

**UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY**

NFE Altamira FLNG, S. de R.L. de C.V

FE Dkt. 22-110-LNG

**Sierra Club's Motion to Intervene and Protest of
NFE Altamira FLNG's Request for Export and Re-Export Authorization**

The Biden administration, and allies around the globe, have recognized the need to transition off fossil fuels as quickly as possible. This transition is needed to avoid the worst of climate change: it is not enough to halt increases in greenhouse gas emissions; instead, the world must reduce emissions as drastically and as quickly as possible. This transition is also essential to global strategic interests: European allies have recognized that the best way to end dependence on *Russian* gas is to end use of *all* gas. Increased fossil fuel exports undermine this transition, and are thus contrary to the public interest.

Fossil fuel exports also hurt American consumers. Exports increase domestic energy prices, including for end-use, residential customers, as recently affirmed by FERC and the Energy Information Administration. These recent, observed increases in energy prices appear to exceed the predictions made in DOE's prior analyses—outdated predictions that DOE plans to continue to rely on here. At a minimum, DOE must update these analyses before taking action on NFE Altamira's request. But DOE must also address the heretofore-ignored distributional impacts of additional gas exports: the fact that exports increase the energy burden on those households least able to tolerate higher prices, including environmental justice communities.

For these reasons, and as further explained below, Sierra Club moves to intervene in the above-captioned docket, and protests this application.

I. Intervention

DOE's rules do not articulate any particular standard for timely intervention, and as such, intervention should be granted liberally. DOE merely requires would-be-intervenors to set out the "facts upon which [their] claim of interest is based" and "the position taken by the movant." 10 C.F.R. § 590.303(b)-(c). As explained in the following section, Sierra Club's position is that the application should be denied or, in the alternative, heavily conditioned. Sierra Club's

interests are based on the impact the proposed additional exports will have on its members and mission.

The requested export and re-export will harm Sierra Club and its members by increasing the prices they pay for energy, including both gas and electricity. As DOE and the Energy Information Administration have previously explained, each marginal increase in export volumes is also expected to further increase domestic energy prices.

The proposed exports will further harm Sierra Club members by increasing gas production and associated air pollution, including (but not limited to) emission of greenhouse gases and ozone precursors. As DOE has recognized, increasing gas exports will increase gas production,¹ and increasing gas production increases ozone pollution, including risking creation of new or expanded ozone non-attainment areas or exacerbating existing non-attainment.² Insofar as the exports at issue here will utilize the Valley Crossing Pipeline, some (if not most or all) of the gas to be exported will foreseeable be produced in Texas. Sierra Club's 23,334 members in Texas are already subject to harmful levels of ozone, including ozone caused by oil and gas production. This particularly includes' Sierra Club's 6,057 members residing with the Dallas-Fort Worth ozone non-attainment area.³

Finally, increasing exports will impact Sierra Club and its members because of the additional greenhouse gases emitted throughout the export lifecycle, from production, transportation, liquefaction, and end use. The impacts from climate change are already harming Sierra Club members in numerous ways. Coastal property owners risk losing property to sea level rise. Extreme weather events, including flooding and heat waves, impact members' health, recreation, and livelihoods. Increased frequency and severity of wildfires emits smoke that

¹ See, e.g., U.S. EIA, Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets (Oct. 2014) at 12, *available at* <https://www.eia.gov/analysis/requests/fe/pdf/lng.pdf> (explaining that “[n]atural gas markets in the United States balance in response to increased LNG exports mainly through increased natural gas production,” and “[a]cross the different export scenarios and baselines, higher natural gas production satisfies about 61% to 84% of the increase in natural gas demand from LNG exports,” with “about three-quarters of this increased production [coming] from shale sources.”).

² U.S. DOE, Final Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States (Aug. 2014) at 27-32, *available at* <https://www.energy.gov/sites/prod/files/2014/08/f18/Addendum.pdf>.

³ Addendum, *supra* note 2, at 27.

impacts members' health, harms ecosystems members depend upon, and threatens members' homes. Proposals, such as this one, that encourage long-term use of carbon-intensive fossil fuels will increase and prolong greenhouse gas emissions, increasing the severity of climate change and thus of these harms.

In summary, NFE Altamira's proposed exports volumes will harm Sierra Club and its members in numerous ways. Sierra Club accordingly contends that the application should be denied or conditioned, as further described in the following protest.

Pursuant to 10 C.F.R. § 590.303(d), Sierra Club identifies the following persons for the official service list:

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II. Protest

The request to export and re-export gas should be denied because it is contrary to the public interest. 15 U.S.C. § 717b(a).

As DOE explained “when reviewing an application for export authorization,” DOE evaluates “economic impacts, international impacts, security of natural gas supply, and environmental impacts, among others.”⁴ Here, all of these factors weigh against the application.

A. NFE Altamira Proposes to Increase Total Export Volumes

At the threshold, NFE Altamira's request must be treated as a request to increase U.S. exports to Mexico—that is, an addition to, rather than replacement for, exports already authorized to occur using the Valley Crossing Pipeline.

Although NFE Altamira states that it is negotiating with CFE International to use its existing capacity on the Valley Crossing Pipeline, Application at 9. NFE Altamira's application is not contingent on the use of that capacity, or on displacement of those existing exports. NFE

⁴ DOE/FE Order No. 3357-B (Freeport LNG), at 9 (Nov. 14, 2014), *available at* <https://www.energy.gov/sites/prod/files/2014/11/f19/ord%203357-B.pdf>.

Altamira explicitly requests that its authorization not require use of the Valley Crossing Pipeline; thus, if CFE does not relinquish capacity, NFE Altamira will be able to seek to effectuate the requested exports through other means. In addition, although NFE Altamira states that modifications to the Valley Crossing Pipeline are not proposed as part of this application, Valley Crossing Pipeline as plainly contemplated such upgrades in other dockets (e.g., to provide additional capacity to supply the now-defunct Anova LNG export proposal), and such modifications could occur here.

NFE Altamira does not argue that its export and re-export proposal should be treated as a displacement of, or substitute for, exports that would otherwise occur. And DOE must not treat the proposal as such.

B. The Proposed Exports Would Increase Domestic Gas Prices

DOE has historically given particular emphasis to “the domestic need for the natural gas proposed to be exported” and “whether the proposed exports pose a threat to the security of domestic natural gas supplies.”⁵ As recent data shows, exports are increasingly linking domestic gas prices to prices in the global market. These increases harm American households and energy intensive industry.

Exports are increasing domestic gas prices, as recognized by FERC, the Wall Street Journal,⁶ S&P Global Platts Analytics,⁷ the Institute for Energy Economics and Financial Analysis, and others. FERC, for example, has identified LNG exports as the “primar[y]” source of the additional demand that is driving recent gas price increases.⁸ FERC recently affirmed that “continued growth in net exports, ... will place additional pressure on natural gas prices this

⁵ *Id.* at 10.

⁶ Collin Eaton & Katherine Blunt, Natural-Gas Exports Lift Prices for U.S. Utilities Ahead of Winter, WALL ST. J., Nov. 7, 2021, <https://www.wsj.com/articles/natural-gas-exports-lift-prices-for-u-s-utilities-ahead-of-winter-11636281000>.

⁷ Kelsey Hallahan, Henry Hub could reach \$12-\$14 this winter as capital discipline limits supply growth: Platts Analytics, S&P GLOBAL PLATTS, Oct. 14, 2021, <https://www.spglobal.com/platts/en/market-insights/latest-news/natural-gas/101421-henry-hub-could-reach-12-14-this-winter-as-capital-discipline-limits-supply-growth-platts-analytics>.

⁸ FERC, 2021 Winter Energy Market and Reliability Assessment (Oct. 21, 2021) at 2, *available at* <https://ferc.gov/sites/default/files/2021-10/Winter%20Assessment%202021-2022%20-%20Report.pdf>

winter.”⁹ Domestic energy prices are expected to be higher this year than the year before, which was higher than the year before that, etc.¹⁰

These price increases will harm both households and industrial energy consumers. The Industrial Energy Consumers of America, which represents manufacturers that use at least 1 million MMBtu of energy per year,¹¹ has repeatedly written to DOE about how export-driven gas prices increases are harming domestic industry.¹² From an economic perspective, gas exports are simply making most Americans worse off: all Americans must pay energy bills, but few own shares (even indirectly, through pension plans and the like) in the gas companies that are benefiting from high gas prices and gas sales.¹³ But DOE is charged with protecting the “public” interest, 15 U.S.C. § 717b(a); that is, the interest “of ... all or most of the people” in the United States. *Public*, Merriam-Webster Unabridged Dictionary.¹⁴ DOE has previously recognized that “the distributional consequences of an authorizing decision” may be so negative as to demonstrate inconsistency with the public interest despite “net positive benefits to the U.S. economy as a whole.”¹⁵ Accordingly, unless DOE addresses distributional concerns, DOE will have failed to consider an important part of the problem. But to date, DOE has never grappled with the distributional impacts of LNG exports: DOE has acknowledged that LNG exports have

⁹ FERC, 2022-2023 Winter Market and Reliability Assessment, at 1 (Oct. 25, 2022), *available at* <https://www.ferc.gov/media/report-2022-2023-winter-assessment>

¹⁰ https://www.eia.gov/outlooks/steo/special/winter/2022_winter_fuels.pdf

¹¹ “Membership Info,” IECA, <https://www.ieca-us.com/membership-info/> (last accessed Dec. 7, 2021).

¹² *See, e.g.*, Letter from Paul N. Cicio to Jennifer Granholm (Nov. 22, 2021), *available at* https://www.ieca-us.com/wp-content/uploads/11.22.21_LNG_-Why-a-Safety-Valve-is-Needed_FINAL.pdf.

¹³ Synapse Energy Economics, Inc., *Will LNG Exports Benefit the United States Economy?* (Jan. 23, 2013) at 9, *available at* https://fossil.energy.gov/ng_regulation/sites/default/files/programs/gasregulation/authorizations/export_study/Exhibits_1-20.pdf, Initially submitted as Exhibit 5 to Comments of Sierra Club *et al.* on the 2012 NERA macroeconomic report).

¹⁴ <http://www.merriam-webster.com/dictionary/public>.

¹⁵ DOE/FE Order 3638-A (Corpus Christi) at 45 (May 26, 2016), *available at* https://fossil.energy.gov/ng_regulation/sites/default/files/programs/gasregulation/authorizations/2012/applications/12-97-LNG_CMI_Corpus_Rehearing_May_26.pdf

some positive and some negative economic impacts,¹⁶ but DOE has not addressed the fact that those who suffer the harms are not the same as those who enjoy the benefits, or that the former are more numerous and generally less advantaged than the latter. In particular, research shows that low-income, Black, Hispanic, and Native American households all face dramatically higher energy burdens—spending a greater portion of their income on energy bills—than the average household.¹⁷ Especially in light of this administration’s emphasis on environmental justice, the distributional and equity impacts of export-driven gas price increases require careful consideration.

DOE’s notice of NFE Altamira’s application states that in reviewing the application, DOE will consider prior analyses of the impact of exports. Those prior analyses concluded that the price impact of exports would be muted because producers would respond to additional demand by increasing drilling and thus supply. But reality has not matched this expectation. As FERC and the EIA have explained, “multiple factors have contributed to higher Henry Hub spot prices over the course of the year: rising domestic natural gas consumption; relatively minor natural gas production growth; lower than average natural gas storage inventories; and continued growth in LNG exports.”¹⁸ Or in the words of the Wall Street Journal, “American frackers ... are holding the line on new drilling as investors pressure them to maintain capital discipline and return money to shareholders. *The result is that natural gas exports are pushing domestic prices higher.*”¹⁹

DOE has previously relied on modeling of how energy markets will balance in response to increased LNG exports, and on studies of the macroeconomic effects of such balancing. The current surge in gas prices calls those prior analyses into question, and DOE cannot approve additional exports without carefully examining the continuing validity of those analyses.

¹⁶ See, e.g., NERA Economic Consulting, *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports* (June 7, 2018) at 19, 21, 64, 67, available at <https://cms.doe.gov/sites/prod/files/2018/12/f58/2018%20Study.pdf>.

¹⁷ American Council for an Energy-Efficient Economy, *How High are Household Energy Burdens?* (Sept. 2020), available at <https://www.aceee.org/sites/default/files/pdfs/u2006.pdf>. Accord Eva Lyubich, *The Race Gap in Residential Energy Expenditures* (June 2020), available at <https://haas.berkeley.edu/wp-content/uploads/WP306.pdf>.

¹⁸ FERC, 2022-2023 Winter Energy Market and Reliability Assessment, at 5.

¹⁹ Eaton & Blunt, *supra* note 6 (emphasis added).

DOE must be particularly cautious given DOE's refusal, to date, to exercise supervisory authority over already-approved exports. Although DOE retains authority to amend and/or rescind existing export authorizations, 15 U.S.C. § 717o, DOE has stated its reluctance to exercise such authority.²⁰ But if export applications are, in effect, a one-way ratchet on export volumes, DOE cannot issue such authorizations carelessly.

The Natural Gas Act's "principle aim[s]" are "encouraging the orderly development of plentiful supplies of natural gas at reasonable prices and protecting consumers against exploitation at the hands of natural companies," with the "subsidiary purposes" of addressing "conservation, environmental, and antitrust issues." *Minisink Residents for Envtl. Pres. & Safety v. FERC*, 762 F.3d 97, 101 (D.C. Cir. 2014) (cleaned up). At present, gas exports are not achieving these purposes. DOE's uniform approval of all export applications has not protected consumers from exploitation at the hands of gas companies, and LNG exports are not leading to reasonable gas prices. Accordingly, even putting aside the numerous and severe environmental impacts of increased gas exports, NFE Altamira's application is inconsistent with the public interest and should be denied.

C. Climate

Secretary of State Antony Blinken has explained that

[the Biden administration] see[s] the challenge of climate change as the existential challenge of our time. And if you see it that way, you're going to make sure that you're doing your part and doing everything necessary to meet the challenge, irrespective of what else is going on, what your other commitments are.²¹

Secretary of Energy Granholm has similarly affirmed that Russia's invasion of Ukraine "has only accelerated the urgency with which we must move to electrify transportation and to move toward clean energy."²² And President Biden himself explained that this invasion "should

²⁰ See Policy Statement Regarding Long-Term Authorizations to Export Natural Gas to Non-Free Trade Agreement Countries, 83 Fed. Reg. 28,841 (June 21, 2018). Although DOE has not exercised this authority yet, DOE *should* carefully consider doing so, given the severe impact already-authorized exports are having on domestic gas prices.

²¹ <https://www.politico.eu/article/cop-26-progress-global-climate-crisis-cop-27/>

²² S&P Capital IQ, Granholm defends gas infrastructure permitting speed amid regulation

motivate us to accelerate our transition to clean energy,” affirming that “This is a perspective ... that our European allies share.”²³

Here, DOE’s notice states that DOE will consider its prior lifecycle greenhouse gas analyses in reviewing NFE Altamira’s application. However, those analyses failed to grapple with the question of whether increasing U.S. LNG exports would undermine this transition or other efforts to reduce greenhouse gas emissions and avoid catastrophic climate change. Fundamentally, those analyses asked the wrong questions.²⁴ DOE needs to provide additional analysis or reasonable forecasting of how global energy markets will respond to additional gas exports and DOE needs to take a harder look at the domestic impact of exposing U.S. energy markets to additional gas demand.

1. Globally, DOE Can Foresee That Increased U.S. LNG Exports Are Incompatible With Emission Reduction Targets

Globally, avoiding catastrophic climate change by limiting global warming to 1.5° C—or even 2° C—will require drastic reductions in global emissions, which can only be achieved by phasing out fossil fuels as quickly as possible.²⁵ The world must transition to net-zero emissions by 2050, and reduce global carbon dioxide (CO₂) emissions by 45 percent by 2030—we need “rapid, deep and sustained reductions in global greenhouse gas emissions.”²⁶ According to the United Nations Intergovernmental Panel on Climate Change (IPCC), to achieve these reductions,

revisions (May 4, 2022)

²³ <https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/03/08/remarks-by-president-biden-announcing-u-s-ban-on-imports-of-russian-oil-liquefied-natural-gas-and-coal/>.

²⁴ DOE has previously argued that the lifecycle analyses’ approach was approved by the D.C. circuit in *Sierra Club v. Department of Energy*, 867 F.3d 189, 202 (D.C. Cir. 2017). But in that case, the Court began by stating that “[a]s for ‘downstream emissions’ ... Sierra Club does not challenge the method employed by the Department to address them.” 867 F.3d at 202. We present such a challenge here.

²⁵ See Sierra Club Comments on 2019 Lifecycle Report at 4-5, *available at* <https://fossil.energy.gov/app/DocketIndex/docket/DownloadFile/604>; Sierra Club Comments on 2014 Lifecycle Report at 12-15, *available at* <https://fossil.energy.gov/app/DocketIndex/docket/DownloadFile/180>

²⁶ U.N. Framework Convention on Climate Change Secretariat, Glasgow Climate Pact at ¶17, *available at* https://unfccc.int/sites/default/files/resource/cop26_auv_2f_cover_decision.pdf.

we must move to renewable energy as extensively and as quickly as possible.²⁷ The International Energy Agency (IEA) similarly concludes that, globally, “there is no need for investment in new fossil fuel supply in our net zero pathway.”²⁸ Accordingly, Executive Order 14,008 instructs federal agencies to discourage “high carbon investments” or “intensive fossil fuel-based energy.”²⁹ Global LNG export volumes, specifically, must *decline* below present levels in just the next few years: as the International Energy Agency recently affirmed, further expansion of LNG export facilities cannot be part of the path to net-zero emissions.³⁰

Despite this broad consensus, and the fact that U.S. LNG exports are significantly reshaping the U.S. and global energy landscapes, DOE has never measured U.S. LNG exports against the world we need to achieve, instead solely comparing U.S. LNG exports to the energy landscape we have now. The only questions asked by DOE’s lifecycle analyses are “How does exported LNG from the United States compare with” other fossil fuels (coal or other gas) currently used “in Europe and Asia, from a life cycle [greenhouse gas] perspective?”³¹

Global warming in excess of 2° C, or even 1.5° C, will have tremendous foreseeable environmental impacts and be contrary to the public interest. But DOE entirely failed to consider whether the exports requested here, with a proposed authorization lasting through 2050, would make it less likely that other countries will achieve the emissions reductions necessary to limit global warming to these levels. DOE therefore failed to consider an important factor weighing on the public interest, and failed to take the hard look required by NEPA.

²⁷ Intergovernmental Panel on Climate Change, *Special Report: Global Warming of 1.5 C, Summary for Policymakers* at 15 (May 2019) (“IPCC 2019”), available at https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_SPM_version_report_LR.pdf.

²⁸ International Energy Agency, *Net Zero by 2050*, at 11 (May 2021), available at https://iea.blob.core.windows.net/assets/7ebafc81-74ed-412b-9c60-5cc32c8396e4/NetZeroBy2050-ARoadmapfortheGlobalEnergySector-SummaryforPolicyMakers_CORR.pdf.

²⁹ Executive Order 14,008, 86 Fed. Reg. 7619, at § 102(f), (h) (Jan. 27, 2021).

³⁰ International Energy Agency, *Net Zero by 2050*, at 102.

³¹ 84 Fed. Reg. 49,278, 49,279 (Sept. 19, 2019).

2. Internationally, DOE Can Make Reasonable Forecasts about Where Exported Gas Will Go and How It Will Be Used

Aside from considering the big picture need for the globe to transition away from fossil fuels, multiple sources of evidence enable DOE to reasonably forecast where additional LNG might go. As discussed below, any additional demand from Europe will likely be limited to the short or intermediate term, expiring far before the authorization's 2050 expiration. In Asia, according to the International Energy Agency, "Demand from traditional LNG buyers, namely Japan and Korea, is likely to be flat or decline gradually depending on use in power generation;"³² "demand from traditional buyers is expected to be stagnant."³³ Any growth in Asian LNG demand "is being driven by newer importers"³⁴ or "non-traditional emerging buyers, namely Bangladesh, China, India and Pakistan."³⁵ Like the IEA, the EIA also uses tools to estimate the extent to which foreign markets are actually likely to buy US LNG.³⁶ And here—where DOE is deciding whether to approve *additional* U.S. LNG exports, from this particular facility—the question before DOE is where demand for this additional gas might come from, throughout the approved 25-year term.

Other evidence also indicates how these receiving markets will shift in response to additional LNG. Peer reviewed research concludes that US LNG exports are likely to play only a limited role in displacing foreign use of coal.³⁷ Thus, while DOE may have thought that common sense suggested that LNG would primarily compete against other fossil fuels in 2014, when the first life cycle analysis report was published, subsequently-developed evidence shows that this

³² International Energy Agency, *Global Gas Security Review 2019* (web version) (Sept. 2019), <https://www.iea.org/reports/global-gas-security-review-2019>; pdf report *available at* https://webstore.iea.org/download/direct/2832?fileName=Global_Gas_Security_Review_2019.pdf.

³³ *Id.* at 4.

³⁴ *Id.*

³⁵ *Id.* at 11.

³⁶ *See, e.g.*, <https://www.eia.gov/outlooks/aeo/assumptions/pdf/natgas.pdf> at 4.

³⁷ Gilbert, A. Q. & Sovacool, B. K., *US liquefied natural gas (LNG) exports: Boom or bust for the global climate?*, *Energy* (Dec. 15, 2017), *available at* <https://doi.org/10.1016/j.energy.2017.11.098>.

unlikely to be the case, and DOE has not provided any evidence suggesting that LNG exports will primarily compete with coal or other sources of gas.

Even if, after taking a hard look at this additional information, DOE reaffirms its assertion that it cannot reasonably forecast how, individually or cumulatively, additional U.S. LNG exports will displace coal, other gas, renewables, or conservation, DOE must provide additional analysis of the range of possible outcomes. In the lifecycle analyses that DOE previously commissioned, U.S. LNG was juxtaposed with other sources of fossil fuels, without a similar juxtaposition for renewables and conservation. Providing only one comparison but not the other presents a misleadingly incomplete picture, especially where DOE concedes that *some* displacement of renewables will occur. If DOE were to provide this analysis, it would show that while the difference between U.S. LNG and other fossil fuels may not be great, the difference between LNG and renewables or conservation is stark. This analysis would reveal what percentage of exported LNG must displace other fossil fuels to avoid increasing emissions, relative to the status quo. Simply identifying that threshold would provide meaningful information to the public and to decisionmakers. For example, if DOE were to determine that the breakeven point is 98% displacement of other fossil fuels, the public and decisionmakers could form judgments about whether additional LNG exports could plausibly have that little of an impact on renewables and conservation, even absent specific forecasts.

3. Domestically, The Impact of U.S. LNG Exports on Domestic GHG Emissions Is Foreseeable, Important, and Ignored by DOE's Analysis

Even if DOE is truly incapable of reasonably forecasting how increased exports will influence overseas emissions, there is no doubt that increasing exports will increase *domestic* emissions associated with gas production and liquefaction.³⁸ DOE cannot refuse to disclose and analyze the entirely foreseeable and presumptively-significant volume of upstream emissions “just because the emissions in question might be partially offset by reductions elsewhere.” *Sierra Club v. FERC*, 867 F.3d 1357, 1374-75 (D.C. Cir. 2017) (“*Sabal Trail*”); accord *WildEarth Guardians v. U.S. Bureau of Land Mgmt.*, 870 F.3d 1222, 1236 (10th Cir. 2017).

Notably, increased exports will have domestic energy market consequences beyond increased gas production. Increased exports will also increase domestic coal use, relative to what

³⁸ See, e.g., Final Environmental Addendum at 44, 2019 Lifecycle GHG Update at 23.

would otherwise occur. EIA has previously predicted that this would occur in its initial LNG export studies. DOE's lifecycle analyses ignore this impact, but EIA has recently confirmed that export-driven gas price increases are, in fact, propping up U.S. coal use.³⁹

Indeed, even if overseas offsets were perfectly foreseeable, DOE would still need to discuss impacts on domestic emissions. The U.S.'s own emission reduction goals, and international climate agreements to which the U.S. is a party, specifically call on the U.S. to address territorial emissions, regardless of whether domestic emission increases might be offset by foreign emission reductions.⁴⁰ Compliance with commitments made under the Paris Accord is evaluated based on "greenhouse gas emissions and removals taking place within national territory and offshore areas over which the country has jurisdiction."⁴¹ There are sound policy reasons for these agreements' focus on domestic emissions. As DOE itself acknowledges, impacts on domestic emissions can be more reasonably verified than impacts in other countries; asking each country to demonstrate reductions in domestic emissions improves both accuracy and accountability. In addition, it would be unfair and thus nonstrategic for the U.S. to argue that although the world must transition *away from* fossil fuels as quickly as possible for climate reasons, the U.S. can enjoy the purported economic benefits of *increased* fossil fuel production, based on the argument that our increased emissions will be offset by other nations' reductions.

Executive Order 14,008, Tackling the Climate Crisis at Home and Abroad,⁴² affirms that "Responding to the climate crisis will require ... net-zero global emissions by mid-century or before."⁴³ As an interim step, President Biden has announced a "commitment to reduce U.S. emissions by 50-52% from 2005 levels in 2030."⁴⁴ Increasing LNG exports is likely to interfere

³⁹ https://www.eia.gov/outlooks/steo/special/winter/2022_winter_fuels.pdf, at 2.

⁴⁰ Sierra Club Comments on 2019 Lifecycle Report at 10; Sierra Club Comments on 2014 Lifecycle Report at 12-14.

⁴¹ Intergovernmental Panel on Climate Change, 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 8: Reporting and Tables, at 8.4 *available at* https://www.ipcc-nggip.iges.or.jp/public/2019rf/pdf/1_Volume1/19R_V1_Ch08_Reporting_Guidance.pdf and attached.

⁴² 86 Fed. Reg. 7619 (Jan. 27, 2021).

⁴³ *Id.* § 101, 86 Fed. Reg. at 7619.

⁴⁴ <https://www.whitehouse.gov/briefing-room/statements-releases/2021/11/13/fact-sheet->

with achieving these goals, and that interference is both contrary to the public interest, as interpreted for purposes of the Natural Gas Act, and an effect that must be analyzed under NEPA. But DOE entirely failed to consider the impact of LNG exports, individually or cumulatively, on efforts to attain U.S. emission reduction targets.

4. DOE Understates Emissions from U.S. Gas Production.

When DOE looks upstream, DOE must correct errors in prior analyses. The 2019 analysis concludes that the “upstream emission rate” or “leak rate” of U.S. LNG exports—the amount of methane that is emitted to the atmosphere during production, processing, and transportation of gas to the export facility—is 0.7% of the gas delivered.⁴⁵ But studies measuring actual emissions find much higher leak rates. One such study, which we previously presented to DOE, estimates an average leak rate of 2.3%.⁴⁶ As we explained, there are many reasons to believe that this study’s atmospheric measurements, and others like it, are more reliable than the “bottom up” estimates used by DOE—notably, the fact that bottom up estimates poorly represent the rare but severe major leaks that constitute a large fraction of upstream emissions.⁴⁷ DOE, in its response to this comment, explained the difference between its estimate and this study’s by arguing that the “higher leakage rates cited by Alvarez are merely indicative of the type of irregular behavior expected in highly variable natural gas systems, which have many contributors with skewed probability distribution functions (e.g., superemitters).” 85 Fed. Reg. 72, 84 (Jan. 2, 2020). But that’s the point: superemitters *do* skew the overall emission rate for gas production, but that doesn’t make superemitters any less real or important, and superemitters are not, or are not adequately, accounted for in NETL’s bottom-up estimates. Subsequent research has consistently affirmed the importance of superemitters and the fact that actual emissions exceed

renewed-u-s-leadership-in-glasgow-raises-ambition-to-tackle-climate-crisis/, attached.

⁴⁵ 2019 Life Cycle GHG Perspective at 27.

⁴⁶ Sierra Club, Comment on 2019 Update to Life Cycle Greenhouse Gas Perspective at 6 (discussing Alvarez, et al., *Assessment of methane emissions from the U.S. oil and gas supply chain*, 361 Science 186 (July 13, 2018)).

⁴⁷ Sierra Club, Comment on 2019 Update to Life Cycle Greenhouse Gas Perspective, at 6-8 (Oct. 21, 2019), *available at* <https://fossil.energy.gov/app/DocketIndex/docket/DownloadFile/604>.

NETL's bottom-up estimates. A 2020 study that found that oil and gas production in the Permian basin, the likely source of supply for many Gulf Coast export projects, had a leak rate of roughly 3.5% or 3.7%.⁴⁸ More broadly, every year, new research further affirms that gas production emits greater amounts of methane than what DOE's analyses have assumed, despite ongoing efforts to reduce methane emissions.⁴⁹ DOE's dismissal of the role of superemitters, and continued reliance on estimates that are contradicted by peer-reviewed, real-world measurements, is arbitrary.

D. Europe Does Not Need Additional North American LNG Exports

NFE Altamira requests authorization for through 2050, *far* beyond the date at which global use of fossil fuels must essentially end.

We agree that there is a public interest in assisting Europe in transitioning away from Russian gas. But the best way to get Europe off Russian gas is to get Europe off gas altogether, as Secretary Granholm has recognized.⁵⁰ In 2022, the United States increased its exports to Europe, using existing infrastructure, far beyond the amount contemplated by the task force convened in response to the U.S.-E.U. task force convened in response to Russia's invasion of Ukraine. Beyond this rapid, existing increase, Europe has other, better options.

⁴⁸ See Yuzhong Zhang *et al.*, *Quantifying methane emissions from the largest oil-producing basin in the United States from space*, SCIENCE ADVANCES (Apr. 22, 2020), DOI: 10.1126/sciadv.aaz5120, available at <https://advances.sciencemag.org/content/6/17/eaaz5120/tab-pdf> (attached); *see also* Environmental Defense Fund: New Data: Permian Oil & Gas Producers Releasing Methane at Three Times National Rate (Apr. 7, 2020), available at <https://www.edf.org/media/new-data-permian-oil-gas-producers-releasing-methane-three-times-national-rate> (attached).

⁴⁹ See, e.g., EPA, Inventory of U.S. greenhouse Gas Emissions and Sinks 1990-2020: Updates for Anomalous Events (April 2022), available at https://www.epa.gov/system/files/documents/2022-04/2022_ghgi_update_-_blowouts.pdf and attached; *see generally* NRDC, *Sailing to Nowhere: Liquefied Natural Gas Is Not an Effective Climate Strategy* (Dec. 2020), available at <https://www.nrdc.org/sites/default/files/sailing-nowhere-liquefied-natural-gas-report.pdf> (attached).

⁵⁰ See, e.g., Politico, DOE declares an energy war (Apr. 28, 2022), <https://www.politico.com/newsletters/morning-energy/2022/04/28/doe-declares-an-energy-war-00028380> and attached (quoting Sec. Granholm's statement that "Perhaps renewable energy is the greatest peace plan this world will ever know.").

The European Union plans to cut Russian gas use by two thirds *this year*.⁵¹ The International Energy Agency has concluded that heat pumps, building efficiency, and similar measures can significantly reduce the European Union's gas use, and thus the impact of Russian energy, within a year, with greater reductions each following year.⁵² Some analyses conclude that EU can entirely eliminate reliance on Russian gas by 2025, with efficiency and renewable energy making up for two thirds of the former Russian supply.⁵³ Similarly, the United Kingdom's Energy & Climate Intelligence Unit has concluded that *all* of the UK's gas demand that was recently met by Russian gas could be eliminated through installation of heat pumps and better installation within five years.⁵⁴ European Energy Commissioner Kadri Simson has emphasized that Europe remains committed to renewable energy goals, and is looking to additional gas imports only for the short term.⁵⁵ Members of the U.S. Congress and the European Parliament have emphasized that, notwithstanding the need to assist Europe in transitioning off of Russian gas, no new gas infrastructure or exports should be approved.⁵⁶

⁵¹ REPowerEU: Joint European action for more affordable, secure and sustainable energy (March 8, 2022), [https://ec.europa.eu/commission/presscorner/api/files/document/print/\[europa_tokens:europa_interface_language\]/ip_22_1511/IP_22_1511_EN.pdf](https://ec.europa.eu/commission/presscorner/api/files/document/print/[europa_tokens:europa_interface_language]/ip_22_1511/IP_22_1511_EN.pdf) and attached

⁵² International Energy Agency, A 10-Point Plan to Reduce the European Union's Reliance on Russian Natural Gas (March 3, 2022), available at <https://www.iea.org/reports/a-10-point-plan-to-reduce-the-european-unions-reliance-on-russian-natural-gas> and attached.

⁵³ <https://www.e3g.org/publications/eu-can-stop-russian-gas-imports-by-2025/> or https://9tj4025o153byww26jdkao0x-wpengine.netdna-ssl.com/wp-content/uploads/Briefing_EU-can-stop-Russian-gas-imports-by-2025.pdf

⁵⁴ Harry Cockburn, Heat Pumps and Insulation 'Fastest Way to End Reliance on Russian Gas,' the Independent, March 9, 2022, *available at* <https://www.independent.co.uk/climate-change/news/heat-pumps-russian-gas-north-sea-b2032017.html> and attached; *see also* Energy & Climate Intelligence Unit, Ukraine Conflict and Impacts on UK Energy, <https://eciu.net/analysis/briefings/uk-energy-policies-and-prices/briefing-ukraine-conflict-and-impacts-on-uk-energy> (last accessed Mar. 10, 2022 and attached).

⁵⁵ <https://www.politico.com/newsletters/morning-energy/2022/04/28/doe-declares-an-energy-war-00028380>.

⁵⁶ Jared Huffman et al., Letter to U.S. President Biden and E.C. President Von der Leyen (May 19, 2022), https://huffman.house.gov/imo/media/doc/Letter%20Regarding%20the%20EU-US%20Joint%20Energy%20Security%20Statement_5.19.22.pdf and attached

We recognize that the U.S and European Commission have nonetheless proposed for EU member states to “work ... toward the goal of ensuring, until at least 2030, demand for approximately 50 bcm/year,” equivalent to approximately 4.8 bcf/d, “of additional U.S. LNG that is consistent with our shared net-zero goals.”⁵⁷ This goal is ill-advised and self-refuting, as increased production and use of LNG through 2030 cannot be made consistent with the shared net-zero goals. But even if this goal is pursued, it does not support DOE’s authorization of additional exports here. For one, some of this additional demand can be satisfied by existing, already-operating facilities. Some existing facilities sell gas on spot markets, and even facilities with long-term contracts with Asian buyers may be interested in redirecting cargoes.⁵⁸ Two, previously-approved non-FTA exports from facilities under construction will already provide an additional 3.06 bcf/d of U.S. export supply.⁵⁹ And three, DOE has already authorized a whopping 30 bcf/d of additional non-FTA LNG exports beyond the 15.54 bcf/d previously authorized from facilities that are already in operation or under construction.⁶⁰ Given DOE’s general refusal to revisit already-approved exports,⁶¹ DOE cannot authorize still further exports to meet demand that would be satisfied several times over by existing authorizations, even if DOE concludes that the proposed additional authorization would be a better way to meet that demand. To be clear, we believe that DOE *should* consider exercising its authority under 15

⁵⁷ <https://www.whitehouse.gov/briefing-room/statements-releases/2022/03/25/fact-sheet-united-states-and-european-commission-announce-task-force-to-reduce-europes-dependence-on-russian-fossil-fuels/> and attached.

⁵⁸ See, e.g., Reuters, Europe draws more LNG from Asia as china imports slump (Apr. 28, 2022), <https://www.reuters.com/markets/commodities/europe-draws-more-lng-asia-china-imports-slump-2022-04-28/> and attached; Bloomberg, China Looks to Sell Spare LNG as Virus Lockdowns Hit Demand (Apr. 24, 2022), <https://www.bloomberg.com/news/articles/2022-04-25/china-looking-to-sell-spare-lng-as-virus-lockdowns-hit-demand>

⁵⁹ See Order 3909-C at 44 n.248 (citing U.S. Energy Info. Admin., *U.S. Liquefaction Capacity* (Dec. 8, 2021), <https://www.eia.gov/naturalgas/U.S.liquefactioncapacity.xlsx>).

⁶⁰ *Id.* at 6-7, 34 n.177.

⁶¹ See Policy Statement Regarding Long-Term Authorizations to Export Natural Gas to Non-Free Trade Agreement Countries, 83 Fed. Reg. 28,841 (June 21, 2018). Although DOE has not exercised this authority yet, DOE *should* carefully consider doing so, given the severe impact already-authorized exports are having on domestic gas prices.

U.S.C. § 717o to amend and/or rescind existing export authorizations, but unless and until DOE does so, DOE cannot continue to allow approved export volumes to ratchet higher and higher.

Finally, if DOE contends that the exports at issue here are in the public interest because Europe will need the gas, then DOE should ensure that the gas goes to Europe. DOE has broad authority to grant the requested additional authorization “in whole or in part, with such modification and upon such terms and conditions as [DOE] find[s] necessary or appropriate.” 15 U.S.C. § 717b(a). If providing additional gas to Europe is the justification for these exports, DOE should explore whether to impose conditions that ensure that the authorization is actually used for that purpose. If DOE fails to impose such conditions, DOE must take a hard look at whether the exports are likely to actually assist Europe, and if not, whether this undermines DOE’s overall conclusion that the exports are not inconsistent with the public interest.

E. DOE Must Prepare a NEPA Analysis For This Application

To comply with federal law, and to ensure that the above factors receive appropriate consideration, DOE must prepare a NEPA analysis for the proposed application. NFE Altamira agrees, and does not contend that the application could be approved through use of a categorical exclusion. Application at 18. We disagree, however, with the applicant’s suggestion that DOE can satisfy its NEPA obligations with an environmental assessment, rather than a full environmental impact statement. Because DOE has recognized that the indirect effects of increased gas exports can include induced gas production with significant environmental impacts, and because the climate impacts of increased exports can also be significant, a full EIS is required. In the alternative, if DOE (wrongly) limits its analysis to an environmental assessment, DOE should nonetheless circulate a draft EA for public comment.

In addition, whether DOE proceeds with an EA or an EIS, insofar as this project-specific NEPA analysis seeks to incorporate DOE’s prior, non-NEPA analyses regarding LNG exports in general, the public must have an opportunity to comment on those analyses and their applicability here.

III. Conclusion

For the foregoing reasons, Sierra Club respectfully requests that DOE grant rehearing of Order 3909-C. The request for authorization of additional exports should be denied, or in the

alternative, DOE should withdraw the authorization and reconsider after conducting the additional analyses required by the Natural Gas Act and NEPA, as described above.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Nathan Matthews', with a long horizontal flourish extending to the right.

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UNITED STATES OF AMERICA
DEPARTMENT OF ENERGY
OFFICE OF FOSSIL ENERGY

NFE Altamira FLNG, S. de R.L. de C.V

FE Docket No. 22-110-LNG

CERTIFIED STATEMENT OF AUTHORIZED REPRESENTATIVE

Pursuant to 10 C.F.R. § 590.103(b), I, Nathan Matthews, hereby certify that I am a duly authorized representative of the Sierra Club, and that I am authorized to sign and file with the Department of Energy, Office of Fossil Energy and Carbon Management, on behalf of the Sierra Club, the foregoing documents and in the above captioned proceeding.

Dated at Oakland, CA this 5th day of December, 2022.

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VERIFICATION

Pursuant to 10 C.F.R. § 590.103(b), I, Nathan Matthews, hereby verify under penalty of perjury that I am authorized to execute this verification, that I have read the foregoing document, and that the facts stated therein are true and correct to the best of my knowledge.

Executed at Oakland, CA on December 5, 2022

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FE Docket No. 22-110-LNG

CERTIFICATE OF SERVICE

I hereby certify that I have this day caused the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Oakland, CA this 5th day of December, 2022.

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