

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Transcontinental Gas Pipe Line Company, LLC)))	Docket No. CP21-94-000
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**COMMENTS OF THE INSTITUTE FOR POLICY
INTEGRITY AT NEW YORK UNIVERSITY SCHOOL OF LAW**

The Institute for Policy Integrity at New York University School of Law (Policy Integrity)¹ respectfully submits the following comments on the Federal Energy Regulatory Commission’s (FERC) Draft Environmental Impact Statement (DEIS)² for Transcontinental Gas Pipe Line Company, LLC’s (Transco) Regional Energy Access Expansion (REAE) Project. 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 frequently submits comments to federal agencies on the consideration of climate change impacts under the National Environmental Policy Act (NEPA) and the Natural Gas Act (NGA).

Unlike in prior NEPA documents,³ FERC concludes that the proposed project will have significant climate change impacts.⁴ Nonetheless, the Commission’s environmental analysis continues to be lacking in several respects. Notably, FERC fails to consider upstream emissions associated with the project and it could better assess the significance of project emissions. To

¹ This document does not purport to present New York University School of Law’s views, if any.

² Fed. Reg. Energy Comm’n, Regional Energy Access Expansion Project Draft Environmental Impact Statement (Docket No. CP21-94) (Mar. 2022) [hereinafter DEIS].

³ See, e.g., Comments of the Inst. for Pol’y Integrity, Wisconsin Access Project, ANR Pipeline Co., Docket No. CP21-78 (Jan. 24, 2022); Comments of the Inst. for Pol’y Integrity, Alberta Xpress and Lease Capacity Abandonment Projects Draft Environmental Impact Statement, ANR Pipeline Co., Docket Nos. CP20-484 & CP20-286 (Sept. 20, 2021); Comments of the Inst. for Pol’y Integrity, Evangeline Pass Expansion Project Draft Environmental Impact Statement, Tenn. Gas Pipeline Co., Docket Nos. CP20-50 & CP20-51 (Sept. 7, 2021).

⁴ DEIS, *supra* note 2, at 1.

improve the Commission’s environmental analysis, this comment letter offers the following recommendations:

- The Commission should recognize that upstream emissions are a reasonably foreseeable effect of the REAE Project and properly consider them in its environmental analysis so it may incorporate that information into its NGA evaluation;
- The Commission should use the social cost of greenhouse gases, a metric generally accepted in the scientific community, to better assess the significance of emissions associated with the REAE Project;
- The Commission should properly analyze the no-action alternative and adequately review non-gas and non-pipeline gas alternatives;
- The Commission should clarify the geographic range of expected air quality impacts and analyze impacts to all the affected environmental justice communities;
- The Commission should consider adverse health impacts on affected communities from pollution levels below the NAAQS; and
- The Commission should conduct an environmental justice analysis of project alternatives, especially with regards to Alternative 4 and siting of compression station 201.

I. The Commission Should Properly Consider the Greenhouse Gas Emissions Associated with the REAE Project

Under NEPA, FERC must adequately consider indirect effects from a proposed project.⁵

And as the U.S. Court of Appeals for the D.C. Circuit has recognized, the Commission must adequately consider reasonably foreseeable climate effects from proposed natural-gas infrastructure, including impacts resulting from downstream and upstream emissions.⁶

While FERC has taken steps to quantify the operational and downstream emissions associated with the REAE Project, it must also adequately consider the upstream emissions

⁵ 40 C.F.R. § 1508.1(g).

⁶ *Sierra Club v. Fed. Energy Regul. Comm’n*, 867 F.3d 1357 (D.C. Cir. 2017); *Birckhead v. Fed. Energy Regul. Comm’n*, 925 F.3d 510 (D.C. Cir. 2019); *Food & Water Watch v. Fed. Energy Regul. Comm’n*, 28 F.4th 277 (D.C. Cir. 2022).

associated with the project. Moreover, it should further assess the significance of emissions associated with the project by using the social cost of greenhouse gases.

A. The Commission Should Properly Consider the REAE Project’s Upstream Emissions

In the DEIS, FERC concludes that the “the environmental impacts of upstream natural gas production would not be caused by the Project or be a reasonably foreseeable consequence of the Project.”⁷ By making such a finding, the Commission unreasonably fails to adequately consider the project’s upstream emissions. Instead, FERC should recognize that upstream emissions from the REAE Project are reasonably foreseeable and estimate emissions based on information provided by the applicant and other federal agencies.

Natural gas infrastructure projects are likely to induce natural gas production, and FERC should presume that the associated emissions of the project are reasonably foreseeable. As stakeholders have argued, FERC should recognize that upstream oil and gas extraction is “necessary to fill the proposed pipeline expansion.”⁸ The Environmental Protection Agency (EPA) provides a succinct explanation of why upstream emissions from production are a reasonably foreseeable indirect effect of FERC certification of a new pipeline: where “the purpose of the proposed project is to transport natural gas for consumption; that natural gas must be produced.”⁹ Likewise, EPA has advised FERC that upstream emissions “are reasonably foreseeable and are causally linked to natural gas transportation infrastructure and capacity for

⁷ DEIS, *supra* note 2, at 4-167.

⁸ Comments of Food & Water Watch at 3, Regional Energy Access Expansion Project, Transcontinental Gas Pipe Line Co., LLC, Docket No. CP21-94 (Nov. 19, 2021) [hereinafter Food & Water Watch Scoping Comments].

⁹ Comments of U.S. Env’t Prot. Agency at 1–2, Enhancement by Compression Project Final Environmental Impact Statement, Iroquois Gas Transmission Sys., L.P., Docket No. CP20-48 (Dec. 20, 2021) [hereinafter EPA Comments on Iroquois FEIS]; *see also* Comments of U.S. Env’t Prot. Agency at 4, Delta Lateral Project Draft Environmental Impact Statement, Kern River Transmission Co., Docket No. CP21-197 (Dec. 27, 2021) [hereinafter EPA Comments on Delta Lateral DEIS].

market access.”¹⁰ In its comments to FERC on this DEIS, EPA also highlighted the Council on Environmental Quality’s (CEQ) position that greenhouse gas emissions are “often a reasonably foreseeable indirect effect of proposed fossil fuel extraction that agencies should evaluate in the NEPA process, even if the pollution is remote in time or geographically remote from a proposed action.”¹¹

FERC claims that “[t]he specific source of natural gas to be transported via the Project is currently unknown and would likely change throughout the Project’s operation” to support its conclusion that upstream emissions are not causally related or reasonably foreseeable.¹² But Transco’s application states that the extracted gas that will be transported by the pipeline will come from the “Marcellus Shale production area in northeastern Pennsylvania” and claims that the REAE Project will enhance access to the region, which is currently “constrained on peak days by limited pipeline take-away capacity.”¹³ FERC could compare the REAE Project’s proposed incremental capacity—100% of which has been committed through binding precedent agreements¹⁴—with the production capacity in the area to assess potential incremental production.¹⁵ This could be used to provide an upper bound of upstream emissions.

Moreover, even if FERC did not know the exact source of the incremental gas to be transported by the REAE Project, that does not mean that such emissions will not occur or are

¹⁰ Comments of U.S. Env’t Prot. Agency at 7, Wisconsin Access Project, ANR Pipeline Co., Docket No. CP21-78 (Sept. 24, 2021).

¹¹ Comments of U.S. Env’t Prot. Agency at 3, Regional Energy Access Expansion Project, Transcontinental Gas Pipe Line Co., LLC, Docket No. CP21-94 (Nov. 18, 2021) (quoting National Environmental Policy Act Implementing Regulations Revisions, 86 Fed. Reg. 55,757, 55,763 (proposed Oct. 7, 2021)).

¹² DEIS, *supra* note 2, at 4-167.

¹³ Application for Certificate of Public Convenience and Necessity and for Order Permitting and Approving Abandonment Facilities (Regional Energy Access Expansion), Transcontinental Gas Pipe Line Co., LLC, Docket No. CP21-94 (2021) [hereinafter Application] (Resource Report No. 1: General Project Description at 1-3 to -4).

¹⁴ Application, *supra* note 13, at 6.

¹⁵ Food & Water Watch Scoping Comments, *supra* note 8, at 3.

not reasonably foreseeable.¹⁶ The Commission can deduce the likelihood of upstream impacts of a project, regardless of whether it has specific information about the source of gas. EPA has commented that where the lifespan of a project is “decades long,” that fact alone is enough to infer that the project will induce natural gas production.¹⁷ That is the case with the REAE Project, which based on executed precedent agreements, has an expected lifespan of at least 17 years¹⁸ and likely longer. In addition, Transco claims that the project will yield benefits by enhancing access to the Marcellus Shale supply.¹⁹ But, new supply is a benefit only because of *upstream* extraction of new gas.²⁰ If FERC considers this benefit of upstream extraction as it has in the past,²¹ it would be inconsistent to assume away the adverse effects of extraction, namely upstream emissions.

Further, if the Commission requires more detailed information to reasonably estimate the REAE Project’s upstream emissions, it should at minimum ask for it. The D.C. Circuit recently (and for a second time) noted it was “‘troubled’ by the Commission’s failure to seek out relevant information” that could be used to estimate upstream emissions.²² The court explained that “an

¹⁶ See Comments of the Inst. for Pol’y Integrity at N.Y.U. School of Law, *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1-000 (July 25, 2018) [hereinafter Policy Integrity 2018 NOI Comments]; see also Comments of the Inst. for Pol’y Integrity at N.Y.U. School of Law, *Certification of New Interstate Pipeline Facilities*, Docket No. PL18-1-000 (May 26, 2021).

¹⁷ See Comments of U.S. Env’t Prot. Agency at 1, Delta Lateral Project Final Environmental Impact Statement, Kern River Transmission Co., Docket No. CP21-197 (Apr. 4, 2022) (“Because the expected life of the gas generators at the [Intermountain Power Project] is decades long, this project will effectively lock-in the production of the gas needed to support those generators. In other words, the purpose of the proposed project is to transport natural gas for consumption; that natural gas must be produced. Upstream emissions from that production are therefore demonstrably reasonably foreseeable indirect effects of the proposed action and should be considered under NEPA.”).

¹⁸ Application, *supra* note 13, at 6.

¹⁹ *Id.* (Resource Report No. 1: General Project Description at 1-4); see also DEIS, *supra* note 2, at 1.

²⁰ Policy Integrity 2018 NOI Comments, *supra* note 16, at 14.

²¹ See *Tex. E. Transmission, LP*, 164 FERC ¶ 61,037, at P 13 (2018) (identifying connection of “diverse supply basins with emerging Gulf Coast markets” as a “benefit[] that will result from the project”); see also Statement of Policy, 88 FERC ¶ 61,227, at 25 (1999) (identifying potential benefits when evaluating need, including “access to new supplies”).

²² *Food & Water Watch*, 28 F.4th at 286 (quoting *Birckhead*, 925 F.3d at 519).

initial lack of information does not afford an agency carte blanche to disregard indirect effects”²³ and that FERC must “at least attempt to obtain the information necessary.”²⁴ Transco, which is indirectly owned by The Williams Companies, Inc.²⁵—one of the largest companies in the natural gas transportation industry—likely has additional information about the projected source of its gas that the Commission could request. To the extent necessary, the Commission should direct Transco to provide additional information and then use this information to estimate the upstream emissions associated with the project.²⁶

In the absence of more specific information, the Commission also could simply use the EPA’s suggested methodology for estimating upstream emissions using available estimates from the Department of Energy. Specifically, EPA has suggested that the Commission quantify upstream emissions by (1) looking at total national upstream emissions to get an average of emissions per unit of production, and (2) multiplying that average by the amount of gas to be transported (i.e., the amount of production that will occur).²⁷ Using this method and assuming that the project runs at full capacity, the project could be expected to result in upstream emissions of approximately 2.5 million metric tons of carbon dioxide equivalent per year.²⁸

²³ *Id.* at 285.

²⁴ *Id.* at 286 (quoting *Birckhead*, 925 F.3d at 520).

²⁵ Application, *supra* note 13 (Resource Report No. 1: General Project Description at 1-1).

²⁶ The Commission regularly asks applicants to supplement applications with further environmental information, including greenhouse gas emissions information. Indeed, FERC recently asked Transco to “[p]rovide a table of speciated greenhouse gas emissions (methane, carbon dioxide, and nitrous oxide) from operation and construction.” Environmental Information Request, Transcontinental Gas Pipe Line Co., LLC, Docket No. CP21-94 (Apr. 12, 2022).

²⁷ EPA Comments on Iroquois FEIS, *supra* note 9, at 3–4; EPA Comments on Delta Lateral DEIS, *supra* note 9, at 4–5.

²⁸ At full capacity, the project would transport 829,400 Dekatherms per day, or approximately 302,731,000 Dekatherms a year (829,400 Dekatherms/day * 365 days/year ≈ 303 million Dekatherms/year). DEIS, *supra* note 2, at 4-166. One Dekatherm is approximately 9.7 hundred cubic feet (hcf) of natural gas, meaning that 303 million Dekatherms/year ≈ 2.94 billion hcf of natural gas a year from the project. U.S. dry gas production in 2021 was approximately 339 billion hcf. See EPA Comments on Iroquois FEIS, *supra* note 9, at 3. Therefore, the REAE project would represent approximately 0.87% of that total (2.94 ÷ 339 = 0.0087). According to the 2019 U.S. GHG Inventory, the total upstream fugitive greenhouse gas emissions were 142.6 million metric tons of CO₂ equivalent

B. The Commission Should Use the Social Cost of Greenhouse Gases to Assess the Significance of REAE’s Emissions

The REAE Project is expected to produce 16.62 million metric tons of CO₂ equivalent annually from operation and downstream emissions using a full-burn assumption.²⁹ As described above, it will also produce upstream emissions. All of the Project’s direct and indirect emissions will contribute to climate change impacts. While FERC appropriately finds that the operational and downstream emissions from the project will be significant,³⁰ it should further assess significance of all of the Project’s emissions by using the social cost of greenhouse gases.

As a threshold matter, finding that the REAE Project’s expected operational and downstream emissions are significant is appropriate. FERC determined that the REAE Project’s emissions met a presumptive threshold for significance as outlined in the Commission’s draft policy statement on “Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews” (Draft GHG Policy Statement).³¹ While FERC suspended the applicability of the Draft GHG Policy Statement for applications currently under review,³² the Commission’s initial determination should stand. Even without applying the Draft GHG Policy Statement, FERC still is required to assess the significance of GHG emissions in order to properly consider them. Numerous federal court decisions spell out NEPA’s requirement that agencies assess the real-world environmental and social impacts of project proposals, and should not stop at providing only volumetric estimates of emissions.³³

and the total upstream combustion estimate is 144.7 million metric tons of CO₂ equivalent. *Id.* Adding these two values and multiplying by 0.87% yields approximately 2.5 million metric tons of CO₂ equivalent.

²⁹ DEIS, *supra* note 2, at 1, 4-166.

³⁰ *Id.* at 1.

³¹ Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, 178 FERC ¶ 61,108 (2022) [hereinafter Draft GHG Policy Statement].

³² Order on Draft Policy Statements, 178 FERC ¶ 61,197 (2022).

³³ *E.g.*, Nat. Res. Def. Council v. Nuclear Regul. Comm’n, 685 F.2d 459, 486–87 (D.C. Cir. 1982) (merely listing the volume of emissions is insufficient if the agency “does not reveal the meaning of those impacts in terms of human health or other environmental values,” since “it is not releases of [pollution] that Congress wanted disclosed”

However, while a finding of significance is an important step, more analysis would be useful to understand the climate impact of a proposed project and to be able to compare this to other adverse and beneficial impacts of the project. One highly useful tool for deeper analysis of this kind is the social cost of greenhouse gases, a metric developed by the Interagency Working Group on the Social Cost of Greenhouse Gases. The social cost of greenhouse gases estimates 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 health and economic damages.³⁴ According to the Working Group’s current central estimate of social cost of greenhouse gases, the REAE Project’s climate impacts from operational and downstream emissions, using a full-burn assumption (i.e., all the gas transported is eventually combusted), total approximately \$931 million in climate damage costs per year.³⁵ Over the span of 15 to 17 years—the timeline of

but rather “the effects, or environmental significance, of those releases”), *rev’d on other grounds*, Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, 462 U.S. 87, 106–07 (1983); Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin., 538 F.3d 1172, 1215–17 (9th Cir. 2008) (rejecting analysis that quantified carbon dioxide emissions and compared them to nationwide totals, since such an analysis failed to “discuss the *actual* environmental effects resulting from those emissions” as 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 to the impacts of global climate change, [the agencies] did not discuss the impacts caused by these emissions.”); Mont. Env’t Info. Ctr. v. U.S. Off. of Surface Mining, 274 F. Supp. 3d 1074, 1095–99 (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, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020) (rejecting NEPA assessment of greenhouse gas emissions because the agency’s approach of quantifying emissions and comparing them to nationwide totals failed to “communicate the *actual* environmental effects resulting from emissions of greenhouse gas” (internal quotation marks omitted)).

³⁴ INTERAGENCY WORKING GRP. ON THE SOCIAL COST OF CARBON, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS 5 (2010).

³⁵ The Project will contribute up to 16.62 million metric tons of carbon dioxide equivalent per year in operational and downstream emissions. DEIS, *supra* note 2, at 4-166. According to the latest estimates from the Interagency Working Group on the Social Cost of Greenhouse Gases, the central value (i.e., using a 3% discount rate) of the social cost of carbon for 2025 emissions is \$56. INTERAGENCY WORKING GRP. ON THE SOC. COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE – INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13,990, at 5 (2021). \$56 multiplied by 16.62 million metric tons equals approximately \$931 million. Alternatively, Transco provides a load factor of 563,857 Dekatherms per day that is approximately 68% of its full capacity of 829,400 Dekatherms per day. Application, *supra* note 13 (Resource Report

precedent agreements underlying the project—the REAE Project could cause between roughly \$14 billion and \$16 billion in climate damages.³⁶ Using the estimate for upstream emissions provided in the previous Section would add an additional \$140 million per year, or between \$2.1 billion and \$2.38 billion over the span of the precedent agreements.³⁷ FERC could use these values to help assess the significance of the project’s climate impacts and use that analysis to both fulfill its obligation to consider environmental impacts under NEPA and inform its final determination of the REAE Project’s authorization under the NGA.

FERC states that it did not apply the social cost of greenhouse gases in its DEIS because, at the time of filing, a federal district court had issued an injunction limiting the use of the metric.³⁸ This injunction has since been stayed.³⁹ Moreover, as the D.C. Circuit explained in *Vecinos*, one particular NEPA regulation—40 C.F.R. § 1502.21(c), which requires agencies to apply “theoretical approaches or research methods generally accepted in the scientific community” to assess “reasonably foreseeable significant adverse impacts”⁴⁰—is “applicable on its face” to the social cost methodology, and may “obligate[]” FERC “to use the social cost of carbon protocol”

No. 9: Air and Noise Quality at 9-53). Using the load factor would yield approximately \$633 million in climate damage costs per year (\$931 million * 68% ≈ \$633 million).

³⁶ Transco’s application indicates that the company has signed precedent agreements ranging from 15 to 17 years. Application, *supra* note 13, at 6. And as explained in the prior footnote, application of the social cost of greenhouse gases finds a central damage value of approximately \$931 million on an annual basis using the social cost of greenhouse gases. \$931 million * 15 years = \$13.965 billion. \$931 million * 17 years = \$15.827 billion. Alternatively, using the applicant’s load factor information, these values would be \$9.495 billion and \$10.761 billion, respectively. Because the social cost of carbon increases each year, these values are an underestimate and represent the climate damages the project would cause only if the social cost of carbon were worth \$56 every year from 2025 forward. However, for year 2040 emissions, for example, the social cost of carbon is \$73/metric ton using a discount rate of 3%. In a full cost-benefit analysis, the project’s lifetime climate damages total would be discounted back to present value.

³⁷ The REAE Project could be expected to produce 2.5 million metric tons of CO₂ equivalent in upstream emissions. See *supra* notes 27–28 and accompanying text. \$56 multiplied by 2.5 million metric tons equals approximately \$140 million. \$140 million * 15 years = \$2.10 billion. \$140 million * 17 years = \$2.38 billion.

³⁸ DEIS, *supra* note 2, at 4-168.

³⁹ *Louisiana v. Biden*, No. 22-30087 (5th Cir. Mar. 16, 2022). Further, another district court has rejected substantially similar arguments. *Missouri v. Biden*, 2021 WL 3885590 (E.D. Mo. Aug. 31, 2021), appeal filed, No. 21-3013 (8th Cir.).

⁴⁰ 40 C.F.R. § 1502.21(c).

in its environmental analyses so long as the methodology meets the criteria laid out in the regulation.⁴¹

In line with this case law, FERC must either incorporate the metric into its environmental analysis or explain why it believes that 40 C.F.R. § 1502.21(c) does not apply. The latter approach would be difficult for the Commission to justify because the social cost of greenhouse gases is in fact a research method that is “generally accepted in the scientific community.”⁴² In 2014, the U.S. Government Accountability Office concluded that the Working Group had followed a “consensus-based” approach, relied on peer-reviewed academic literature, disclosed relevant limitations, and adequately planned to incorporate new information through public comments and updated research.⁴³ In 2016 and 2017, the National Academies of Sciences, Engineering, and Medicine issued two reports that, while recommending future improvements, supported continued agency use of the Working Group’s estimates.⁴⁴ Leading economists and climate policy experts have also endorsed the Working Group’s values as the best available estimates.⁴⁵ And the U.S. Court of Appeals for the Seventh Circuit has upheld agency reliance on the Working Group’s valuations.⁴⁶

⁴¹ *Vecinos para el Bienestar de la Comunidad Costera v. Fed. Energy Regul. Comm’n*, 6 F.4th 1321, 1329 (D.C. Cir. 2021).

⁴² 40 C.F.R. § 1501.21(c)(4).

⁴³ GOV’T ACCOUNTABILITY OFF., GAO-14-663, REGULATORY IMPACT ANALYSIS: DEVELOPMENT OF SOCIAL COST OF CARBON ESTIMATES 12–19 (2014), <https://perma.cc/A2PV-6K62>.

⁴⁴ NAT’L ACAD. SCI., ENGINEERING & MED., VALUING CLIMATE DAMAGES: UPDATING ESTIMATION OF THE SOCIAL COST OF CARBON DIOXIDE 3 (2017), <https://perma.cc/YT88-LJEM>; NAT’L ACAD. SCI., ENGINEERING & MED., ASSESSMENT OF APPROACHES TO UPDATING THE SOCIAL COST OF CARBON: PHASE 1 REPORT ON A NEAR-TERM UPDATE 1–2 (2016), <https://perma.cc/2FVZ-NYWM>.

⁴⁵ See, e.g., Richard Revesz et al., *Best Cost Estimate of Greenhouse Gases*, 357 SCI. 655 (2017); Michael Greenstone et al., *Developing a Social Cost of Carbon for U.S. Regulatory Analysis: A Methodology and Interpretation*, 7 REV. ENV’T ECON. & POL’Y 23, 42 (2013); Richard L. Revesz et al., *Global Warming: Improve Economic Models of Climate Change*, 508 NATURE 173 (2014) (co-authored with Nobel Prize winner Kenneth Arrow) (explaining that the Working Group’s values, though methodically rigorous and highly useful, are very likely underestimates).

⁴⁶ *Zero Zone v. Dept. of Energy*, 832 F.3d 654, 679 (7th Cir. 2016).

Furthermore, Policy Integrity’s previous comments in response to both Notices of Inquiry⁴⁷ and various NEPA documents⁴⁸ have rebuffed the Commission’s stated rationales for not using the social cost metric and explained why the social cost of greenhouse gases is a rigorous and useful tool for assessing the climate impacts of proposed natural gas infrastructure projects. As noted in the Draft GHG Policy Statement, use of the metric is “consistent with the Commission’s practices for determining the significance of other monetized effects, such as economic impacts.”⁴⁹ It can therefore be used to contextualizes climate impacts and readily facilitates comparison to other project effects.⁵⁰ The social cost of greenhouse gases can also be used outside of a formal cost-benefit analysis to facilitate a rational balancing of beneficial and adverse impacts.⁵¹ Finally, the metric is a rigorous and reliable tool for monetizing impacts.⁵² Accordingly, FERC should incorporate the social cost of greenhouse gases metric into its analysis to better assess the significance of the emissions associated with the REAE Project.

II. FERC Should Properly Consider Alternatives to the Proposed Action

FERC has an obligation under NEPA to give full and meaningful consideration to all reasonable alternatives in its environmental compliance documents.⁵³ At a minimum, this includes proper consideration of the no-action alternative.⁵⁴ In the DEIS, FERC swiftly dismisses the no-action alternative by claiming that it would not fulfill the project applicant’s goal and “is

⁴⁷ See generally Joint Comments of Env’t Def. Fund et al., *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1 (May 27, 2021) [hereinafter 2021 Joint NOI Comments]; Joint Comments of Env’t Def. Fund et al., *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1 (July 25, 2018).

⁴⁸ See sources cited *supra* note 3.

⁴⁹ Draft GHG Policy Statement *supra* note 31, at P 70 (citing 2021 Joint NOI Comments, *supra* note 47).

⁵⁰ See, e.g., Policy Integrity Comments on the East Lateral Xpress Project DEIS, *supra* note 3, at 6–7. These and similar comments on other environmental impact statements, see sources cited *supra* note 3, provide a detailed response to the Commission’s previous stance on use of the social cost of greenhouse gases, rebutting the incorrect arguments the Commission has made to avoid using this tool.

⁵¹ Policy Integrity Comments on the East Lateral Xpress Project DEIS, *supra* note 3, at 7–8.

⁵² *Id.* at 8–10.

⁵³ *W. Watersheds Project v. Abbey*, 719 F.3d 1035, 1050 (9th Cir. 2013).

⁵⁴ 40 C.F.R. § 1502.14.

also not likely to provide a significant environmental advantage.”⁵⁵ Further, the DEIS’s refusal to consider other alternatives beyond pipeline and pipeline infrastructure is also inappropriate. The limited consideration of alternatives is deficient under NEPA and so the document cannot properly inform FERC’s evaluation of the public interest under the NGA.

A. FERC Inappropriately Dismisses the No-Action Alternative Without Proper Consideration

As an initial matter, the DEIS states that “[b]ecause the Commission will ultimately determine project need, and *because staff has not identified a significant impact associated with the proposed action*, we do not recommend the no-action alternative.”⁵⁶ However, staff does in fact identify a significant impact associated with the proposed action—climate impacts. The DEIS states: “[W]ith the exception of climate change impacts, th[e project’s] [adverse environmental] impacts would not be significant.”⁵⁷ The final DEIS must address this inconsistency and explain why staff still would not recommend the no-action alternative even in light of the project’s significant climate impacts.

More broadly, FERC does not fully or meaningfully analyze the environmental implications of a no-action alternative in the DEIS. Instead, the agency simply asserts, without analysis, that a similar alternative would likely be approved if Transco’s proposal were rejected.⁵⁸ But the U.S. Court of Appeals for the Ninth Circuit has rejected similar reasoning, explaining that “[a] no action alternative in an EIS is meaningless if it assumes the existence of the very plan being proposed.”⁵⁹ Indeed, this assumption ignores that the Commission (or,

⁵⁵ DEIS, *supra* note 2, at 3-2 to -3.

⁵⁶ *Id.* at ES-9.

⁵⁷ *Id.* at 1.

⁵⁸ *Id.* at 3-3.

⁵⁹ *Friends of the Yosemite Valley v. Kempthorne*, 520 F.3d 1024, 1038 (9th Cir. 2008); *see also* *N.C. Wildlife Fed’n v. N.C. Dep’t of Transportation*, 677 F.3d 549, 604 (4th Cir. 2012) (“Without [accurate baseline] data, an agency cannot carefully consider information about significant environment impacts . . . resulting in an arbitrary and

potentially, another government regulator) would have to consider an alternative project's environmental impacts prior to approval, and overlooks the possibility that no project would be built.

Additionally, FERC's criteria for evaluating whether an alternative would be "preferred" ensures that the no-action alternative can never be preferred to the proposed project. The DEIS explains that "[a] preferable alternative must meet the stated purpose of the Project."⁶⁰ The no-action alternative cannot meet this criterion and thus, under the Commission's logic, cannot ever be preferred. This standard inherently undermines the goal of NEPA and its requirement that agencies thorough consider the no-action alternative.

B. FERC Consideration of Other Alternatives Is Also Inadequate

FERC rejection of potential non-gas energy alternatives because they do not fulfill the applicant's goal of transporting natural gas⁶¹ is similarly misguided. As the U.S. Court of Appeals for the Seventh Circuit has explained, NEPA requires "evaluation of alternative means to accomplish the general goal of an action; it is not an evaluation of the alternative means by which a particular applicant can reach his goals."⁶² Accordingly, agencies cannot "contrive a purpose so slender as to define competing reasonable alternatives out of consideration."⁶³ Based on this case law, CEQ recently rescinded a 2020 regulatory amendment that called for agencies

capricious decision. Accordingly, courts not infrequently find NEPA violations when an agency miscalculates the 'no build' baseline or when the baseline assumes the existence of a proposed project." (internal quotations and citations omitted) (alterations in original)).

⁶⁰ DEIS, *supra* note 2, at 3-1.

⁶¹ *Id.* at 3-3 ("We note that the Project purpose is to transport natural gas from northeastern Pennsylvania to customer delivery points in New Jersey, Pennsylvania, and Maryland . . . [A]lternatives that do not also facilitate the transportation of natural gas cannot be a function surrogate. Therefore, we have not identified any non-gas energy alternatives or other non-project alternatives that satisfy the need for the Project.").

⁶² *Van Abbema v. Fornell*, 807 F.2d 633, 638 (7th Cir. 1986).

⁶³ *Simmons v. U.S. Army Corps of Eng'rs*, 120 F.3d 664, 666 (7th Cir. 1997) (internal quotation marks omitted); *see also Nat'l Parks & Conservation Ass'n v. Bureau of Land Mgmt.*, 606 F.3d 1058, 1070 (9th Cir. 2010) ("Agencies enjoy considerable discretion to define the purpose and need of a project. However, an agency cannot define its objectives in unreasonably narrow terms." (internal quotation marks omitted)).

to narrowly define a project’s purpose and need according to “the goals of the applicant,” explaining that such an approach—which mirrors FERC’s assessment in the DEIS—is contrary to NEPA.⁶⁴

The DEIS also does not consider gas alternatives like storage or liquefied natural gas (LNG) projects that could more efficiently meet demand than the proposed pipeline. New research from economists at the University of Hawaii concludes that significant pipeline overbuild has occurred in much of the United States, and demonstrates the importance of holistically considering other alternatives like storage and LNG as they can be substitutes for each other.⁶⁵ FERC should consider these other gas alternatives that could meet the need underlying the project, and doing so requires the EIS to lay out the environmental impacts of such reasonable alternatives.

Meaningful analysis of a broad range of alternative is critical because FERC is tasked under Section 7 of the NGA with assessing whether the REAE Project “is or will be required by the present or future public convenience and necessity.”⁶⁶ In interpreting the NGA, the Supreme Court has stated that its “clear that the principal purpose . . . was to encourage the orderly development of plentiful supplies of electricity and natural gas at reasonable prices.”⁶⁷ On its face, this statutory goal does not preclude the consideration of non-gas alternatives to a proposed project where such alternatives could deliver energy to consumers at a reasonable price. It also should encompass consideration of non-pipeline gas alternatives, where the explicit goal is to

⁶⁴ National Environmental Policy Act Implementing Regulations Revisions, 87 Fed. Reg. 23,453, 23,462 (Apr. 20, 2022).

⁶⁵ Thuy Doan, Matthias Fripp & Michael J. Roberts, *Are We Building Too Much Natural Gas Pipeline? A Comparison of Actual US Expansion of Pipeline to an Optimized Plan of the Interstate Network* (Apr. 25, 2022), <https://perma.cc/LNE4-GWL7>.

⁶⁶ 15 U.S.C. § 717f(c), (e).

⁶⁷ NAACP v. Fed. Power Comm’n, 425 U.S. 662, 669–70 (1976).

serve gas demand. Moreover, the NGA “undoubtedly [contains] other subsidiary purposes” such as “conservation, environmental, and antitrust” issues.⁶⁸ This authority creates a duty to “consider the public interest [that] is broader than promoting a plentiful supply of cheap gas, as important as that policy may be.”⁶⁹

Accordingly, FERC must carefully analyze alternatives distinct from the applicant’s own goals, and incorporate such an analysis into its public convenience and necessity determination. The Commission’s NGA assessment relies on a thorough review of alternatives in its NEPA documents to understand the environmental impacts of the project as compared to reasonable alternatives, including rejecting the certificate. Without adequate consideration of the no-action alternative and other non-pipeline gas and non-gas alternatives, the EIS cannot properly inform and facilitate the Commission’s determination of whether “the public benefits from the project outweigh any adverse effects.”⁷⁰

III. The Commission Should More Robustly Consider Impacts to Environmental Justice Communities

To improve its environmental justice analysis of the REAE Project, FERC should ensure that the scope over which it analyzes impacts on environmental communities matches the range for environmental effects identified in its analysis. It should also assess pollution impacts to nearby communities below the NAAQS levels and incorporate environmental justice into its analysis of project alternatives.

⁶⁸ *Id.* at 670, n. 6.

⁶⁹ Fla. Gas Transmission Co. v. Fed. Energy Regul. Comm’n, 604 F.3d 636, 650 (D.C. Cir. 2010).

⁷⁰ Statement of Policy, *supra* note 21, at 28.

A. The Commission Should Clarify the Geographic Scope of Expected Environmental Impacts and Analyze Impacts on All Affected Environmental Justice Communities

FERC should analyze impacts on *all* of the environmental justice communities actually affected by the REAE Project. Currently, the Commission assesses impacts at the census block level to environmental justice communities present within a 1-mile radius of aboveground facilities or crossed by the pipeline.⁷¹ The stated rationale for this smaller radius is that this “radius is sufficiently broad considering the likely concentration of construction activities, noise, visual, and traffic impacts proximal to the aboveground facilities, and operational emissions.”⁷² However, FERC also recognizes in the DEIS that environmental impacts could extend beyond that range. For example, the Commission states that air quality impacts can cover a radius of 31.1 miles from aboveground compression facilities.⁷³

The Commission should explain this discrepancy between the geographic scope of expected effects and the radius over which impacts on environmental justice communities was analyzed. The *Vecinos* decision is instructive in this regard. There, the D.C. Circuit agreed with petitioners that FERC’s decision to analyze project impacts on environmental justice communities in a smaller geographic area was arbitrary given that it had determined that environmental effects from the project would extend to a larger area.⁷⁴ The court specifically cited FERC’s conclusion in its NEPA analysis that air quality impacts could occur over a much larger geographic region.⁷⁵ In the DEIS, the Commission’s stated rationale for restricting its environmental justice analysis does not explain why other census blocks, where environmental

⁷¹ DEIS, *supra* note 2, at 4-126, 4-147.

⁷² *Id.* at 4-126.

⁷³ *Id.* at 4-185.

⁷⁴ *Vecinos*, 6 F.4th at 1330–31.

⁷⁵ *Id.* at 1330.

justice communities may be present and which admittedly may see air quality impacts, should not be included in the analysis. Accordingly, FERC should clarify its basis for choosing a 1-mile radius in light of broader air quality impacts and identify any other environmental impacts that extend beyond the 1-mile radius. Moreover, the Commission should analyze the effects on all of the environmental justice communities within the geographic range of an identified impact, not just those immediately adjacent to the impact's source.

B. The Commission Should Consider Pollution Impacts Below the NAAQS

FERC concludes that because air pollutants associated with the project will not exceed the NAAQS thresholds, the project “would not have significant impact on local or regional air quality.”⁷⁶ This assumes that where a project would not cause criteria pollutant levels to violate the NAAQS, there is no significant impact on human health or the environment. However, the Commission's insistence that pollutant levels below the NAAQS do not cause adverse impacts is unsupported by the relevant guidance documents and inconsistent with the scientific and regulatory treatment of NAAQS.⁷⁷

The DEIS indicates that the project will increase pollutant concentrations for nearby communities.⁷⁸ In particular, modifications to the two gas fired compression stations will increase 1-hr nitrogen dioxide concentrations by nearly 40%.⁷⁹ Nitrogen dioxide, along with all the other criteria air pollutants, is a non-threshold pollutant, meaning that it has no safety “threshold” and has health impacts even at levels below the legally permissible limits.⁸⁰ EPA has identified health benefits from reducing pollutant levels below the legal standard for almost all of

⁷⁶ DEIS, *supra* note 2, at 1-63.

⁷⁷ See generally Kimberly M. Castle & Richard L. Revesz, *Environmental Standards, Thresholds, and the Next Battleground of Climate Change Regulations*, 103 MINN. L. REV. 1349, 1357 (2018).

⁷⁸ DEIS, *supra* note 2, at 4-162.

⁷⁹ *Id.*

⁸⁰ See Castle & Revesz, *supra* note 77, at 1357.

its regulated criteria pollutants.⁸¹ That is, EPA has said in multiple rulemakings that there are health risks associated with exposure to criteria pollutants at levels below the NAAQS.⁸² Therefore, as a general matter, it is inappropriate to assume that where a project does not violate the NAAQS, there are no meaningful health impacts.

Furthermore, air pollutants such as ozone, sulfur dioxide, and particulate matter can and do interact with other co-pollutants, together causing health impacts more severe than would be predicted by aggregating the independent impacts of each pollutant.⁸³ In failing to consider health effects from pollution below the NAAQS, the Commission ignores how these levels may compound the impacts felt by environmental justice communities that are already overburdened with pollution.⁸⁴

Finally, FERC's reliance on the NAAQS is particularly inappropriate for assessing impacts to populations that are sensitive to lower levels of pollution, including those with high levels of respiratory and other health issues.⁸⁵ For such sensitive populations, exposure to criteria pollutants below the NAAQS may be particularly harmful.⁸⁶ Environmental justice communities are more likely to include sensitive populations because of the health disparities they face. For

⁸¹ *Id.* at 1392–97 (discussing EPA's calculations of benefits below NAAQS levels and explicit findings on the lack of evidence of thresholds for ozone, carbon monoxide, and nitrogen dioxide).

⁸² *Id.* at 1390–91.

⁸³ See Deborah N. Behles, *Examining the Air We Breathe: EPA Should Evaluate Cumulative Impacts When It Promulgates National Ambient Air Quality Standards*, 20 PACE ENV'T L. REV. 200, 215–17 (2010).

⁸⁴ EPA has identified higher median blood lead levels among black children and those living in poverty, compared to economically well-off and white children. See National Ambient Air Quality Standards for Lead, 73 Fed. Reg. 66,964, 66,976 (Nov. 12, 2008). Higher concentrations of particulate matter, according to EPA, also exist in communities with lower income, lower rates of education, and higher percentages of minority populations, see National Ambient Air Quality Standards for Particulate Matter, 78 Fed. Reg. 3,086, 3,125 (Jan. 15, 2013), and have been linked to “disproportionately high and adverse effects on minority and/or low-income populations.” *Id.* at 3,266.

⁸⁵ See Castle & Revesz, *supra* note 77, at 1354, 1374.

⁸⁶ See Richard L. Revesz, *Air Pollution and Environmental Justice*, 49 ECOLOGY L. Q. (forthcoming 2022), <https://perma.cc/7M6K-ZVQ2> (manuscript at 33–35) (discussing greater susceptibility disparities in health outcomes for disadvantaged communities exposed to PM_{2.5}).

example, asthma exists in higher rates among minority populations and increases health risks from exposure to ozone, particular matter, and sulfur dioxide.⁸⁷ Health risks from such exposure may be more severe as asthma hospitalizations and mortality have also been observed at higher rates in minority communities.⁸⁸ By failing to meaningfully consider impacts of pollutant exposure below the NAAQS, FERC inappropriately disregards the harms that the REAE Project may pose to these individuals.

C. The Commission Should Assess the Environmental Justice Impacts of Project Alternatives

FERC assesses a number of project alternatives in the DEIS, including different pipeline routes and four siting options for compression station 201.⁸⁹ While the Commission briefly evaluates environmental impacts and effects on landowners from these alternatives, it does not specifically analyze differential environmental justice impacts.⁹⁰ It should do so. Evaluation of alternatives is crucial to a meaningful analysis that avoids merely concluding that the distributional impacts of the proposed project are acceptable without knowing whether the distributional impacts of an available project alternative are significantly less severe.⁹¹ FERC could improve its analysis by identifying environmental justice communities that would be affected by project alternatives and fully discussing marginal changes in impacts on environmental justice communities. In particular, the Commission should consider and explain

⁸⁷ See Review of the Primary National Ambient Air Quality Standards for Sulfur Oxides, 84 Fed. Reg. 9,866, 9,878-79 (Mar. 18, 2019); ENV'T PROT. AGENCY, EPA 240-R-13-001, AMERICA'S CHILDREN AND THE ENVIRONMENT 21 (3d ed. 2013), <https://perma.cc/K2EV-EKS2>.

⁸⁸ See Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. 35,520, 35,527 (June 22, 2010); *Health Effects of Ozone in Patients with Asthma and Other Chronic Respiratory Disease*, U.S. ENV'T PROT. AGENCY (June 23, 2020), <https://perma.cc/FQ3P-Y7XD>.

⁸⁹ DEIS, *supra* note 2, at 3-1 to -29.

⁹⁰ See, e.g., *id.* at 3-12 to -15.

⁹¹ See Richard L. Revesz & Samantha Yi, *Distributional Consequences and Regulatory Analysis*, 52 ENV'T L. 53, 93 (2022) (“[U]nless the distributional consequences of various alternatives are analyzed, an agency might satisfy itself that its chosen policy is acceptable on distributional grounds without knowing that another alternative would be a great deal better.”).

whether pipeline routing Alternative 4, which would reduce construction and operational impacts by 20 percent,⁹² and the siting alternatives for compression station 201, which would move the facility out of an environmental justice community,⁹³ would reduce adverse impacts on environmental justice populations.

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⁹² *Id.* at 3-12.

⁹³ *Compare id.* at 3-23, *with id.* at 4-145.