

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Technical Conference on Greenhouse Gas)
Mitigation: Natural Gas Act Sections 3 and 7) Docket No. PL21-3-000
Authorizations)

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I appreciate the opportunity to join FERC in exploring how it ought to delineate its Section 7 and Section 3 Natural Gas Act obligations when determining whether proposed fossil gas facilities can be built consistent with the public interest in a habitable planet. That the Commission must do so is unquestionable — Sabal Trail¹ and Birckhead² instructed the Commission to incorporate meaningful analysis and weigh this existential threat into its permitting decisions for fossil fuel infrastructure.³ And as

¹ Sierra Club v. Fed. Energy Regul. Comm'n, 867 F.3d 1357, 1374 (D.C. Cir. 2017) (“As we have noted, greenhouse-gas emissions are an indirect effect of authorizing this project, which FERC could reasonably foresee, and which the agency has legal authority to mitigate. See 15 U.S.C. § 717f(e).”)

² Birckhead v. Fed. Energy Regul. Comm'n, 925 F.3d 510, 520 (D.C. Cir. 2019) (“Despite initially attempting, once again, to invoke the limited nature of its jurisdiction in order “to point out that there are limitations to [its] ability to ask” for the necessary information, the Commission ultimately conceded during oral argument that its lack of jurisdiction over shippers, distributors, and end users “doesn’t preclude or foreclose” it from further developing the record by requesting additional data from the project applicant.”) (internal citations omitted).

³ See also Romany M. Webb, *Climate Change, FERC, and Natural Gas Pipelines: The Legal Basis for Considering Greenhouse Gas Emissions Under Section 7 of the Natural Gas Act*, 28 N.Y.U. Envtl L. J. 179, 184 (2020) (“FERC must ‘evaluate all factors bearing on the public interest’ which necessitates a broad-ranging assessment of the need for pipeline development, its benefits, and its costs.”)

several Commissioners have acknowledged, this inquiry is past due.⁴ As set out in greater detail below, there are several key changes the Commission must implement involving its consideration of greenhouse gas emissions, in order to be able to engage in a legally defensible public convenience and necessity analysis, and to ensure that it authorizes only those projects that serve the public interest.

Greenhouse Gas Emissions Policies' Impact on the Commission's Market Demand Determination

Embedded in the Commission's public benefit analysis is its critical determination that there is market demand for the project: this is the first juncture during which FERC must consider greenhouse gas emissions, incorporating relevant data and policies into its market demand determination. FERC's demand determination arises against the backdrop of federal and state laws and policies necessitating reduced use of gas both for electric generation and home heating. For example, Federal Executive Order No. 14008, issued on January 27, 2021, recognized that the United States must achieve a carbon pollution-free electricity sector by no later than 2035 and be on a path to achieve net-zero emissions economy-wide no later than 2050, in order to avert worst-case climate change outcomes.⁵ Numerous government and independent reports

⁴ See also Rich Glick and Matthew Christiansen, *FERC and Climate Change*, 40 Energy L.J. 1, 6 (2019) (the Commission must "double down" on the obligation it already has to weigh the existential threat posed by climate change in its public interest permitting decisions for fossil fuel infrastructure).

⁵ Tackling the Climate Crisis at Home and Abroad, Exec. Order No. 14008, 86 Fed. Reg. 7619 (Feb. 1, 2021), available at <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>. Consistent with the Executive Order, on April 15, 2021, the U.S. submitted a new Nationally Determined Contribution under the Paris Agreement, in which it committed to reducing economy-wide greenhouse gas emissions by 50 to 52% below 2005 levels by 2030. See The United States of America Nationally Determined

demonstrate that achieving net-zero emissions will likely require a substantial reduction in, or the complete elimination of, fossil gas production and consumption.^{6,7,8} Policies supporting alternative energy sources have been adopted at the federal level and in many states and localities.⁹

Contribution, Reducing Greenhouse Gases in the United States: A 2030 Emissions Target (2021), available at <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United%20States%20of%20America%20First/United%20States%20NDC%20April%202021%202021%20Final.pdf>

⁶ See e.g., U.S. Mid-Century Strategy for Deep Decarbonization 18-19 (2016), available at <https://perma.cc/6ZZR-PXJE>; James H Williams et al., Pathways to Deep Decarbonization in the United States (2015), available at <https://perma.cc/DHH8-FDBE>; International Energy Agency, Net Zero by 2050: A Roadmap for the Global Energy Sector (2021), available at <https://iea.blob.core.windows.net/assets/4719e321-6d3d-41a2-bd6b-461ad2f850a8/NetZeroBy2050-ARoadmapfortheGlobalEnergySector.pdf>.

⁷ IEA (2021), World Energy Outlook 2021, OECD Publishing, Paris, <https://doi.org/10.1787/14fcb638-en>. See Table A.2d: World final consumption (page 310), which shows Total final consumption for natural gas in Net Zero Emissions by 2050 scenario *declining* by 13% by 2030, 40% by 2040, and 71% by 2050 to 20 EJ. See also Table A.12: Natural gas demand (bcm) (page 317), which shows that the Announced Pledges Scenario (which includes national net zero GHG emissions by 2050), total primary energy demand from natural gas declines even faster than global rate, declining 18% by 2030 and 72% by 2050 to 248 BCM.

⁸ See, e.g., E. Larson, C. Greig, J. Jenkins, E. Mayfield, A. Pascale, C. Zhang, J. Drossman, R. Williams, S. Pacala, R. Socolow, EJ Baik, R. Birdsey, R. Duke, R. Jones, B. Haley, E. Leslie, K. Paustian, and A. Swan, Net-Zero America: Potential Pathways, Infrastructure, and Impacts, Final report, Princeton University, Princeton, NJ, 29 October 2021, available at <https://www.dropbox.com/s/ptp92f65lgds5n2/Princeton%20NZA%20FINAL%20REPORT%20%2829Oct2021%29.pdf?dl=0> (data available at <https://netzeroamerica.princeton.edu/>), where primary energy from natural gas in the United States is projected to decline between 45 and 100% in five net-zero scenarios analyzed (with 3 of the 5 scenarios showing between 74-80% reduction).

⁹ See, e.g., NRDC, Race to 100% Clean (collecting state laws, policies and targets) available at <https://www.nrdc.org/resources/race-100-clean>.

Given those policies, and the declining cost of alternatives, fossil gas use in electricity generation and buildings is forecast to decline in coming decades.^{10,11} Considering the anticipated declines in fossil gas usage, our energy sector will likely not require new gas infrastructure over the coming decade but will need to ensure that existing infrastructure is used more efficiently. On the contrary, our energy sector will need to decrease reliance on new natural gas infrastructure to avoid stranded assets, environmental degradation, and needless condemnations.¹² At a minimum, the Commission should presume that there is no need to increase reliance on new gas infrastructure, and require applicants to overcome this presumption with data and analyses demonstrating that building gas infrastructure serves the public interest.¹³ For

¹⁰ International Energy Agency, Report Extract: Outlook for Energy Demand, World Energy Outlook 2020, available at <https://www.iea.org/reports/world-energy-outlook-2020/outlook-for-energy-demand>. (after the mid-2020s, “the prospects for gas start to deteriorate as a result of environmental considerations, increasing competition from renewables, efficiency gains, growing electrification of end-use demand and improving prospects for alternative low-carbon gases, such as hydrogen.”).

¹¹ IEA (2021), World Energy Outlook 2021, OECD Publishing, Paris, <https://doi.org/10.1787/14fcb638-en>. See figure 5.14 (page 228), which shows that natural gas demand in the United States is anticipated to decline by ~55 billion cubic meters in the buildings sector and 90+ billion cubic meters in the power sector between 2020 and 2030.

¹² It is not possible to eliminate all greenhouse gas emissions associated with natural gas production, transportation, storage, and use. A significant proportion of emissions during natural gas production, transportation, and storage are due to leaks which can be reduced but not eliminated. Eliminating downstream emissions from natural gas use would require the use of new technologies that are not currently cost effective in most situations. See generally, Dep’t of Energy, Carbon Capture Opportunities for Natural Gas Fired Power Systems (undated), available at https://www.energy.gov/sites/prod/files/2017/01/f34/Carbon%20Capture%20Opportunities%20for%20Natural%20Gas%20Fired%20Power%20Systems_0.pdf.

¹³ See e.g., Shearer, C., Tong, D., Fofrich, R., & Davis, S. J. (2020), Committed emissions of the U.S. power sector, 2000–2018, AGU Advances, 1, e2020AV000162, available at <https://doi.org/10.1029/2020AV000162> (“We find that very large reductions in the use of U.S. coal and gas plants are already needed for the country to meet its

example, if the applicant provides data from shippers demonstrating that peak demand or reliability criteria cannot be met by existing pipeline capacity, and that there are no cost-effective non-pipeline alternatives to meet peak demand, these factors can begin to provide the Commission with a basis for determining that there is true demand for new infrastructure.

A Note on Greenhouse Gas Emissions and Commission Consideration of a No Action Alternative: Doing a Better Job of Assessing What Happens if It Says ‘No’

FERC should not continue to assume that the no-action alternative would simply yield another comparable gas infrastructure project. Asking applicants the right questions will yield data demonstrating what, in fact, project shippers would do in the absence of building new fossil gas infrastructure. The Commission’s NEPA assessment of the no-action alternative can and should help to inform its fulsome NGA public convenience and necessity analysis, and lead to authorization of only those projects *required* by that exacting standard. The Commission commonly substitutes the following paragraph (with only slight variation) in lieu of essential analysis for NEPA’s requisite “no-action” alternative: “If [applicant’s] proposed facilities are not constructed, the Project shippers may need to obtain an equivalent supply of natural gas from new or existing pipeline systems. In response, [Applicant] or another natural gas transmission company may develop a new project or projects to provide the volume of natural gas contracted through the Project’s binding precedent agreements with the Project

targets under the Paris climate agreement—even if no new coal or gas plants are built.”).

shippers. Alternatively, customers of the Project shippers could seek to use alternative fuel or renewable energy sources, which could require new facilities. In either case, construction of new pipelines or other energy infrastructure would result in environmental impacts that could be equal to or greater than those of the Project. For these reasons, the No Action Alternative would not be preferable to or provide a significant environmental advantage over the Project.” PennEast FEIS, FERC Docket No. CP15-558, Accession No. 20170407-4001. When assessing other alternatives, the Commission has not engaged in a measurably better analysis. Where the no-action alternative can fulfil the Gas Act goal of only certifying truly needed infrastructure, the Commission should deny certification. Sometimes these two goals will align, but more often, given today’s context of necessarily declining reliance on gas infrastructure as described above, they will not.¹⁴

Integrating Greenhouse Gas Emissions into the Commission’s Weighing of a Proposed Project’s Costs and Benefits

In order for the Commission to fulfil its NGA mandate and engage in a fulsome public convenience and necessity balancing determination that will protect the public interest, FERC must be able to quantify a proposed project’s public benefits and costs. FERC cannot weigh or balance what it cannot measure with robust data and analyses; it cannot merely rely on applicants’ assertions. Of fossil gas projects’ anticipated costs,

¹⁴ Whereas gas was a limited supply to be conserved, supplies are now plentiful, and different factors must be considered. See Florida Southeast Connection, LLC, 162 FERC ¶ 61,233 at P 17 (2018). See also Dr. Steve Isser, NATURAL GAS PIPELINE CERTIFICATION AND RATEMAKING (Oct. 7, 2016), FERC Docket No. CP15-558, Accession No. 20161020-5028.

climate change impacts from project-induced greenhouse gas emissions collectively constitute the gravest threat to the public interest.¹⁵

Having submitted comments previously detailing the various methodologies and data points essential to the Commission's consideration of greenhouse gas emissions when implementing the NGA's requisite fulsome public convenience and necessity analysis,¹⁶ here it is critically important to explore *when* and *how* the Commission ought to deploy those tools and data. First, the Commission should assess proposed projects' upstream, direct construction and operation, and downstream emissions using the previously noted tools and measures. In doing so, it should contextualize these emissions and their contribution to climate change in both monetary terms and in comparative ones. Courts have made clear that one way to contextualize the GHG emissions that the Commission must consider (after asking applicants the right questions, see Birckhead) is by assessing their significance against other agencies' articulated standards.¹⁷ The Commission should not consider any mitigation measures in this step.¹⁸ Rather, it should delineate the proposed project's societal costs, adding those to other adverse impacts that it has cataloged, including landowner harms and

¹⁵ I previously submitted comments to the Commission in its 2021 NOI Docket No. PL18-1-000, at Accession #20210526-5125. Those comments are hereby incorporated in full (but not reproduced), to provide the Commission additional guidance and detail regarding the various methodologies available to assist the Commission in quantifying the adverse impacts from proposed new fossil gas infrastructure projects against their verifiable benefits.

¹⁶ See id., at pp. 18-25.

¹⁷ Sierra Club v. Fed. Energy Regul. Comm'n, 867 F.3d 1357, 1374 (D.C. Cir. 2017) (suggesting several standards against which FERC could contextualize significance).

¹⁸ See Allen, M. & et al. The Oxford Principles for Net Zero Aligned Carbon Offsetting (pdf 2020) (organizing principle is the need to reduce emissions prior to considering offsets) available at: <https://www.smithschool.ox.ac.uk/publications/reports/Oxford-Offsetting-Principles-2020.pdf>.

other water, air and resource damages. This aggregate harm must then be measured against aggregated, documented benefits, with the Commission considering whether the public interest will be served by project authorization.

If the Commission determines that the public interest requires it to authorize the additional fossil gas infrastructure because the public benefits outweigh the public harms, then, as its second step, the Commission should determine how it can minimize the harms associated with the proposed project. It is an uncontroversial proposition that a Commission determination that the public convenience and necessity requires a particular project to be built does not eradicate the public harm that will stem from that project. It simply means that, on balance, the public interest will be better served by authorizing the project than by denying it. But as the very letter of Section 717f(e) states, the Commission can predicate its finding that the project is required by the public convenience and necessity on additional conditions imposing significant restrictions and requirements.¹⁹ Thus, if the Commission determines that while, on balance, the public requires the project to be built, the public convenience and necessity requires that it “attach to the issuance of the certificate and to the exercise of the rights granted thereunder such reasonable terms and conditions.”²⁰

This is where the Commission can address public harm stemming from its project authorization by imposing greenhouse gas mitigation measures. It is critical, however, that greenhouse gas reduction or mitigation measures are not used at the outset of the Commission’s accounting and contextualization of proposed projects’ climate change

¹⁹ 15 U.S.C. 717f(e) (“The Commission shall have the power to attach to the issuance of the certificate and to the exercise of the rights granted thereunder such reasonable terms and conditions as the public convenience and necessity may require.”)

²⁰ Id.

harms for a few key reasons. As the Commission itself (and industry proponents) have noted, the Commission is not an environmental regulator with enforcement powers extending beyond its jurisdiction over the applicant. While states have such powers emanating from their traditional and primary police power to protect citizens' health and welfare, the federal government is one of limited and carefully delineated powers. And while Congress tasked federal agencies via statute with specific powers to protect our lands, air and water emanating out of its constitutionally-provided Commerce Clause powers, their right to do so remains under constant assault – specifically with respect to their consideration of greenhouse gas emissions and climate change. The Commission, an independent body charged with protecting the public interest by only authorizing fossil fuel infrastructure that is required by the public convenience and necessity, must account for the public impacts of its decisions without the luxury of relying on other agencies' ability to regulate or enforce specific mitigation measures, and without relying on largely unverifiable carbon offset markets.

Beyond its legal obligations to do so, the Commission's structural role in stewarding the energy transition away from fossil fuels towards a reliable, flexible, clean energy system makes it **critically** important for the Commission to meaningfully account for and contextualize projects' greenhouse gas emissions impacts. Confronted with the grim reality that we have no time remaining to slash emissions and avoid the worst climate change outcomes, the Commission's NGA authority is the rampart against which any bid to increase greenhouse gas emissions must fall. The Commission is well-positioned within our federal system to ensure that usage of fossil fuels for home heating, industrial operations and power generation will decline over time by authorizing

only those new projects that the public cannot do without during this essential period of transition.

Finally, Commission reliance on prospective upstream or downstream mitigation proposals in its fulsome public convenience and necessity balancing would be without factual basis. Crediting any upstream promises of emissions reductions by producers or well operators would be akin to magical thinking as such technologies are not yet widely used by industry.²¹ And while downstream mitigations such as carbon capture and storage or carbon credit offsets may be more viable, the Commission cannot consider them in its public interest balancing test because they are inapposite to various end uses, such as gas projects designed to serve home heating, and/or are largely unverifiable, untested and unenforceable. Carbon offset markets tend to be more carbon reduction theater than verifiable climate benefit.²² The Commission must reserve such upstream and downstream mitigation measures for the *end* of its inquiry, when it imposes conditions that attempt to reduce greenhouse gas emissions harms

²¹ Options for certificate conditions to mitigate upstream impacts once FERC has decided the project is required by the public convenience and necessity include those summarized in a recent NETL report, which calculated marginal abatement costs and showed several to be cost effective for the case study evaluated. S. Rai, J. Littlefield, S. Roman-White, G. G. Zaines, G. Cooney, T. J. Skone, "Industry Partnerships & Their Role in Reducing Natural Gas Supply Chain Greenhouse Gas Emissions – Phase 2," National Energy Technology Laboratory, Pittsburgh, February 12, 2021, available at: <https://netl.doe.gov/projects/files/NETL-Industry-Partnerships-and-their-Role-in-Reducing-Natural-Gas-Supply-Chain-Greenhouse-Gas-Emissions-Phase-2-12FEB2021.pdf>

²² See, e.g., Badgley, Grayson & Freeman, Jeremy & Hamman, Joseph & Haya, Barbara & Trugman, Anna & Anderegg, William & Cullenward, Danny. (2021). Systematic over-crediting in California's forest carbon offsets program. Global change biology. 10.1111/gcb.15943; David Roberts, Carbon Offsets aren't working, and probably can't: A conversation with Cullenward & Victor, part two, available at: <https://www.volts.wtf/p/carbon-offsets-arent-working-and>.

from projects that the public absolutely requires – not to persuade the Commission that the project is not so harmful in the first place.

Conclusion

The Commission's Docket #PL21-3-000 can provide a robust forum that can expedite the Commission's creation of the framework it will use for assessing greenhouse gas emissions and their climate consequences in its Section 7 and Section 3 authorization inquiries. I look forward to the Commission incorporating its final structure into its regulations governing applications for these authorizations, so that applicants have a clear roadmap on what kinds of data and analyses they must provide to allow the Commission to conduct a fulsome public convenience and necessity analysis of their proposed projects. Having shifted its inquiry to ensure that it is asking the right questions from the outset, the Commission can evaluate the public harms from proposed new infrastructure against verifiable public benefits. If and when it determines that a project is required by the public convenience and necessity, the Commission should then attach certificate conditions imposing significant mitigation measures designed to minimize upstream, direct operation, and downstream greenhouse gas emissions that the project will generate.

Respectfully submitted,

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