UNITED STATES OF AMERICA DEPARTMENT OF ENERGY OFFICE OF FOSSIL ENERGY AND CARBON MANAGEMENT

IN THE MATTER OF)
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Venture Global CP2 LNG, LLC)

FE Docket No. 21-131-LNG

Motion to Intervene and Protest of Natural Resources Defense Council

In the above-captioned docket, Venture Global CP2 LNG, LLC, a wholly-owned, direct subsidiary of Venture Global LNG, Inc. (*hereafter*, CP2 LNG or Applicant) seeks to export liquefied natural gas (LNG) up to the equivalent of 1,446 billion cubic feet of gas per year (equivalent to 3.96 Bcf/d) to Free Trade Agreement (FTA) countries and to Non-Free Trade Agreement (NFTA) countries. The export volume requested is the highest sought in a single application in U.S. Department of Energy (*hereinafter*, DOE) history.¹ If authorized, the requested export would substantially expand the volume of LNG exported via western Louisiana and would have significant adverse impacts for American consumers and the global climate at large. Natural Resources Defense Council (*hereinafter*, NRDC) hereby moves to intervene in this

¹ Compare the instant application with U.S. DOE, List of current LNG Export Applications of the Lower 48 States before the Department of Energy as of February 23, 2022 (Feb. 23, 2022), available at https://www.energy.gov/sites/default/files/2022-02/Summary%20of%20LNG%20Export%20Applications.pdf; Alaska LNG Project LLC, DOE/FE Dkt. No. 14-96-LNG available at https://www.energy.gov/fecm/articles/alaskalng-project-llc-fe-dkt-no-14-96-lng. See also U.S. DOE, Notice of Receipt of Application (Feb. 11, 2022), available at https://www.energy.gov/fecm/articles/venture-global-cp2-lng-llc-fe-dkt-no-21-131-lng. (hereafter, Notice of Application.)

docket, pursuant to 10 C.F.R. § 590.303(b). NRDC concurrently protests this application, pursuant to 10 C.F.R. § 590.304, as inconsistent with the public interest, 15 U.S.C. § 717b(a).

I. Intervention and Service

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, NRDC's position is that CP2's application for export authorization should be denied. NRDC's interests are based on the impact the proposed additional exports would have on the organization's members and the organization's mission. NRDC is a national non-profit membership organization with more than 3 million members and engaged community participants worldwide. NRDC has over 1,100 members in Louisiana, including in Cameron and Calcasieu Parishes. NRDC is committed to the preservation and protection of the environment, public health, and natural resources. To this end, NRDC conceives and develops policies that reduce greenhouse gas emissions and other forms of pollution and that accelerate the deployment of energy efficiency and renewable energy. NRDC has a longstanding and active interest in ensuring need-driven and efficient energy resource development, protecting consumers from project overbuild and stranded assets, promoting environmental justice, curbing harmful fossil fuel expansion, expanding clean energy resources, and protecting the public from environmental threats, including the protection of waterbodies and wetlands.

Additionally, the requested increase in export volumes would harm NRDC and its members by increasing the prices they pay for energy, including both gas and electricity. As DOE and the Energy Information Administration (*hereafter*, EIA) have previously explained,

each marginal increase in export volumes is also expected to further increase domestic energy prices. For the reasons set forth above, NRDC has an interest which may be materially affected by the outcome of this proceeding, and no other parties can represent its interest. These interests are further shared by the public at large. In summary, CP2 LNG's proposed increase in export volumes would harm NRDC and its members in numerous ways. NRDC 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), All communications and correspondence concerning this application, including all service of pleadings and notices, should be directed to the following persons:

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II. Protest

CP2 LNG's request for authorization should be denied because it is contrary to the public interest. 15 U.S.C. § 717b(a). The Applicant is seeking DOE's authorization to export 1,446 Bcf of U.S.-produced LNG per year (equivalent to 3.96 Bcf/d) through December 31, 2050, pursuant to DOE's Term Extension Policy Statement.² From the outset it must be noted that DOE's Term Extension Policy Statement is an arbitrary policy developed by the previous administration.³ The policy is directly at odds with this administration's stated climate goals,⁴ at odds with climate commitments like the Glasgow Climate Compact,⁵ and at odds with reality. In effect, the Term Extension Policy Statement forces LNG exports onto the markets for elongated spans of time (expanding long-term authorizations from 20 to 50 years) and contravenes DOE's ability to review and re-assess (and the public's ability to weigh in on) expired authorizations after a more reasonable period of time. Prior to the issuance of the Term Extension Policy Statement, that period of time was 20 years.

When developing the Term Extension Policy Statement, the previous administration based its decision (at least in part) on the 2018 Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports study (*hereafter*, 2018 LNG Export Study.) In its issuance of the

² U.S. DOE, Extending Natural Gas Export Authorizations to Non-Free Trade Agreement Countries Through the Year 2050, Notice of Final Policy Statement and Response to Comments, 85 Fed. Reg. 52,237 (Aug. 25, 2020) (*hereafter*, "Term Extension Policy Statement") *available at* https://www.energy.gov/sites/prod/files/2020/09/f78/2020-16836_FE_Policy%20Statement%20Year%202050.pdf.

³ U.S. DOE, Trump Administration Releases Policy Extending LNG Export Term to 2050 (July 29, 2020) *available at* https://www.energy.gov/articles/trump-administration-releases-policy-extending-lng-export-term-2050.

⁴ U.S. Dep't. of State and Exec. Office of the President, (Nov. 2021) *available at* <u>https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf</u>.

 $^{^5}$ 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.

Term Extension Policy Statement, the previous administration concluded that, per the 2018 LNG Export Study, the U.S. will "net economic benefits from the export of domestically produced LNG through the 30-year study period, i.e., from 2020 through 2050[.]"⁶ As we explain in greater detail below, much has changed since 2018.⁷ The current surge in gas prices calls those prior analyses into question and indicates that the previous administration's uses of the study (in this instance, in support of the Term Extension Policy Statement) must be called into question.

In similar fashion, the previous administration utilized the study, "The Life Cycle Greenhouse Gas Perspective on Exporting Liquified Natural Gas From the United States: 2019,"⁸ to conclude that DOE had "no reason to conclude that that U.S. LNG exports will increase global GHG emissions in a material or predictable way" and that this conclusion was supportive of the Term Extension Policy Statement.⁹ On its face, this is a nonsensical conclusion, and we further examine the issues with this analysis below. For all of the above reasons, the Term Extension Policy Statement is ripe for reconsideration by this DOE, as it has discretion under 10 C.F.R. § 590.404 to impose a suitable term for long-term NFTA authorizations, in light of the evidence in each proceeding.

Beyond the threshold issues with CP2 LNG's request pursuant to the Term Extension Policy Statement, it is clear that the export sought is contrary to the public interest. As DOE has explained in previous reviews of exports, when reviewing an application for export authorization," DOE evaluates "economic impacts, international impacts, security of natural gas

⁶ See n.2, supra at 52,240.

⁷ See n.33, infra.

⁸ U.S. DOE, Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update (Sept. 12, 2019), *available at* <u>https://fossil.energy.gov/app/docketindex/docket/index/21</u>.

⁹ See n.3, supra at 52,240.

supply, and environmental impacts, among others."¹⁰ DOE has also 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."¹¹ Here, all of these factors weigh against the application, and we focus on key areas of concern below.

A. This export would adversely impact domestic energy prices and supply.

Across years of DOE dockets, a multitude of intervenors, commentors and protestors have informed DOE of the harmful impacts that its policy of unfettered LNG export approval has had (and will continue to have) on American energy consumers.¹² These impacts and concerns are salient for this historically-voluminous export authorization sought by CP2.¹³ The latest EIA Short-Term Energy Outlook (*hereinafter*, STEO) analysis indicates that high levels of U.S. LNG exports are expected to continue in 2022, averaging 11.3 Bcf/d for the year, at a 16% increase from 2021.¹⁴ At the same time, EIA projects U.S. energy consumption will increase through 2050.¹⁵ Positively, renewable energy is the fastest growing energy source; however, EIA projects that gas will remain an in-demand fuel source for years to come. As established above, the export sought by applicant is, in a word, voluminous. As of January 2022, the total of authorized U.S.

¹⁰ 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.

¹¹ *Id*. at 10.

¹² See e.g., Sierra Club et al Motion to Intervene and Protest, DOE/FE Docket No. 21-98-LNG (Dec. 07, 2021), available at <u>https://www.energy.gov/sites/default/files/2021-</u> 12/MTI%20and%20Protest%20in%20Dkt.%2021-98-LNG-%20SC.pdf.

¹³ See n. 1, supra.

¹⁴ See U.S. EIA, Short-Term Energy Outlook Forecast highlights (Mar. 2022) at 3, *available at* <u>https://www.eia.gov/outlooks/steo/pdf/steo_full.pdf</u>.

¹⁵ See U.S. EIA, EIA projects U.S. energy consumption will grow through 2050, driven by economic growth (Mar. 3, 2022) *available at* <u>https://www.eia.gov/todayinenergy/detail.php?id=51478</u>.

export capacity for LNG (spread across 19 different projects) was 43.00 Bcf/d.¹⁶ CP2 LNG's requested export alone is equivalent to 9.2% of that total authorized export capacity.

Although the Applicant contends that "arguments against LNG exports based on misplaced concern about insufficient supplies or domestic natural gas prices are baseless,"¹⁷ we look to the very real concerns voiced by stakeholders and ratepayers and disagree.¹⁸ EIA's most current STEO indicates that gas prices can and already have broken past \$4/MMbtu.¹⁹ This further illustrates the volatility and impacts to domestic consumers resulting with unprecedented rates of LNG export.²⁰ Approving export of LNG at this magnanimous scale, *and* until 2050—a point at which EIA anticipates that domestic need will be at its highest—would be an action squarely outside of the public interest from a supply, competitiveness, and pricing perspective.

B. In fully assessing the environmental impacts of the export sought, DOE must consider the *entire* LNG lifecycle, and in doing so, would find that authorization is not in the public interest.

The environmental impacts of CP2 LNG's proposed export also weigh against the public interest. These include impacts occurring across the entire LNG lifecycle, which both the Natural Gas Act and the National Environmental Policy Act (NEPA), 42 U.S.C. 4321 *et seq.*, require DOE to consider.

¹⁶ U.S. DOE/FECM, LNG Snapshot January 2022 (Jan. 2022) at 2, *available at* <u>https://www.energy.gov/sites/default/files/2022-01/LNG%20Snapshot%20January%202022.pdf</u>.

¹⁷ CP2, Application in DOE/FE Dkt. 21-131-LNG, at 26 (Dec. 2, 2021) *available at* <u>https://www.energy.gov/sites/default/files/2021-12/21-131-LNG.pdf</u>. (*Hereafter*, the Application.)

¹⁸ See, e.g., Sens. Reed, King, Markey, Warren *et al*, Letter to DOE Sec. Granholm, (Feb. 2, 2022) *available at* <u>https://www.reed.senate.gov/imo/media/doc/letter_to_department_of_energy_on_lng_2-2-22.pdf</u>.

¹⁹ See, e.g., U.S. EIA, Short Term Energy Outlook, (Mar. 8, 2022) available at <u>https://www.eia.gov/outlooks/steo/report/natgas.php</u>.

²⁰ See, Reuters, U.S. natgas volatility jumps to a record as prices soar worldwide, (Oct. 7, 2021) available at https://www.reuters.com/business/energy/us-natgas-volatility-jumps-record-prices-soar-worldwide-2021-10-06/.

As DOE has previously recognized, increasing LNG exports will increase gas production,²¹ and increasing gas production increases ozone pollution, including risking creation of new or expanded ozone non-attainment areas or exacerbating existing non-attainment areas.²² These, and all other upstream impacts, are highly relevant to DOE's review of the application and public interest determination. The holding in Sierra Club v. FERC, 827 F.3d 36 (D.C. Cir. 2016) ("Freeport I") could not be clearer. Freeport I held that the Federal Energy Regulatory *Commission (hereinafter*, FERC) had no authority prevent upstream impacts, specifically because DOE had retained "exclusive" authority to do so. 827 F.3d at 40-41, 46. FERC had "no authority" to consider the impacts of export-induced gas production because "the Natural Gas Act places export decisions squarely and exclusively within the Department of Energy's wheelhouse." Id. at 46. As such, DOE must consider the upstream impacts of this requested authorization.²³ As established above, this project and requested export authorization are large in scale and request more export volume than any previous single application. If authorized, this export will foreseeably induce gas production, and relatedly, will increase pollution related to the increased production.

²¹ 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* <u>https://www.eia.gov/analysis/requests/fe/pdf/lng.pdf</u> (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.").

²² 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.

²³ In 2020, DOE adopted a Categorical Exclusion (CatEx) that arbitrarily, capriciously and unlawfully contravenes the holdings of *Freeport I*, 827 F.3d at 47, and DOE's legal obligation to review impacts occurring upstream of the point of export. *See* 85 Fed. Reg. 78,197.

DOE must consider the downstream impacts of the requested export. On this point, *Freeport I* was also clear—DOE has the sole authority to consider downstream impacts. In FERC's newly-issued Interim GHG Policy Statement,²⁴ FERC cited *Freeport I*'s holding that DOE, not the Commission, has sole authority to license and consider the environmental impacts of the export of any gas,²⁵ and that as courts have explained, "the Commission need not consider the effects of downstream transportation, consumption, or combustion of exported gas because the Department of Energy's "independent decision to allow exports . . . breaks the NEPA causal chain and absolves the Commission of responsibility to include [these considerations] in its NEPA analysis."²⁶

CP2 LNG is seeking authorization for notably-high export volumes through 2050. As the scale of export is large, so are the associated climate impacts from downstream uses of the LNG. As established previously, well before 2050, the world must have fully transitioned to net-zero emissions, as the U.S.—and the world—recently affirmed in Glasgow.²⁷ Limiting global warming to 1.5 °C "requires rapid, deep and sustained reductions in global greenhouse gas emissions," including intermediate steps such as "reducing global carbon dioxide emissions by 45 percent by 2030."²⁸ Global LNG export volumes must decline below present levels in the near future: as the International Energy Agency recently affirmed, further expansion of LNG export

²⁴ FERC, Consideration of Greenhouse Gas Emissions in Nat. Gas Infrastructure Project Reviews, 178 FERC ¶ 61,108 (2022) *available at <u>https://www.ferc.gov/media/pl18-1-000</u>.*

²⁵ See n. 22, supra at 47 (holding that the Commission does not have to address the indirect effects of the anticipated export of natural gas because the Department of Energy, not the Commission, has sole authority to license and consider the environmental impacts of the export of any natural gas going through LNG facilities); *Freeport I*, 827 F.3d at 62-63 (same); *EarthReports, Inc. v. FERC*, 828 F.3d at 956 (same); *Sabal Trail*, 867 F.3d at 1372 (explaining *Freeport I*).

²⁶ Id. at 109

²⁷ See n. 5, supra.

 $^{^{28}}$ *Id*.

facilities is inconsistent with achieving net-zero emissions.²⁹ Authorization of the export requested by CP2 LNG jeopardizes our ability to meet these clear and pressing goals, and would be contrary to the public interest.

Furthermore, DOE's past declination to meet its obligation to analyze upstream impacts, citing unforeseeability, gives way to applicants (like CP2 in the instant case) leaving out basic pieces of information that would otherwise inform DOE's public interest and NEPA review. To facilitate full and accurate lifecycle analysis for the requested export, DOE would require key information that CP2 LNG has not proffered to it. For one, the Applicant has failed to clearly identify to DOE where its feed gas will be sourced.³⁰ DOE could work with FERC, as the lead agency overseeing the overall CP2 Project, to obtain this outstanding information.

C. DOE's utility of flawed and outdated studies and analyses prevents fulsome and adequate reviews of export applications.

In addition to the DOE Final Addendum to Environmental Review Documents

Concerning Exports from the United States,³¹ (hereafter, Addendum) as referenced in DOE's

²⁹ International Energy Agency, Net Zero by 2050, at 102 (May 2021), *available at* <u>https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf</u>.

³⁰ See, n. 18, *supra* at 11. "Access to the integrated pipeline grid through CP Express will enable CP2 LNG, or its customers, to purchase natural gas from a multitude of sources of conventional and non-conventional U.S. production. Such supplies could be produced from any of a wide variety of production areas, including conventional Gulf Coast production regions, the robust and expanding supplies produced from nearby shale gas plays such as the Haynesville, Permian, Barnett, and Bossier formations, as well as the more distant but prolific Marcellus and Utica shale regions. The feed gas will be sourced in requisite volumes in the spot market or purchased under long-term arrangements. CP2 LNG has not yet entered into any natural gas supply arrangements, but it will file all long-term natural gas supply agreements, once executed, with the DOE/FE in accordance with established policy and precedent."

³¹ U.S. DOE, Final Addendum to Environmental Review Documents Concerning Exports of Natural Gas from the United States (Aug. 2014), available at https://www.energy.gov/cites/prod/files/2014/02/f18/Addendum.pdf

Notice of the CP2 application for export,³² DOE will utilize the following in its review of the application:

- *Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports* (2018 LNG Export Study), and DOE's response to public comments received on that Study.
- "Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States," 79 FR 32260 (June 4, 2014); and
- "The Life Cycle Greenhouse Gas Perspective on Exporting Liquified Natural Gas From the United States: 2019," and DOE's response to public comments received on that study.

As explained above (as related to DOE's adoption of the Term Extension Policy

Statement) much has changed since 2018. LNG exports have more than tripled from their 2018

volume.33

	Liquefied U.S. Natural Gas Exports (N						lillion Cubic Feet)			
Decade	Year-0	Year-1	Year-2	Year-3	Year-4	Year-5	Year-6	Year-7	Year-8	Year-9
1980's						52,883	50,172	48,599	51,573	51,424
1990's	52,546	54,005	52,532	55,989	62,682	65,283	67,648	62,187	65,984	63,882
2000's	66,028	66,218	63,842	66,075	62,467	65,367	60,938	48,485	39,217	33,355
2010's	64,793	70,001	28,298	2,924	16,255	28,381	186,841	707,542	1,083,118	1,819,547
2020's	2,389,963	3,560,818								

- = No Data Reported; -- = Not Applicable; NA = Not Available; W = Withheld to avoid disclosure of individual company data.

Release Date: 2/28/2022 Next Release Date: 3/31/2022

Figure 1, EIA, Liquefied U.S. Natural Gas Exports (Million Cubic Feet) (Current as of Mar. 8, 2022).

³² U.S. DOE, Venture Global CP2 LNG, LLC; Application for Long-Term Authorization To Export Liquefied Natural Gas to Non-Free Trade Agreement Nations 87 Fed. Reg. 1133

³³ EIA, Liquefied U.S. Natural Gas Exports (Million Cubic Feet), (Mar. 8. 2022) *available at* <u>https://www.eia.gov/dnav/ng/hist/n9133us2A.htm</u>.



Figure 2, EIA, Liquefied Natural Gas Exports (Million Cubic Feet) (Current as of Mar. 8, 2022)

The export boom has impacted domestic prices in ways that the 2018 could not contemplate. Just as DOE and EIA have recognized that other export studies are due for revisiting, DOE is overdue for an update to this study. DOE should, at a minimum, not analyze and approve further export applications until DOE has the opportunity to revisit the 2018 LNG Export Study.

The 2014 and 2019 Life Cycle Greenhouse Gas Analyses (*hereafter*, Lifecycle Analyses) are similarly overdue for review and response to existing research before approving further export applications. Fundamentally, the Lifecycle Analyses both ask the wrong questions and do not reflect available science regarding LNG's impacts.

First, the Lifecycle Analyses ask the wrong questions. CP2 LNG seeks authorization to increase exports through 2050. DOE therefore must take a hard look at the environmental impact of the high-volume requested exports of LNG across that time period, with the long-term gas production and use such exports necessarily entail. This includes addressing whether such impacts are consistent with the United States' climate goals. Decidedly, they are not. But the Lifecycle Analyses do not address this issue. That is, the Lifecycle Analyses do not provide any discussion of whether additional LNG export will help or hinder achievement of the long-term drastic emission reductions that are essential to avoiding the most catastrophic levels of climate change. Instead, the Lifecycle Analyses look only to the short term. The only questions asked by the Lifecycle Analyses are "How does exported LNG from the United States compare with" other fossil fuels (coal or other gas) used "in Europe and Asia, from a life cycle [greenhouse gas] perspective?"³⁴ DOE has attempted to justify this narrow focus by arguing that in the present moment, LNG primarily competes with other sources of fossil fuel. But DOE has not contended, nor can it, that this will be true throughout the authorization term that CP2 LNG seeks through 2050.

Limiting global temperature rise to 1.5 degrees C° will require dramatic emission reductions in the near and long term, reductions which are inconsistent with further development of long-lived fossil fuel infrastructure in the U.S. or abroad, as confirmed by the International Energy Agency,³⁵ Intergovernmental Panel on Climate Change,³⁶ and others. Executive Order 14,008 appropriately instructs federal agencies to work to discourage other countries from "high carbon investments" or "intensive fossil fuel-based energy."³⁷ The Lifecycle Analyses argue that the infrastructure needed to receive and use U.S. LNG is not higher emitting than other sources of fossil fuel, but the Lifecycle Analyses do not inform decisionmakers or the public whether

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

³⁵ IEA, Net Zero by 2050 at 101-02.

³⁶ Intergovernmental Panel on Climate Change, *Special Report: Global Warming of 1.5 C, Summary for Policymakers* at 13-17 (May 2019), *available at* https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15 SPM version report LR.pdf.

³⁷ Executive Order 14,008 at § 102(f), (h).

facilities to use U.S. LNG are nonetheless such a "high-carbon," "intensive" source of emission that they must be discouraged.

Even for the short term, the Lifecycle Analyses ignore important parts of the question of how DOE's decision to authorize U.S. LNG exports (particularly large-scale authorizations, such as the one sought by CP2 LNG in the instant case) will affect greenhouse gas emissions. DOE has recognized, for example, that increasing LNG exports will both cause some gas-to-coal shifting in the U.S. electric sector.³⁸ Similarly, DOE has acknowledged that "U.S. LNG Exports may ... compete with renewable energy ... as well as efficiency and conservation measures" in overseas markets.³⁹ Indeed, while DOE has refused to address the likely share of U.S. LNG exports are likely to play only a limited role in displacing foreign use of coal, and such that U.S. LNG exports are likely to increase net global GHG emissions.⁴⁰

Finally, while it is important to address foreseeable overseas impacts of LNG exports, DOE also needs to examine the impact of increased exports specifically on domestic or territorial emissions. The world must transition away from fossil fuel development as quickly as possible. It is inappropriate, unfair, and nonstrategic for the U.S. to argue that it can nonetheless increase fossil fuel production, and enjoy the purported economic benefits thereof, because the associated

³⁸ See, e.g., U.S. EIA, Effect of Increased Levels of Liquefied Natural Gas Exports on U.S. Energy Markets (Oct. 2014) at 12, 19 *available at <u>https://www.eia.gov/analysis/requests/fe/pdf/lng.pdf</u> (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.").*

³⁹ DOE/FE Order 3638 at 202-03.

⁴⁰ 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* <u>https://doi.org/10.1016/j.energy.2017.11.098</u>.

emissions will be offset by foregone production elsewhere. Instead, nations' commitments under the Paris Accord and similar agreements "should include greenhouse gas emissions and removals taking place within national territory and offshore areas over which the country has jurisdiction."⁴¹ Requiring nations to measure and report territorial emissions also ensures the reliability of emission calculations, as nations can only directly regulate emissions within their borders. Estimates of emissions from activities within the U.S. are also likely to be more accurate than estimates that seek to trace the lifecycle of fuels combusted in an end use country. For all of these reasons, a hard look at the climate impact of increasing U.S. LNG exports must address the impact of such exports on domestic emissions specifically, in addition to including reasonable forecasting about global impacts.

In addition to asking the wrong questions, DOE's Lifecycle Analyses are factually unsupported and understate emissions, as NRDC and others have previously explained. First, the 2019 analysis assumes 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.⁴² Studies measuring actual emissions find much leak rates: a 2020 study that found that oil and gas production in the Permian basin had a leak rate of roughly 3.5% or 3.7%.⁴³ Sierra Club for one has explained that

⁴¹ Witi, J. & Romano, D., 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 8: Reporting and Tables, *available at* <u>https://www.ipcc-</u> <u>nggip.iges.or.jp/public/2019rf/pdf/1_Volume1/19R_V1_Ch08_Reporting_Guidance.pdf</u>, at 8.4.

⁴² 2019 Life Cycle GHG Perspective at 27.

⁴³ 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.*

there are many reasons to believe these atmospheric measurements 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.⁴⁴ NRDC has conducted research that further affirms that gas production emits greater amounts of methane than what DOE's analyses have assumed, despite ongoing efforts to reduce methane emissions.⁴⁵ At a minimum, DOE must review and to respond to this research before approving any further LNG export applications.

III. Conclusion

For the reasons stated above, NRDC's motion to intervene in this docket should be granted. The proposed export is not consistent with the public interest and should be denied. At a minimum, DOE must not approve the application without reviewing whether current gas price spikes and domestic demand projections call into question DOE's prior analyses and assumptions about the effects of increased exports on domestic gas production and prices. DOE must also not approve this application without taking a hard look at foreseeable environmental impacts occurring throughout the LNG lifecycle and ensuring it has the information in the record before it to make a fulsome and accurate assessment of those foreseeable impacts.

<u>/s/ Morgan A. Johnson</u> Morgan A. Johnson Staff Attorney Natural Resources Defense Council 1152 15th Street, NW, Suite 300 Washington, DC 20005 <u>majohnson@nrdc.org</u>

⁴⁴ 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.

⁴⁵ 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.

UNITED STATES OF AMERICA DEPARTMENT OF ENERGY OFFICE OF FOSSIL ENERGY AND CARBON MANAGEMENT

IN THE MATTER OF)
)
)
Venture Global CP2 LNG, LLC)

FE Docket No. 21-131-LNG

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 590.107, I, Morgan Johnson, hereby certify that I caused the above documents to be served on the persons included on the official service list for this docket, as provided by DOE/FE, on March 11, 2022.

<u>/s/ Morgan A. Johnson</u> Morgan A. Johnson Staff Attorney Natural Resources Defense Council 1152 15th Street, NW, Suite 300 Washington, DC 20005 majohnson@nrdc.org

UNITED STATES OF AMERICA DEPARTMENT OF ENERGY OFFICE OF FOSSIL ENERGY AND CARBON MANAGEMENT

IN THE MATTER OF)
)
Venture Global CP2 LNG, LLC)

FE Docket No. 21-131-LNG

NRDC VERIFICATION

Pursuant to 10 C.F.R. § 590.103(b), I, Morgan Johnson, 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 Silver Spring, MD on March 11, 2022.

Morgan A. Johnson Staff Attorney Natural Resources Defense Council 1152 15th Street, NW, Suite 300 Washington, DC 20005 <u>majohnson@nrdc.org</u>