM*, 870 F.3d 1222, 1236 (10th Cir. 2017).

³⁰ *Birckhead v. FERC*, 925 F.3d 510, 520 (D.C. Cir. 2019).

³¹ 15 U.S.C. § 717f(e).

³² *Balt. Gas & Elec. Co.*, 462 U.S. at 97.

³³ EA at B-109 ("Without the ability to determine discrete resource impacts, we are unable to determine the significance of the Project's contribution to climate change.").

without assessment or analysis that such emissions would have “no significant impact” on the environment.³⁴ This contradictory and conclusory assessment does not satisfy the Commission’s obligations under the NGA and NEPA to meaningfully assess environmental harms including effects on climate change. And the Commission unjustifiably casts aside the best available tool to permit such an assessment: the social cost of greenhouse gases.

With respect to NEPA, mere quantification of greenhouse gas emissions is insufficient without an assessment of the harm that those emissions will cause. NEPA requires “hard look” consideration of the beneficial and adverse impacts of each alternative option for major federal government actions. The U.S. Supreme Court has called the disclosure of impacts the “key requirement of NEPA,” and held that agencies must “consider and disclose the *actual environmental effects*” of a proposed project in a way that “brings those effects to bear on [the agency’s] decisions.”³⁵ The “impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires,” and it is arbitrary and capricious not to “provide the necessary contextual information about the[se] cumulative and incremental environmental impacts.”³⁶

The tons of greenhouse gases emitted by the Project (both directly and indirectly through upstream and downstream emissions) are not the “actual environmental effects” that must be assessed under NEPA. Rather, the actual effects are the incremental climate impacts caused by those emissions, including property lost or damaged by sea-level rise, coastal storms, flooding, and other extreme weather events, and human health impacts including mortality from heat-related illnesses and changing disease vectors like malaria and dengue fever.³⁷ Simply quantifying emissions is not enough: By calculating only the tons of greenhouse gases emitted, an agency fails to meaningfully assess the actual incremental impacts to property, human health, productivity, and so forth.³⁸ To provide an analogous example, just quantifying the acres of

³⁴ *Id.* at C-10; *see also id.* at B-111 (“[I]mpacts associated with the Project would be relatively minor.”).

³⁵ *Balt. Gas & Elec. Co.*, 462 U.S. at 96.

³⁶ *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008); *see also id.* (“[T]he fact that climate change is largely a global phenomenon that includes actions that are outside of [the agency’s] control . . . does not release the agency from the duty of assessing the effects of *its* actions on global warming within the context of other actions that also affect global warming.”); *Border Power Plant Working Grp. v. U.S. Dep’t of Energy*, 260 F. Supp. 2d 997, 1028–29 (S.D. Cal. 2003) (failure to disclose project’s indirect carbon dioxide emissions violates NEPA).

³⁷ For a more complete discussion of actual climate effects, including air quality mortality, extreme temperature mortality, lost labor productivity, harmful algal blooms, spread of West Nile virus, damage to roads and other infrastructure, effects on urban drainage, damage to coastal property, electricity demand and supply effects, water supply and quality effects, inland flooding, lost winter recreation, effects on agriculture and fish, lost ecosystem services from coral reefs, and wildfires, *see* EPA, *Multi-Model Framework for Quantitative Sectoral Impacts Analysis: A Technical Report for the Fourth National Climate Assessment* (2017); U.S. Global Change Research Program, *Climate Science Special Report: Fourth National Climate Assessment* (2017); EPA, *Climate Change in the United States: Benefits of Global Action* (2015); Union of Concerned Scientists, *Underwater: Rising Seas, Chronic Floods, and the Implications for U.S. Coastal Real Estate* (2018).

³⁸ *See, e.g., Ctr. for Biological Diversity*, 538 F.3d at 1216–17 (rejecting analysis under NEPA when agency “quantifie[d] the expected amount of [carbon dioxide] emitted” but failed to “evaluate the incremental impact that these emissions will have on climate change or on the environment more generally,” noting that this approach impermissibly failed to “discuss the *actual* environmental effects resulting from those emissions” or “provide the necessary contextual information about the cumulative and incremental environmental impacts” that NEPA requires); *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190 (D. Colo. 2014) (“Beyond quantifying the amount of emissions relative to state and national emissions and giving general discussion

timber to be harvested or the miles of road to be constructed does not constitute a “description of *actual* environmental effects,” even when paired with a qualitative “list of environmental concerns such as air quality, water quality, and endangered species,” if the agency fails to assess “the degree that each factor will be impacted.”³⁹

Turning to the NGA, Section 7 of that Act permits FERC to approve the construction of natural gas facilities only if the project is “required by the present or future public convenience and necessity.”⁴⁰ Such a determination requires FERC to adequately consider a project’s environmental impacts, including climate consequences.⁴¹ Such an assessment requires more than a “passing reference to relevant factors,”⁴² but rather requires FERC to meaningfully and rationally consider all “relevant factors . . . within the scope of the authority delegated to the agency.”⁴³ FERC cannot reasonably make this determination if it simply lists the volume of emissions without meaningful consideration of the impacts that those emissions will have on the climate. Indeed, it would be irrational for FERC to declare the Project to be in the public interest without carefully assessing its impacts on human health, extreme weather events, property damage, and other devastating impacts posed by climate change.⁴⁴

The Commission’s failure to meaningfully consider the impact of the Project’s greenhouse gas emissions on climate damages is particularly arbitrary and irrational because an available and widely-used tool developed by the federal government—the social cost of greenhouse gases—allows for precisely such an assessment. The social cost of greenhouse gases methodology calculates how the emission of an additional unit of greenhouse gases affects atmospheric greenhouse concentrations, how that change in atmospheric concentrations changes temperature, and how that change in temperature incrementally contributes to the above list of economic damages.⁴⁵ The social cost of greenhouse gases tool therefore captures the factors that actually affect public welfare and assesses the degree of impact to each factor, in ways that just

to the impacts of global climate change, [the agencies] did not discuss the impacts caused by these emissions.”); *Mont. Env’tl. Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1096–99 (D. Mont. 2017) (rejecting the argument that the agency “reasonably considered the impact of greenhouse gas emissions by quantifying the emissions which would be released if the [coal] mine expansion is approved, and comparing that amount to the net emissions of the United States”); *California v. Bernhardt*, No. 18-5712, 2020 WL 4001480, at *36 (N.D. Cal. July 15, 2020) (“[F]raming sources as less than 1% of global emissions is dishonest and a prescription for climate disaster.” (citation omitted)).

³⁹ *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.*, 387 F.3d 989, 995 (9th Cir. 2004) (“A calculation of the total number of acres to be harvested in the watershed is . . . not a sufficient description of the actual environmental effects that can be expected from logging those acres.”).

⁴⁰ 15 U.S.C. § 717f(e).

⁴¹ *See, e.g., Sabal Trail*, 867 F.3d at 1373 (explaining that “FERC could deny a pipeline certificate [under Section 7 if] the pipeline would be too harmful to the environment,” and proceeding to assess the adequacy of the Commission’s analysis of greenhouse gas emissions).

⁴² *Mo. PSC v. FERC*, 234 F.3d 36, 41 (D.C. Cir. 2000).

⁴³ *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

⁴⁴ *Rio Grande LNG, LLC*, 169 FERC ¶ 61,131, at P 2 (Nov. 22, 2019) (Glick, Comm’r, dissenting) (“Claiming that a project generally has no significant environmental impacts while at the same time refusing to assess the significance of the project’s impact on the most important environmental issue of our time is not reasoned decisionmaking.”).

⁴⁵ Interagency Working Group on the Social Cost of Carbon, *Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis 5* (2010).

estimating the volume of emissions cannot. In fact, various agencies have used the social cost of greenhouse gases to assess a project's climate impacts under NEPA.⁴⁶

The most widely used social cost estimates were developed by the federal Interagency Working Group on the Social Cost of Carbon (“Working Group”), a coordinated effort among twelve federal agencies and White House offices. The Working Group released estimates in 2010 and updated them in 2016 to “provide a consistent approach for agencies to quantify [climate change] damage in dollars.”⁴⁷ Many authorities endorse the Working Group’s estimates of the social cost of greenhouse gases. In 2016 and 2017, the National Academies of Sciences issued two reports that, while recommending future methodological improvements, supported the continued use of the Working Group estimates.⁴⁸ Distinguished economists have explained that the Working Group’s estimates remain the best numbers available to federal agencies.⁴⁹ The U.S. Court of Appeals for the Seventh Circuit upheld agency reliance on these estimates,⁵⁰ and other federal courts have held up the Working Group’s estimates as well-considered and reliable.⁵¹

Using the central value identified by the Working Group, the methodology reveals that the Project’s operational and downstream emissions—assuming full burn of the transported natural gas—would cause over \$160 million in annual climate harms.⁵² Even the Project’s annual operational emissions alone (not even including direct construction emissions) would cause over \$24 million in annual climate harms.⁵³ These substantial costs illuminate the intensity and significance of the Project’s climate harms pursuant to NEPA and should bear heavily on assessing whether the Project is in fact in the public interest.

While FERC offers several excuses for failing to apply the social cost of greenhouse gases, its arguments are misguided. First, the Commission claims that the tool “cannot meaningfully inform its decision on whether and how to authorize a proposed project under the

⁴⁶ See e.g., BUREAU OF OCEAN ENERGY MGMT., FINAL ENVIRONMENTAL IMPACT STATEMENT OF COOK INLET PLANNING AREA OIL AND GAS LEASE SALE 244 (BOEM 2016-069) (Dec. 23, 2016); see also Peter Howard & Jason Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COLUM. J. ENVTL. L. 203, 270–84 (2017) (listing all uses by federal agencies through mid-2016, including numerous NEPA assessments).

⁴⁷ *Fla. Se. Connection, LLC*, 162 FERC ¶ 61,233, at P 45 (Mar. 14, 2018).

⁴⁸ Nat’l Acads. Sci., Eng’g & Med., *Valuing Climate Damages: Updating Estimates of the Social Cost of Carbon Dioxide 3* (2017) [hereinafter “NAS 2017 Report”]; Nat’l Acads. Sci., Eng’g & Med., *Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update 1* (2016).

⁴⁹ See Richard L. Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 SCIENCE 655 (2017) (co-authored with Michael Greenstone, Michael Hanemann, Peter Howard, and Thomas Sterner).

⁵⁰ *Zero Zone, Inc. v. U.S. Dep’t of Energy*, 832 F.3d 654, 678 (7th Cir. 2016).

⁵¹ *California*, 2020 WL 4001480, at *25–28 (endorsing Working Group’s estimates of the social cost of methane and vacating a rulemaking that relied on alternate estimates); *High Country*, 52 F. Supp. 3d at 1190–93 (describing Working Group’s methodology and concluding that its estimates are applicable to project-level reviews).

⁵² See *supra* note 6 and accompanying text.

⁵³ The Interagency Working Group’s central estimate of the social cost of carbon for year 2025 emissions is \$46 in 2007\$. Interagency Working Group on the Social Cost of Carbon, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis 4* (2016). Adjusted for inflation, that equals approximately \$57 in 2019\$. And the Project is expected to produce 423,913 metric tons of carbon dioxide equivalent in annual operational emissions. EA at B-72. 423,913 metric tons of CO₂e* \$57 = \$24.16 million. In a proper cost-benefit analysis, that calculation of costs from year 2025 emissions would be discounted back to present value.

NGA,” since “no basis exists to designate a particular monetized value as significant.”⁵⁴ But the lack of bright-line criteria for establishing significance is not unique to climate impacts, as other environmental and economic effects present similar line-drawing challenges and require judgments by the Commission. With respect to noise, for instance, the Commission does not rely on any clear threshold but rather uses its judgment to conclude that any noise impacts from the Project would be insignificant.⁵⁵ The Commission arbitrarily holds climate damages to a higher standard. Moreover, the need to identify significant environmental effects is actually a strong reason for FERC to monetize emissions using the social cost of greenhouse gases. A key advantage of the social cost of greenhouse gases is that it groups together many climate impacts and thus allows the Commission to assess ultimate “impacts [on] human health or other environmental values” as NEPA requires.⁵⁶ And an economic regulator such as FERC can readily determine the significance of monetized harms.⁵⁷

Second, the Commission argues that the social cost of greenhouse gases would not be useful because “the Commission does not use monetized cost-benefit analyses as part of the review under NEPA or the decision under the NGA.”⁵⁸ But even if other impacts are not monetized, the social cost of greenhouse gases is the best method to assess the significance of a project’s climate-related impacts as NEPA requires. Applicable regulations acknowledge that when monetization of costs or benefits is “relevant to the choice among environmentally different alternatives,” that analysis can be presented alongside “any analyses of unquantified environmental impacts, values, and amenities.”⁵⁹ In other words, contrary to FERC’s suggestion, the inability to monetize some impacts does not preclude the monetization of other impacts—like climate damages—that can be readily monetized. This is especially true because applying the social cost of greenhouse gases requires simple arithmetic (multiplication) once FERC has quantified a project’s emissions.

Third, the Commission claims that “different discount rates introduce substantial variation in results” and therefore “limit the tool’s usefulness in the review under NEPA and the decision under the NGA.”⁶⁰ But this critique falls flat, as the Working Group in fact provided “central values” for its social cost metrics using a 3 percent discount rate,⁶¹ and likewise, recent reports from the National Academies of Sciences and other authorities make clear that a 3 percent discount rate or lower is appropriate.⁶² Accordingly, many other agencies have applied

⁵⁴ EA at B-109.

⁵⁵ *Id.* at B-111.

⁵⁶ *NRDC v. U.S. Nuclear Regulatory Comm’n*, 685 F.2d 459, 486 (D.C. Cir. 1982).

⁵⁷ See *Atlantic Coast Pipeline, LLC*, 164 FERC ¶ 61,100, at 8 n.38 (Aug. 10, 2018) (LaFleur, Comm’r, dissenting) (describing areas where FERC exercises judgment to arrive at significance thresholds, such as “just and reasonable returns on equity”).

⁵⁸ EA at B-109.

⁵⁹ 40 C.F.R. § 1502.22.

⁶⁰ EA at B-109.

⁶¹ Interagency Working Group on the Social Cost of Carbon, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis* 4 (2016).

⁶² See, e.g., NAS 2017 Report at 32–33

the central value in their regulatory analyses.⁶³ In any event, even accepting that there is a range of plausible social cost estimates, this does not justify FERC’s failure to monetize emissions at all. Because “the value of carbon emissions reduction is certainly not zero,” agency actions assigning no value to such emissions have been struck down under NEPA.⁶⁴ Indeed, “[r]egulators by nature work under conditions of serious uncertainty,” and “[t]he mere fact that the magnitude of [a regulatory cost] is uncertain is no justification for disregarding the effect entirely.”⁶⁵

Relying on these three objections to the social cost of greenhouse gases, FERC asserts that “there is no universally accepted methodology to attribute discrete, quantifiable, physical effects on the environment to the Project’s incremental contribution to [greenhouse gases].”⁶⁶ Yet the Commission acknowledges that the social cost of greenhouse gases “can be used to estimate incremental physical climate change impacts,”⁶⁷ and as discussed above its objections to the tool ring hollow. Furthermore, FERC is mistaken to suggest that a methodology must be “universally accepted” for the Commission to apply it. For one, such a burden would complicate FERC’s analysis of many impacts, as the Commission frequently “develop[s] ... analytical frameworks” and “exercise[s] judgment, based on its expertise, precedent, and the record before it,” despite the lack of a universal methodology.⁶⁸ In any event, the Commission overlooks the fact that the social cost of greenhouse gases has gained widespread acceptance in the scientific and regulatory communities. The tool, which was developed by experts at twelve federal agencies and White House offices, has been endorsed by prominent scientists and economists and used by many federal agencies in both rulemakings and project-level reviews. As one federal court recently recognized, there is broad “consensus that [the Working Group’s] estimates constitute the best available science about monetizing the impacts of greenhouse gas emissions.”⁶⁹

Policy Integrity hereby attaches its October 2019 comments on FERC’s Draft Environmental Impact Statement for the Alaska LNG Project, submitted jointly with six other groups, which provides further detail on the social cost of greenhouse gases and rebuts specific arguments that the Commission has offered against the methodology in prior determinations. Policy Integrity also attaches its 2019 report titled “Pipeline Approvals and Greenhouse Gas Emissions,” which further explains FERC’s legal obligations to assess climate-related impacts in pipeline approvals. Additionally, Policy Integrity attaches several other documents referenced in

⁶³ See, e.g., Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662, 64,751 (Oct. 23, 2015).

⁶⁴ *Ctr. for Biological Diversity*, 538 F.3d at 1200, 1227.

⁶⁵ *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1219, 1221 (D.C. Cir. 2004) (emphasis omitted); see also Energy Conservation Program: Energy Conservation Standards for Uninterruptible Power Supplies, 85 Fed. Reg. 1447, 1477 (Jan. 10, 2020) (recent rule applying Social Cost of Carbon and recognizing that “some uncertainty” in estimate “does not relieve [agency] of its obligation to attempt to factor” climate impacts into its analysis).

⁶⁶ EA at B-108.

⁶⁷ *Id.* at B-109.

⁶⁸ *Atlantic Coast Pipeline, LLC*, 164 FERC ¶ 61,100, at 8 n.38 (LaFleur, Comm’r, dissenting); see generally *Pub. Citizen v. Fed. Motor Carrier Safety Admin.*, 374 F.3d 1209, 1219 (D.C. Cir. 2004) (“The mere fact that the magnitude of [an effect] is uncertain is no justification for disregarding the effect entirely.”).

⁶⁹ *California*, 2020 WL 4001480, at *25.

these comments. FERC should consider all relevant arguments expressed in the attached documents to be comments made on the Environmental Assessment as well. As these documents further explain, and as detailed above, it would be arbitrary and capricious for FERC to approve the Project without further analysis of its climate impacts.

Sincerely,

Iliana Paul, Senior Policy Analyst
Max Sarinsky, Attorney
Jason A. Schwartz, Legal Director

Attached:

- 1) Joint Comments on the Failure to Use the Social Cost of Greenhouse Gases in the Alaska LNG Project Draft Environmental Impact Statement (Docket No. CP17-178-000)
- 2) Jayni Hein et al., Inst. for Pol'y Integrity, *Pipeline Approvals and Greenhouse Gas Emissions* (2019)
- 3) Interagency Working Group on the Social Cost of Carbon, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis* (2016)
- 4) Richard L. Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 SCIENCE 655 (2017)
- 5) Peter Howard, Inst. for Pol'y Integrity, *The Bureau of Land Management's Modeling Choice for the Federal Coal Programmatic Review* (2016)
- 6) James Bradbury et al., Dep't of Energy, *Greenhouse Gas Emissions and Fuel Use Within the Natural Gas Supply Chain* (2015)