

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

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LAKE CHARLES LNG EXPORT COMPANY, LLC )	DOCKET NO. 13-04-LNG
_____ )	DOCKET NO. 16-109-LNG

ORDER EXTENDING EXPORT TERM FOR AUTHORIZATIONS  
TO FREE TRADE AND NON-FREE TRADE AGREEMENT  
NATIONS THROUGH DECEMBER 31, 2050

DOE/FECM ORDER NO. 3252-C  
DOE/FECM ORDER NO. 3868-D  
DOE/FECM ORDER NO. 4010-D

NOVEMBER 1, 2023

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## I. INTRODUCTION

On May 24, 2022, Lake Charles LNG Export Company, LLC (Lake Charles LNG Export) filed an application (Application)<sup>1</sup> with the Department of Energy’s (DOE) Office of Fossil Energy and Carbon Management (formerly the Office of Fossil Energy)<sup>2</sup> under section 3 of the Natural Gas Act (NGA).<sup>3</sup> As explained below, Lake Charles LNG Export asks DOE to extend the export term set forth in its three long-term authorizations, pursuant to DOE’s policy statement entitled, “Extending Natural Gas Export Authorizations to Non-Free Trade Agreement Countries Through the Year 2050” (2050 Policy Statement).<sup>4</sup>

Lake Charles LNG Export is currently authorized to export domestically produced liquefied natural gas (LNG) by vessel from the proposed Lake Charles Terminal liquefaction facilities (Liquefaction Project or Project) to be constructed in Lake Charles, Louisiana, under the following orders and their amendments:

- (i) DOE/FE Order No. 3252,<sup>5</sup> as amended, authorizing the export of LNG in a volume equivalent to 730 billion cubic feet per year (Bcf/yr) of natural gas to any country with which the United States has entered into a free trade agreement (FTA) requiring national treatment for trade in natural gas (FTA countries), under NGA section 3(c);<sup>6</sup>

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<sup>1</sup> *Lake Charles LNG Export Co., LLC*, Application to Amend Export Term for Existing Long-Term Authorization[s] Through December 31, 2050, Docket Nos. 13-04-LNG and 16-109-LNG (May 24, 2022) [hereinafter Application or App.].

<sup>2</sup> The Office of Fossil Energy (FE) changed its name to the Office of Fossil Energy and Carbon Management (FECM) on July 4, 2021.

<sup>3</sup> 15 U.S.C. § 717b. The authority to regulate the imports and exports of natural gas, including liquefied natural gas, under section 3 of the NGA has been delegated to the Assistant Secretary for FECM in Redelegation Order No. S4-DEL-FE1-2023, issued on April 10, 2023.

<sup>4</sup> U.S. Dep’t of Energy, *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) [hereinafter 2050 Policy Statement].

<sup>5</sup> *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 3252, Docket No. 13-04-LNG, Order Granting Long-Term Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel from the Lake Charles Terminal to Free Trade Agreement Nations (Mar. 7, 2013), *amended by* DOE/FE Order No. 3252-A (Mar. 18, 2015) (amending authorization to reflect corporate name change to Lake Charles LNG Export) and DOE/FE Order No. 3252-B (Oct. 6, 2020) (amending the term of FTA export authorization).

<sup>6</sup> 15 U.S.C. § 717b(c). The United States currently has FTAs requiring national treatment for trade in natural gas with Australia, Bahrain, Canada, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Honduras, Jordan, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, Republic of Korea, and Singapore. FTAs with Israel and Costa Rica do not require national treatment for trade in natural gas.

- (ii) DOE/FE Order No. 3868,<sup>7</sup> as amended, authorizing the export of LNG in a volume equivalent to 730 Bcf/yr of natural gas to any other country with which trade is not prohibited by U.S. law or policy (non-FTA countries), under NGA section 3(a);<sup>8</sup> and
- (iii) DOE/FE Order No. 4010,<sup>9</sup> as amended, a consolidated order authorizing the export of LNG in an additional export volume equivalent to 121 Bcf/yr of natural gas to FTA and non-FTA countries.

These three orders authorize exports of LNG in a total combined volume equivalent to 851 Bcf/yr of natural gas to FTA and non-FTA countries on a non-additive basis.<sup>10</sup> Lake Charles LNG Export is authorized to export these volumes for a 30-year term to FTA countries and for a 20-year term to non-FTA countries.<sup>11</sup>

In the Application, Lake Charles LNG Export asks DOE to “grant an extension to the currently authorized export term of ... the [a]uthorization through December 31, 2050 (inclusive of any make-up period), with an attendant increase in the total export volume over the life of the [a]uthorizations.”<sup>12</sup>

DOE published a notice of the non-FTA portion of the Application in the *Federal*

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<sup>7</sup> *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 3868, Docket No. 13-04-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel From the Lake Charles Terminal in Calcasieu Parish, Louisiana to Non-Free Trade Agreement Nations (July 29, 2016), *amended by* DOE/FE Order No. 3868-A (Oct. 6, 2020) (extending export commencement deadline in non-FTA authorization), *requested amendment denied by* DOE/FECM Order No. 3868-B (Apr. 21, 2023) (denying second commencement extension), *reh'g denied*, DOE/FECM Order No. 3868-C (June 21, 2023).

<sup>8</sup> 15 U.S.C. § 7171b(a).

<sup>9</sup> *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 4010, Docket No. 16-109-LNG, Opinion and Order Granting Long-Term, Multi-Contract Authorization to Export Liquefied Natural Gas by Vessel From the Lake Charles Terminal in Lake Charles, Louisiana, to Free Trade and Non-Free Trade Agreement Nations (June 29, 2017), *amended by* Order No. 4010-A (Oct. 6, 2020) (amending the term of FTA export authorization and extending export commencement deadline in non-FTA authorization), *requested amendment denied by* DOE/FECM Order No. 4010-B (Apr. 21, 2023) (denying second commencement extension), *reh'g denied* DOE/FECM Order No. 4010-C (June 21, 2023).

<sup>10</sup> *Lake Charles LNG Export Co., LLC*, DOE/FE Order No. 4010, at 54-55 (Terms and Conditions I and J).

<sup>11</sup> *See Lake Charles LNG Export Co., LLC*, DOE/FE Order Nos. 3252-B, 3868-A, 4010-A, Docket Nos. 13-04-LNG, 16-109-LNG, Order Granting Application for Extension of Commencement Deadlines (Oct. 6, 2020).

<sup>12</sup> App. at 4. Although the 2050 Policy Statement does not apply to exports of natural gas to FTA countries under NGA section 3(c), 15 U.S.C. § 717b(c), DOE anticipated that authorization holders would seek to align their long-term FTA and non-FTA export terms through December 31, 2050, for administrative efficiencies. *See* 2050 Policy Statement, 85 Fed. Reg. at 52,238 n.3, 52,248.

*Register* (Notice of Application).<sup>13</sup> The Notice of Application invited interested persons to submit protests, motions to intervene, notices of intervention, and/or comments addressing the requested term extension by July 6, 2022.<sup>14</sup> DOE received a “Notice of Intervention, Protest, and Comment” filed by the Industrial Energy Consumers of America (IECA),<sup>15</sup> a “Motion to Intervene and Protest” filed by Public Citizen, Inc. (Public Citizen),<sup>16</sup> and a “Motion to Intervene and Protest” filed by Sierra Club<sup>17</sup> in response to the Notice of Application. Lake Charles LNG Export subsequently filed an Answer to all three filings.<sup>18</sup> IECA responded to Lake Charles LNG Export’s Answer.<sup>19</sup>

In this Order, DOE grants Lake Charles LNG Export’s Application and authorizes the requested term extension for all three orders. Specifically, DOE grants the FTA portion of the Application under NGA section 3(c). Section 3(c) was amended by section 201 of the Energy Policy Act of 1992 (Pub. L. 102-486) to require that FTA applications “shall be deemed to be

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<sup>13</sup> U.S. Dep’t of Energy, Lake Charles LNG Export Co, LLC; Application to Amend Export Term Through December 31, 2050, for Existing Non-Free Trade Agreement Authorization, 87 Fed. Reg. 36,838 (June 21, 2022) [hereinafter Notice of Application].

<sup>14</sup> DOE finds that the requirement for public notice of applications and other hearing-type procedures in 10 C.F.R. Part 590 is applicable only to non-FTA applications under NGA section 3(a).

<sup>15</sup> Industrial Energy Consumers of America, Notice of Intervention, Protest and Comment, Docket Nos. 11-59-LNG, 16-110-LNG, 13-04-LNG, 16-110-LNG [sic] (July 6, 2022) [hereinafter IECA Pleading]. Under DOE’s regulations, only a state commission may file a notice of intervention. See 10 C.F.R. §§ 590.303(a), (b), 590.102(q). Therefore, DOE construes IECA’s filing as a motion to intervene under 10 C.F.R. § 590.303(b). IECA filed the same Pleading in both Lake Charles Docket Nos. 16-109-LNG relating to Lake Charles LNG Export Company and 16-110-LNG relating to Lake Charles Exports, LLC. However, its Pleading mistakenly listed the docket number 16-110-LNG for the non-FTA portion of the Lake Charles LNG Export proceeding; the correct docket number is 16-109-LNG.

<sup>16</sup> Public Citizen, Inc., Motion to Intervene and Protest of Public Citizen, Inc., Docket Nos. 11-59-LNG, 16-110-LNG, 13-04-LNG, 16-109-LNG (July 6, 2022) [hereinafter Public Citizen Motion].

<sup>17</sup> Sierra Club, Motion to Intervene and Protest of Sierra Club, Docket Nos. 13-04-LNG and 16-109-LNG (July 6, 2022) [hereinafter Sierra Club Motion].

<sup>18</sup> Lake Charles LNG Export Co., LLC, Answer of Lake Charles Exports, LLC, and Lake Charles LNG Export Company, LLC to the Protests of the Industrial Energy Consumers of America, Public Citizen, Inc., and Sierra Club, Docket Nos. 11-59-LNG, 16-110-LNG, 13-04-LNG, and 16-109-LNG (July 21, 2022) [hereinafter Answer].

<sup>19</sup> Response by the Industrial Energy Consumers of America to Lake Charles Exports, LLC and Lake Charles LNG Export Company, LLC, Docket Nos. 11-59-LNG, 16-110-LNG, 13-04-LNG, 16-109-LNG (Aug. 5, 2022) [hereinafter IECA Response to Answer].

consistent with the public interest” and granted “without modification or delay.”<sup>20</sup> The FTA portion of the Application falls within NGA section 3(c) and, therefore, DOE approves the requested term extension for Order No. 3252 and the FTA portion of Order No. 4010, both as amended, without modification or delay. Accordingly, none of the public interest analysis discussed below applies to the FTA portion of the authorizations.

DOE also grants the non-FTA portion of the Application under NGA section 3(a), and, therefore, approves the requested term extension for Order No. 3868 and the non-FTA portion of Order No. 4010, both as amended. As discussed below, DOE received three motions to intervene and protests in opposition to the Application. Subsequently, Lake Charles LNG Export filed its Answer on July 21, 2022.<sup>21</sup> IECA responded to Lake Charles LNG Export’s Answer.<sup>22</sup> Upon review of the record in this proceeding, DOE finds that it has not been shown that the term extension for Order No. 3868 and the non-FTA portion of Order No. 4010, both as amended, are inconsistent with the public interest, as would be required to deny the non-FTA portion of the Application under NGA section 3(a).

In sum, DOE is amending Order Nos. 3252, 3868, and 4010, in each case, as amended, where applicable, to extend the existing export term in each authorization through December 31, 2050 (inclusive of any make-up period), with an attendant increase in the total export volume over the life of each authorization owing to the additional period that exports may occur.<sup>23</sup> These orders remain unchanged in all other respects.

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<sup>20</sup> 15 U.S.C. § 717b(c).

<sup>21</sup> See Answer.

<sup>22</sup> See IECA Response to Answer.

<sup>23</sup> See 2050 Policy Statement, 85 Fed. Reg. at 52,247. In many long-term FTA and non-FTA authorizations, DOE has approved a three-year “make-up period” following the end of the original export term, during which the authorization holder may continue to export any “make-up volume” that it was unable to export during the export term. See *id.* at 52,239.

## **II. APPLICANT’S PUBLIC INTEREST ANALYSIS FOR REQUESTED NON-FTA TERM EXTENSION**

Lake Charles LNG Export states that the requested term extension is in the public interest for the reasons set forth in the 2050 Policy Statement—namely, because the United States will experience economic and energy security benefits associated with exporting LNG through December 31, 2050.<sup>24</sup> Lake Charles LNG Export states that “[g]lobal events following the August 2020 publication of the [2050] Policy Statement have only further reinforced that the exportation of natural gas through December 31, 2050 will not be inconsistent with the public interest.”<sup>25</sup> Lake Charles LNG Export further notes that “the U.S. Energy Information Administration’s Annual Energy Outlook for 2022 projects growing natural gas production in the United States through 2050, the requested term of the extensions sought [].”<sup>26</sup>

## **III. DOE PROCEEDING**

In response to the Notice of Application of the non-FTA portion of the Application published in the *Federal Register* on June 21, 2022, DOE received three motions to intervene and protest, from IECA, Public Citizen, and Sierra Club, in opposition to Lake Charles LNG Export’s Application. On July 21, 2022, Lake Charles LNG Export filed an Answer in opposition to IECA, Sierra Club, and Public Citizen’s pleadings. IECA responded to Lake Charles LNG Export’s Answer on August 5, 2022. The motions to intervene and protest, Lake Charles LNG Export’s Answer, and IECA’s response to the Answer are summarized below.

### **A. Motion to Intervene, Protest and Comment by The Industrial Energy Consumers of America**

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<sup>24</sup> App. at 4-5.

<sup>25</sup> *Id.* (citing the 2050 Policy Statement).

<sup>26</sup> *Id.* at 5.

On July 6, 2022, IECA submitted its “Notice of Intervention, Protest and Comment,” which DOE is construing as a motion to intervene and protest.<sup>27</sup> IECA states that it is a nonpartisan association of leading manufacturing companies with \$1.1 trillion in annual sales, over 11,700 facilities nationwide, and more than 1.8 million employees. IECA’s stated purpose is to promote the interests of manufacturing companies. IECA’s membership represents a diverse set of industries, including chemicals, plastics, steel, aluminum, fertilizer, automotive, and many more.<sup>28</sup>

IECA challenges Lake Charles LNG Export’s request to increase the term for LNG exports as contrary to the public interest. IECA contends that increasing the term for LNG exports does not actually help consumer prices due to uncertainties with production capacity and opening access to the domestic LNG market to foreign countries.<sup>29</sup> IECA also raises arguments that the existing authorizations to export are also not in the public interest. IECA argues that DOE’s Study on “Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports” (2018 LNG Export Study)<sup>30</sup> “was fundamentally flawed” in three primary respects, and that any export volumes approved based on the study are therefore not in the public interest.<sup>31</sup> First, IECA asserts that, with rising domestic natural gas and electricity costs, instead of U.S. consumer well-being increasing with increased LNG exports, the opposite has occurred as “[o]nly a narrow sector of the economy has benefited...while every citizen and the economy in general has been negatively affected” due to rising natural gas costs.<sup>32</sup> Second, IECA states that

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<sup>27</sup> See generally IECA Pleading.

<sup>28</sup> See *id.* at 1.

<sup>29</sup> See *id.* at 2-3.

<sup>30</sup> NERA Economic Consulting, Macroeconomic Outcomes of Market Determined Levels of U.S. LNG Exports (June 7, 2018), <https://www.energy.gov/sites/prod/files/2018/06/f52/Macroeconomic%20LNG%20Export%20Study%202018.pdf> [hereinafter 2018 LNG Export Study or 2018 Study].

<sup>31</sup> See IECA Pleading at 1-2.

<sup>32</sup> See *id.* at 2.



as a domestic source of income, LNG exports financially benefit “only a handful of large corporations, including foreign companies that own these export terminals[,] not households.”<sup>33</sup> Finally, IECA asserts that the 2018 LNG Export Study did not take into account combined uncertainties unique to natural gas, such as “levels of production [,]... pipeline availability[,] weather that causes extreme heat or cold, [or] federal and state public policies and activist groups that can stop or slow the drilling and building of pipelines.”<sup>34</sup>

### **B. Motion to Intervene and Protest of Public Citizen**

On July 6, 2022, Public Citizen filed a “Motion to Intervene and Protest.”<sup>35</sup> Public Citizen states that it is a national, not-for-profit, non-partisan, research and advocacy organization representing the interests of household consumers.<sup>36</sup> Public Citizen argues that Lake Charles LNG Export has applied to extend its current 30-year authorization to export LNG to 50 years which is not in the public interest.<sup>37</sup> Public Citizen argues that the increase in LNG exports is “radically upending domestic natural gas markets, resulting in a direct and punishing correlation between exports and increased energy price burdens for American families.”<sup>38</sup> Public Citizen argues that denying the requested extension to 50 years will not result in any harm to Lake Charles LNG Export, but granting “a blanket authorization to export LNG for 50 years is inconsistent with the public interest, as it unnecessarily threatens American families with prolonged exposure to higher domestic price risk.”<sup>39</sup>

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<sup>33</sup> *See id.*

<sup>34</sup> *Id.*

<sup>35</sup> *See generally* Public Citizen Motion.

<sup>36</sup> *See id.* at 1.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.*

<sup>39</sup> *Id.* at 2.

### C. Motion to Intervene and Protest of Sierra Club

On July 6, 2022, Sierra Club also filed a “Motion to Intervene and Protest.”<sup>40</sup> Sierra Club argues that the request to extend export terms should be denied for the following reasons: (1) the 2050 Policy Statement that DOE relies upon is not determinative and each of the public interest factors weighs against granting Lake Charles LNG Export’s Application; (2) exports are increasingly linking domestic gas prices to prices in the global market and these increases harm American households and energy intensive industry; (3) short-term global strategic interests do not justify extending LNG exports through 2050; and (4) Sierra Club members will be harmed by increasing gas production and associated air pollution, including (but not limited to) emission of greenhouse gases.

First, Sierra Club contends that DOE’s 2050 Policy Statement, upon which DOE relies, is not determinative, and that DOE must look critically at the facts and circumstances of Lake Charles LNG Export’s application and include new information that has become available since the 2050 Policy Statement.<sup>41</sup> Sierra Club asserts that the 2050 Policy Statement’s analysis “contained several flaws”<sup>42</sup> that center around reliance on DOE’s 2018 LNG Export Study,<sup>43</sup> which, Sierra Club asserts, failed to account for “foreseeable and significant changes in the regulatory and economic environment making it nearly impossible to sell or use LNG by 2050” and “mounting evidence ... [that] these facilities will ... be in the cross hairs of catastrophic climate change.”<sup>44</sup>

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<sup>40</sup> See generally Sierra Club Motion.

<sup>41</sup> *Id.* at 5.

<sup>42</sup> *Id.* at 7.

<sup>43</sup> See 2018 LNG Export Study.

<sup>44</sup> Sierra Club Motion at 7.

Second, Sierra Club asserts that recent data show exports are increasingly linking domestic natural gas prices to prices in the global market and that these increases harm American households and energy-intensive industry.<sup>45</sup> Sierra Club contends that the increase in “winter 2021-2022 gas prices demonstrate that LNG exports are harming U.S. consumers.”<sup>46</sup> Moreover, Sierra Club argues that the drop in domestic natural gas prices resulting from the Freeport LNG explosion “further affirms [that] Lake Charles’s project will increase domestic gas prices” and thereby harm consumers.<sup>47</sup> Sierra Club, therefore, contends that recent data demonstrate that a term extension is not in the public interest and also constitutes significant new information requiring DOE to revisit its 2050 Policy Statement.<sup>48</sup>

Third, Sierra Club argues that short-term global strategic interests do not justify extending LNG exports through 2050.<sup>49</sup> While conceding “a public interest in assisting Europe to transition away from Russian gas,” Sierra Club contends that “DOE must reject Lake Charles’s attempt to invoke any near-term European need to justify its requested term extension.”<sup>50</sup> Sierra Club points out that the exports at issue in the term extension would occur in the long-term in the late 2040s and fail to support current European gas supply needs, especially as the European Union plans to reduce reliance on Russian gas significantly within a year and perhaps altogether by 2025, according to some analysis, through low-emission alternatives, such as heat pumps and efficiency measures.<sup>51</sup> Sierra Club further asserts that

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<sup>45</sup> *Id.* at 11. *See also id.* at 13.

<sup>46</sup> Sierra Club Motion at 13.

<sup>47</sup> *Id.* at 11.

<sup>48</sup> *Id.*

<sup>49</sup> *Id.* at 17.

<sup>50</sup> *Id.* at 19.

<sup>51</sup> *Id.* at 17-18 (citing International Energy Agency, A 10-Point Plan to Reduce the European Union’s Reliance on Russian Natural Gas (Mar. 3, 2022), <https://www.iea.org/reports/a-10-point-plan-to-reduce-the-european-unions-reliance-on-russian-natural-gas>; Briefing: EU Can Stop Russian Gas Imports by 2025, [https://9tj40250l53byww26jdkao0xwpenetdna-ssl.com/wp-content/uploads/Briefing\\_EU-can-stop-Russian-gas-imports-by-2025.pdf](https://9tj40250l53byww26jdkao0xwpenetdna-ssl.com/wp-content/uploads/Briefing_EU-can-stop-Russian-gas-imports-by-2025.pdf)).

“[f]undamental shifts in the global market, highlighted by Lake Charles’s repeated delays, demonstrate that the extension is not in the public interest.”<sup>52</sup> Sierra Club points to the following changed economic, political, and scientific circumstances since the 2050 Policy Statement that warrant a re-evaluation of DOE’s original public interest finding: (i) financial investment decision delays in an uncertain market with dampened demand that has affected 38 percent, or 700 million tonnes per annum, of the export capacity under development globally, including Lake Charles LNG Export,<sup>53</sup> (ii) the Inter-Governmental Panel on Climate Change’s (IPCC) 6th Assessment Report of the urgency and severity of the climate hazards and essentiality of aggressive emissions reductions to avoid the most devastating climate harms, (iii) the International Energy Agency’s (IEA) 2021 Net Zero Report,<sup>54</sup> which envisions a more limited role for LNG exports in a net zero scenario, anticipating a decrease in global demand of five percent in the 2030s and in a drop in global trading of 60 percent from 2030 to 2050.<sup>55</sup>

Lastly, Sierra Club contends that, in addition to the immediate harm caused by price increases, LNG exports will cause environmental harm lasting for generations.<sup>56</sup> Sierra Club argues that the NGA and National Environmental Policy Act of 1969 (NEPA) require DOE to “take a hard look” at (i) these impacts across the entire LNG lifecycle based on a “broad perspective” that considers the “worldwide and long-range character of environmental problems,”<sup>57</sup> such as GHGs, which are not “location-dependent,”<sup>58</sup> and (ii) “indirect effects

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<sup>52</sup> Sierra Club Motion at 19.

<sup>53</sup> *Id.* at 20 (citing Lydia Plante and Ted Nace, Nervous Money, Global Energy Monitor, at 4 (June 2021), <https://globalenergymonitor.org/report/nervous-money/>).

<sup>54</sup> International Energy Agency, Net Zero by 2050: A Roadmap for the Global Energy Sector, at 101-02 (May 2021), [https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector\\_CORR.pdf](https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf) [hereinafter Net Zero Report].

<sup>55</sup> Sierra Club Motion at 20.

<sup>56</sup> *Id.* at 21.

<sup>57</sup> 42 U.S.C. § 4332(2)(F).

<sup>58</sup> Sierra Club Motion at 21-23.

...caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable.”<sup>59</sup>

Furthermore, Sierra Club maintains that the proposed export extensions cannot be categorically excluded from NEPA review because the categorical exclusion adopted in 2020 for LNG export approvals is invalid or, in the alternative, the proposed term extension fails to satisfy the “integral elements” 1 (due to threatened violation of E.O. 14,008<sup>60</sup>) and 4 (due to potential to cause significant impact on endangered species) (as defined in Appendix B to 10 C.F.R. Part 2021 Subpart D) that are necessary for a categorical exclusion.<sup>61</sup>

Sierra Club asserts that because DOE’s prior 2019 and 2014 lifecycle greenhouse gas analyses asked the wrong questions and underestimated emissions, they are “not a substitute for NEPA review and do not demonstrate that greenhouse gas emissions caused by the proposal are consistent with the public interest.”<sup>62</sup> According to Sierra Club, DOE’s analyses have only considered the short-term comparison of LNG with other fossil fuels<sup>63</sup> and do not inform whether facilities using U.S. LNG are sources of emissions discouraged by E.O. 14,008.<sup>64</sup> Sierra Club also emphasizes that DOE must examine the impact of increased exports on U.S. domestic emissions.<sup>65</sup> Sierra Club contends that DOE’s assumptions in prior lifecycle analyses of an “upstream emission rate” or “leak rate” of LNG exports (*i.e.*, the amount of methane emitted

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<sup>59</sup> *Id.* at 23 (quoting 40 C.F.R. § 1508(g)(2)).

<sup>60</sup> Exec. Order No. 14,008, *Tackling the Climate Crisis at Home and Abroad*, 86 Fed. Reg. 7619 (Jan. 27, 2021), <https://www.govinfo.gov/content/pkg/FR-2021-02-01/pdf/2021-02177.pdf> [hereinafter E.O. 14,008].

<sup>61</sup> Sierra Club Motion at 24-26.

<sup>62</sup> *Id.* at 28-31.

<sup>63</sup> *Id.* at 29-30.

<sup>64</sup> *Id.*

<sup>65</sup> *Id.* at 31.

during production, processing, and transportation of gas to the export facility) is underestimated, as new research shows.<sup>66</sup>

Finally, Sierra Club argues that three recent documents from the IPCC's 6th Assessment Report constitute substantial new information supporting the urgent need to curb GHGs now that DOE must consider in its public interest analysis and NEPA review.<sup>67</sup> As an initial matter, the IPCC's August 2021 report, *Climate Change: The Physical Science Basis* states that evidence increasingly demonstrates the "near-linear" link between human-induced GHGs, global warming, and weather and climate extremes and concludes that reducing GHGs now and reaching net zero emissions are required to stabilize human-induced global temperature increase at any level.<sup>68</sup>

Next, Sierra Club highlights the IPCC's February 2022 report on *Impacts, Adaptation, and Vulnerability, Summary for Policy Makers*, finding increasing climate-related risks to coastal infrastructure, such as adverse impacts from flood/storm damages in coastal areas and to key infrastructure and economic sectors in North America.<sup>69</sup>

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<sup>66</sup> *Id.* at 31-32 (citing 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, <https://advances.sciencemag.org/content/6/17/eaaz5120/tab-pdf> [hereinafter Science Advances]; 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> [hereinafter, together with Science Advances, the 2020 Studies]; 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>; NRDC, Sailing to Nowhere: Liquefied Natural Gas Is Not an Effective Climate Strategy (Dec. 2020), <https://www.nrdc.org/sites/default/files/sailing-nowhere-liquefied-natural-gasreport.pdf>; Kayrros, U.S. Methane Emissions from Fossil Fuels at Risk of Worsening in 2022, Extending 2021 Trend (June 2022), [<https://www.energy.gov/sites/default/files/2022-08/38.%20Kayrros%20-%20Methane%20Emissions%20Worsening.pdf>]).

<sup>67</sup> Sierra Club Motion at 32.

<sup>68</sup> *Id.* at 33.

<sup>69</sup> *Id.* at 33-34 (citing IPCC, *Climate Change 2022 Impacts, Adaptation and Vulnerability, Summary for Policy Makers*, at 8, A.3 (Feb. 2022), [https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf) [hereinafter IPCC Impacts Summary]).

Last, Sierra Club highlights that the IPCC's April 2022 *Climate Change 2022: Mitigation of Climate Change, Summary for Policy Makers* report demonstrates the need for LNG exports to be significantly curtailed well before 2050 to avoid installation of unabated fossil fuel infrastructure that locks in GHGs over the lifetime of existing and currently planned fossil fuel infrastructure.<sup>70</sup>

#### **D. Answer of Lake Charles LNG Export**

In its Answer to IECA, Sierra Club, and Public Citizen's pleadings, Lake Charles LNG Export asks DOE to reject the respective protests of IECA, Sierra Club, and Public Citizen and approve the Application to extend export terms through December 31, 2050 as requested.<sup>71</sup> Lake Charles LNG Export argues that IECA and Sierra Club disregarded the limitation set forth by DOE that only comments or protests that directly bear on the requested term extension and not the existing non-FTA Order will be considered by DOE. Therefore, IECA and Sierra Club's arguments that Lake Charles LNG Export's existing authorizations to export LNG to non-FTA countries were not in the public interest should be rejected.<sup>72</sup> Lake Charles LNG Export also asserts that Public Citizen's protest should be rejected because it erroneously argued that Lake Charles LNG Export seeks to extend the export term to 50 years.<sup>73</sup> Lake Charles LNG Export notes that it has requested an amendment to its export terms for existing long-term authorizations through December 31, 2050 in accordance with DOE's 2050 Policy Statement and did not seek a 50-year export term as alleged by Public Citizen.<sup>74</sup>

#### **E. IECA's Response to Lake Charles LNG Export's Answer**

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<sup>70</sup> *Id.* at 35 (citing IPCC, *Climate Change 2022: Mitigation of Climate Change, Summary for Policy Makers*, at C.4 and B.7 (Apr. 2022), [https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC\\_AR6\\_WGIII\\_SPM.pdf](https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf) [hereinafter IPCC Mitigation of Climate Change Report]).

<sup>71</sup> Answer at 5.

<sup>72</sup> *Id.* at 3.

<sup>73</sup> *Id.*

<sup>74</sup> *Id.*

IECA responded to Lake Charles LNG Export’s Answer on August 5, 2022.<sup>75</sup> IECA argues that LNG export volumes have direct and negative impacts on natural gas and electric power prices nationwide, “increasing inflation and endangering national economic [sic] and national security.”<sup>76</sup> IECA argues that these impacts qualify as “unforeseen developments of such significant consequence to put the public interest at risk” that justify DOE’s rejection of the term extension application.<sup>77</sup>

#### **IV. DISCUSSION FOR REQUESTED NON-FTA TERM EXTENSION**

##### **A. Procedural Matters**

We find that the evidence presented in this proceeding could affect the interests of each of IECA, Sierra Club, and Public Citizen and their respective members. Lake Charles LNG Export was afforded an opportunity to respond to the motion of each of IECA, Public Citizen, and Sierra Club pursuant to 10 C.F.R. § 590.304(f), and it did so. Accordingly, DOE will grant the requests for intervention by each of IECA, Public Citizen, and Sierra Club.

##### **B. Standard of Review**

Section 3(a) of the NGA sets forth the applicable standard of review for the non-FTA portion of the Application. Section 3(a) provides:

[N]o person shall export any natural gas from the United States to a foreign country or import any natural gas from a foreign country without first having secured an order of the [Secretary of Energy] authorizing it to do so. The [Secretary] shall issue such order upon application, unless after opportunity for hearing, [she] finds that the proposed exportation or importation will not be consistent with the public interest. The [Secretary] may by [the Secretary’s] order grant such application, in whole or part, with such modification and upon

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<sup>75</sup> See IECA Response to Answer.

<sup>76</sup> *Id.* at 2 (citing Policy Statement regarding Long-Term Authorizations to Export Natural Gas to Non-Free Trade Agreement Countries, 83 Fed. Reg. 28,841 (June 21, 2018) [hereinafter Policy Statement on Non-FTA Long-Term Authorizations]).

<sup>77</sup> *Id.* (citing Policy Statement on Non-FTA Long-Term Authorizations, 83 Fed. Reg. at 28,842).



such terms and conditions as the [Secretary] may find necessary or appropriate.<sup>78</sup>

DOE, as affirmed by the U.S. Court of Appeals for the District of Columbia Circuit, has consistently interpreted NGA section 3(a) as creating a rebuttable presumption that a proposed export of natural gas is in the public interest.<sup>79</sup> Accordingly, DOE will conduct an informal adjudication and grant a non-FTA application unless DOE finds that the proposed exportation will not be consistent with the public interest.<sup>80</sup>

NGA section 3(a) does not define “public interest” or identify criteria that must be considered in evaluating the public interest. In prior decisions, DOE has identified a range of factors that it evaluates when reviewing an application for export authorization. These factors include economic impacts, international impacts, security of natural gas supply, and environmental impacts, among others. To conduct this review, DOE looks to record evidence developed in the application proceeding.

Before reaching a final decision, DOE must also comply with NEPA.<sup>81</sup> DOE’s environmental review process under NEPA may result in the preparation or adoption of an environmental impact statement (EIS) or environmental assessment (EA) describing the potential environmental impacts associated with the application. In other cases, DOE may determine that an application is eligible for a categorical exclusion from the preparation or adoption of an EIS or EA, pursuant to DOE’s regulations implementing NEPA.

### **C. Background on 2050 Policy Statement**

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<sup>78</sup> 15 U.S.C. § 717b(a).

<sup>79</sup> See *Sierra Club v. U.S. Dep’t of Energy*, 867 F.3d 189, 203 (D.C. Cir. 2017) (“We have construed [NGA section 3(a)] as containing a ‘general presumption favoring [export] authorization.’”) (quoting *W. Va. Pub. Serv. Comm’n v. U.S. Dep’t of Energy*, 681 F.2d 847, 856 (D.C. Cir. 1982)).

<sup>80</sup> See *id.* (“there must be ‘an affirmative showing of inconsistency with the public interest’ to deny the application” under NGA section 3(a)) (quoting *Panhandle Producers & Royalty Owners Ass’n v. Econ. Regulatory Admin.*, 822 F.2d 1105, 1111 (D.C. Cir. 1987)).

<sup>81</sup> 42 U.S.C. § 4321 *et seq.*

In the 2050 Policy Statement, DOE discontinued its practice of granting a standard 20-year export term for long-term authorizations to export domestically produced natural gas, including LNG, from the lower-48 states to non-FTA countries.<sup>82</sup> On the basis of the record evidence, DOE adopted a term through December 31, 2050, as the standard export term for long-term non-FTA authorizations.<sup>83</sup> DOE implemented this policy change after considering its obligations under NGA section 3(a), the public comments supporting and opposing the Proposed 2050 Policy Statement,<sup>84</sup> and a wide range of information bearing on the public interest—including the 2018 LNG Export Study that analyzed exports of U.S. LNG through the year 2050, the U.S. Energy Information Administration’s (EIA) then-most recent projections for U.S. natural gas, and relevant environmental issues, including a new environmental analysis, entitled *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update*,<sup>85</sup> which used the most current available science, methodology and data from the U.S. natural gas system to assess emissions of GHGs associated with U.S. LNG exports.<sup>86</sup> DOE stated that, for applications to amend existing authorizations submitted pursuant to this 2050 Policy Statement, DOE would provide notice and an opportunity for comment on the requested term extension. DOE further stated that, following the notice and comment period, it would conduct a public interest analysis under NGA section 3(a) limited to the requested term extension.<sup>87</sup>

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<sup>82</sup> 2050 Policy Statement, 85 Fed. Reg. at 52,247.

<sup>83</sup> *Id.*; *see also id.* at 52,239-40 (summarizing reasons supporting the term extension).

<sup>84</sup> *See* U.S. Dep’t of Energy, Extending Natural Gas Export Authorizations to Non-Free Trade Agreement Countries Through the Year 2050; Notice of Proposed Policy Statement and Request for Comments, 85 Fed. Reg. 7672 (Feb. 11, 2020) [hereinafter Proposed 2050 Policy Statement].

<sup>85</sup> *Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States: 2019 Update – Response to Comments*, 85 Fed. Reg. 72 (Jan. 2, 2020) [hereinafter 2019 Update].

<sup>86</sup> *See* 2050 Policy Statement, 85 Fed. Reg. at 52,247; *see also id.* at 52,240 (discussing the 2018 LNG Export Study and DOE’s most recent life cycle analysis of greenhouse gas emissions associated with exports of U.S. LNG), 52,243-44 (discussing EIA’s *Annual Energy Outlook 2020*), 52,244-45 (discussing additional environmental issues).

<sup>87</sup> *See id.* at 52,239, 52,247. *See also* Notice of Application, 87 Fed. Reg. at 36,838.

An intervenor or protestor may challenge the requested term extension but not the existing non-FTA order.<sup>88</sup> DOE notes that extensions of term proceedings are not an invitation to re-open the underlying dockets. DOE’s inquiry when reviewing a request for a term extension is narrow—it is not an opportunity to revisit the determinations made in Natural Gas Act authorizations after orders have become final and unappealable. There is no question here of whether the public interest determinations made in the underlying authorization order remain valid.

#### **D. Public Interest Review Under NGA Section 3(a)**

Lake Charles LNG Export asks DOE to amend the export term in its non-FTA orders, Order Nos. 3868 and 4010, both as amended, through December 31, 2050, pursuant to the 2050 Policy Statement. DOE notes that this term extension will increase Lake Charles LNG Export’s total potential volume of exports over the life of the authorization (by extending the duration of Order No. 3868 and the non-FTA portion of Order No. 4010, both as amended, through December 31, 2050), but it will not affect the day-to-day liquefaction and export operations of the Liquefaction Project.<sup>89</sup>

As set forth in each order, the 20-year term begins when the authorization holder commences commercial export from its facility. DOE allows a term for commercial LNG export operations to commence – typically seven years from the date the order is issued – and a three-year “make-up period” following the end of the 20-year export term, during which the authorization holder may continue to export any “make-up volume” that it was unable to export during the 20-year export term.<sup>90</sup> Lake Charles LNG Export’s 20-year term must commence no

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<sup>88</sup> See 2050 Policy Statement, 85 Fed. Reg. at 52,247.

<sup>89</sup> *Id.* <sup>90</sup> See *id.* at 52,239.

<sup>90</sup> See *id.* at 52,239.

later than December 16, 2025,<sup>91</sup> and will end on December 16, 2048, after taking into account the three-year make-up period. The requested term extension at issue is the two-years and 15-day period between December 17, 2048 and December 31, 2050.<sup>92</sup>

## **E. Non-Environmental Issues**

### **1. Price Impacts**

Intervenors Sierra Club, IECA, and Public Citizen generally assert that the link between domestic gas prices and global market prices of LNG exports harm American households and energy-intensive industry, citing the June 2022 explosion of the Freeport LNG facility and high winter natural gas prices in 2021-2022<sup>93</sup> to support denying the requested term extension and/or to revisit the 2050 Policy Statement. These intervenors have used these isolated circumstances that are specific in time and regional application to generalize more broadly about natural gas pricing – which inherently will fluctuate depending on season and other factors. They have not explained how these events in 2021-2022 apply to Lake Charles LNG Export nor to the roughly two-year term extension at issue. As DOE has explained, “the 2018 [LNG Export] Study shows that U.S. natural gas prices will not rise to the same levels as global natural gas prices as a result of increased LNG exports.”<sup>94</sup> DOE added that “[t]his result is consistent with the 2015 Study’s analysis of the linkages between U.S. and global natural gas prices, as [DOE] previously

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<sup>91</sup> *Lake Charles LNG Export Co., LLC*, DOE/FE Order Nos. 3252-B, 3868-A, and 4010-A, Docket Nos. 13-04-LNG and 16-109-LNG, Order Granting Application for Extension of Commencement Deadlines, at 8-11 (Oct. 6, 2020) (extending export commencement deadline to December 16, 2025, for the non-FTA authorizations).

<sup>92</sup> *See id.* As Lake Charles LNG Export is authorized to export beginning no later than December 16, 2025 for 20 years plus the three-year make-up period, the latest date its current authorizations can expire is December 16, 2048. The 20-year term begins when exports begin, and that date is not fixed. By contrast, the extension to December 31, 2050 would be to a fixed date, and the term would expire on that date regardless of when exports began, although the required commencement deadline of December 16, 2025 would still apply. Because LNG project development and construction is often a lengthy process, DOE believes it prudent to use the latest possible start date—that is, December 16, 2025.

<sup>93</sup> *See* Sierra Club Motion at 11-16; IECA Pleading at 2-5; Public Citizen Motion at 1-2.

<sup>94</sup> 2018 Study Response to Comments, 83 Fed. Reg. at 67,268 (citing 2018 LNG Export Study at 55).

discussed.”<sup>95</sup> Further, DOE has analyzed price projections through 2050 in the Annual Energy Outlook 2023 (AEO2023) to evaluate any differences from AEO2017, which formed the basis of the 2018 LNG Export Study. The AEO2023 indicates that “[g]iven the combination of relatively little growth in domestic consumption and continued growth in production, [EIA] project[s] that the United States will remain a net exporter of [] natural gas through 2050 in all AEO2023 cases” while the Henry Hub price remains below \$4 per million British thermal units (MMBtu) [in real dollars] through the projection period in most cases.<sup>96</sup> For the year 2050, the AEO2023 Reference case projects an average Henry Hub natural gas price [in real dollars] that is lower than the AEO2017 Reference case without the Clean Power Plan by 41%.<sup>97</sup> None of the intervenors have cited evidence or projections applicable to the relevant two-year period that would indicate a contrary long-term trajectory. Therefore, they have not demonstrated that the two-year term extension would lead to any long-term price impacts that would be inconsistent with the public interest.

As noted above, IECA opposes the Lake Charles LNG Export extension of the export term expressing its concern that increasing the term for LNG exports does not actually help consumer prices due to uncertainties with production capacity and opening access to the domestic LNG market to foreign countries. In this regard, we are not persuaded by IECA’s arguments. Rather, IECA’s broad challenges to DOE’s approvals of applications to export domestically produced LNG to non-FTA countries are not supported by sufficient evidence. In

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<sup>95</sup> *Id.*

<sup>96</sup> U.S. Energy Info. Admin., Annual Energy Outlook 2023 with projections to 2050 Narrative, at 6 [hereinafter AEO2023]; *see also* AEO2023 Data Tables (“Table 1”), <https://www.eia.gov/outlooks/aeo/data/browser/>.

<sup>97</sup> AEO2017 included two versions of the Reference case—one with, and one without, the implementation of a rulemaking by the U.S. Environmental Protection Agency (EPA) called the Clean Power Plan (CPP). EPA repealed the CPP in 2019. In this Order, we refer only to the AEO2017 Reference case without the CPP. The AEO2023 Reference Case does not include the CPP, so the comparisons between AEO2017 and AEO2023 are consistent in that regard.

addition, IECA’s related arguments to the 2018 LNG Export Study, fail to address Lake Charles LNG Export’s term extension application. For example, IECA asserts that, “[i]f not for LNG exports, the U.S. Henry Hub natural gas price would have never increased”<sup>98</sup> in 2022 as compared to 2021. DOE notes that, although Henry Hub natural gas prices in 2022 nearly doubled from their historic lows in 2020 to 2021 and periodically exceeded \$8/MMBtu,<sup>99</sup> as noted earlier, prices are projected to average below \$4/MMBtu, in real dollars, throughout the projection period in most projection cases, according to the latest AEO2023. Further, DOE already found that Lake Charles LNG Export’s proposed exports had not been shown to be inconsistent with the public interest and, consequently, authorized those exports in Order No. 3868 and in the non-FTA portion of Order No. 4010, both as amended. In addition, as IECA states, it raised the arguments against the 2018 LNG Export Study during the comment period for the study. DOE considered those comments at that time and summarized its conclusions in the final 2018 LNG Export Study.<sup>100</sup> For these reasons, DOE finds that arguments concerning domestic price increases are not supported by record evidence.

Finally, Public Citizen erroneously argues that Lake Charles LNG Export seeks “to extend its current 30 year authorization to export LNG to 50 years.”<sup>101</sup> Lake Charles LNG Export requested an amendment to its export terms for existing long-term authorizations through December 31, 2050, an addition of slightly more than two years in accordance with the DOE’s 2050 Policy Statement, and did not seek a 50-year export term as alleged by Public Citizen.

Therefore, Public Citizen’s protest is based on a false premise and is rejected. For these reasons,

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<sup>98</sup> IECA Pleading at 3.

<sup>99</sup> Henry Hub prices averaged \$2.03/MMBtu in 2020, \$3.89/MMBtu in 2021, and \$6.45/MMBtu in 2022. *See* U.S. Energy Info. Admin., Table, “Henry Hub Natural Gas Spot Price (Dollars per Million Btu)” (Oct. 18, 2023) (viewing annual history), <https://www.eia.gov/dnav/ng/hist/rngwhhdA.htm>.

<sup>100</sup> *See* Study on Macroeconomic Outcomes of LNG Exports: Response to Comments Received on Study, 83 Fed. Reg. 67,251, 67,261-67,272 (Dec. 28, 2018).

<sup>101</sup> Public Citizen Motion at 1.

and as explained in DOE's Response to Comments on the 2018 LNG Export Study, we find that arguments concerning domestic price increases are not supported by the record evidence.

## **2. Benefits of International Trade**

Sierra Club argues that short-term global strategic interests do not justify extending LNG exports through 2050. Conceding there is “undoubtedly a public interest in assisting Europe to transition away from Russian gas,” Sierra Club then contends that “DOE must reject Lake Charles's attempt to invoke any near-term European need to justify its requested term extension.”<sup>102</sup> Sierra Club makes preemptive arguments about short-term, global strategic interests that DOE is not making. Absent the introduction into the record of any contrary evidence, DOE reaffirms its long-held view that an efficient, transparent international market for natural gas with diverse sources of supply provides both economic and strategic benefits to the United States and our allies. To the extent U.S. exports diversify global LNG supplies and increase the volumes of LNG available globally, these exports will improve energy security for many U.S. allies and trading partners.

Moreover, Sierra Club argues that the European Union's plans to reduce reliance on Russian gas significantly within a year and perhaps altogether by 2025, according to some analysis, through low-emission alternatives, such as heat pumps and energy efficiency measures, undermine any determination that the term extension is in the public interest. The Reference Case in EIA's latest International Energy Outlook 2023 (IEO2023), with projections to 2050, indicates that global natural gas consumption is expected to grow by 29% from 2022 through the end of the forecast period.<sup>103</sup> Specifically, according to the IEO2023, “[t]he projected rise in

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<sup>102</sup> Sierra Club Motion at 17, 19.

<sup>103</sup> See U.S. Energy Info. Admin., International Energy Outlook 2023, (Oct. 2023), International Energy Outlook 2023 Narrative (eia.gov) [hereinafter IEO2023]; see also IEO2023 Data Tables (“Table A6”), [https://www.eia.gov/outlooks/ieo/data/pdf/A\\_r\\_230822.081459.pdf](https://www.eia.gov/outlooks/ieo/data/pdf/A_r_230822.081459.pdf).

natural gas consumption is most pronounced in the electric power sector, where it replaces retiring coal-fired generation, and the industrial sector, where it primarily fuels expanding industrial production. The Reference Case also projects that the “Europe and Eurasia superregion“ will continue “to have a relatively stable amount of fossil fuel-fired generation, which reflects the continued reliance on the existing capacity mix, [and] relatively stable demand.”<sup>104</sup> The IEO2023 further notes that the “[g]rowth in natural gas consumption is widely distributed regionally.”<sup>105</sup> These projections support DOE’s proposition that continued diversification of supply in the two-year period at issue would bolster U.S. and global energy security.

Finally, Sierra Club argues that “[f]undamental shifts in the global market [] demonstrate that the extension is not in the public interest.”<sup>106</sup> In support, Sierra Club asserts that Lake Charles LNG Export is not commercially viable, relying on both the call of the -IPCC in its 6th Assessment Report for aggressive emissions reductions to avoid the most devastating climate harms and projections in the IEA Net Zero by 2050 report that suggest drops in both demand through 2030 and global LNG trading between 2030 and 2050.<sup>107</sup> DOE subscribes in its public interest analysis to the long-standing principle set forth in our 1984 Policy Guidelines that, under most circumstances, the market is the most efficient means of allocating natural gas supplies.<sup>108</sup>

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<sup>104</sup> *Id.* at 37.

<sup>105</sup> *Id.* at 13.

<sup>106</sup> Sierra Club Motion at 19-21.

<sup>107</sup> *Id.* (citing to IEA Net Zero by 2050, at 102).

<sup>108</sup> New Policy Guidelines and Delegation Order Relating to Regulation of Imported Natural Gas, 49 Fed. Reg. 6684 (Feb. 22, 1984) [hereinafter 1984 Policy Guidelines]. See *Freeport LNG Expansion, L.P., FLNG Liquefaction, LLC, FLNG Liquefaction 2, LLC, and FLNG Liquefaction 3, LLC*, DOE/FE Order No. 4961, Docket No. 21-98-LNG, Order Granting Long-Term Authorization to Export Liquefied Natural Gas to Non-Free Trade Agreement Nations, at 26, 71 (Mar. 3, 2023) (citing U.S. Dep’t of Energy, New Policy Guidelines and Delegations Order Relating to Regulation of Imported Natural Gas, 49 Fed. Reg. 6684 (Feb. 22, 1984) [hereinafter 1984 Policy Guidelines]). DOE has acknowledged, however, that “agency intervention may be necessary to protect the public in the event there is insufficient domestic natural gas for domestic use, or as a result of other facts or circumstances beyond those presented here. Given these



Specifically, DOE’s “primary responsibility in authorizing imports [or exports]” is “to evaluate the need for the [natural] gas and whether the import [or export] arrangement will provide the [natural] gas on a competitively priced basis ... while minimizing regulatory impediments to a freely operating market.”<sup>109</sup> While the IEA Net Zero by 2050 report envisions global natural gas trading and demand drops, the IEA still acknowledges in the same report a continuing role for natural gas in a net zero scenario, noting that “more than half of natural gas use globally in 2050 is to produce hydrogen in facilities with CCUS.”<sup>110</sup> In these respects, DOE finds that the potential for fundamental shifts in the global market that Sierra Club has identified are not dispositive. Even in that circumstance, Sierra Club has not established that allowing additional natural gas to be exported pursuant to the requested term extension would be inconsistent with the public interest.

#### **F. Environmental Review Under NEPA**

On November 1, 2023, DOE issued a supplement analysis (SA)<sup>111</sup> examining whether the proposed modification – an addition of over two years to the total time period allowed – or new circumstances or information, would represent a significant change that would require a supplement to the existing EIS.<sup>112</sup> DOE concludes in the SA that the information presented by Sierra Club relevant to environmental concerns does not represent significant new circumstances or information and therefore a supplement to the EIS is not required. This Order grants the non-FTA portion of the Application, in part, on the basis of this SA and the existing EIS, which

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possibilities, DOE recognizes the need to monitor market developments closely as the impact of successive authorizations of LNG exports unfolds.” *Id.* at 71.

<sup>109</sup> *See id.* at 26-27 (citing to 1984 Policy Guidelines, 49 Fed. Reg. at 6685).

<sup>110</sup> IEA Net Zero by 2050, at 103.

<sup>111</sup> U.S. Dep’t of Energy, Supplement Analysis for the Application of Lake Charles LNG Export Company, LLC and Lake Charles Exports, LLC to Extend Their Authorized Export Term Through December 31, 2050, DOE/EIS-0491-SA-01 (November 2023) [hereinafter SA].

<sup>112</sup> U.S. Dep’t of Energy, Docket Nos. 11-59-LNG and 13-04-LNG, Final Environmental Impact Statement for Lake Charles Liquefaction Project, FERC/EIS-0258F and DOE/EIS-0491 (Aug. 2015) [hereinafter EIS].

supports DOE’s determination that the proposed term extension is not inconsistent with the public interest under the NGA.

### **1. Environmental Impacts from the Term Extension**

DOE’s NEPA regulations state that when it “is unclear whether or not an EIS supplement is required, DOE shall prepare a [SA].”<sup>113</sup> An SA shall provide sufficient information for DOE to determine whether (1) to supplement an existing EIS, (2) to prepare a new EIS, or (3) no further NEPA documentation is required.<sup>114</sup> In this case, the SA examines whether supplementation of the EIS is required based on the information presented by Sierra Club in this proceeding, including (but not limited to) with respect to resource areas related to geologic hazards (*i.e.*, flooding and storm damage); threatened, endangered and other special status species; and air quality and noise, including GHG emissions. The analysis set forth in the SA for the Liquefaction Project is herein incorporated by reference in its entirety.

This section summarizes DOE’s top-line conclusions from analysis of the resource areas reviewed in detail in the SA. Nothing in the analysis supporting the SA for the Liquefaction Project demonstrates that the proposed term extension would be inconsistent with the public interest under the NGA:

a. Geologic Hazards. Sierra Club asserts that climate-related risks, according to the IPCC, are projected to include increasing adverse impacts from flood/storm damages in coastal areas, including to infrastructure, local communities, and key economic sectors, and that the resultant losses will be greater, owing to the “siting of the infrastructure.”<sup>115</sup>

DOE has considered potential impacts of flood/storm damage on the Liquefaction

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<sup>113</sup> 10 C.F.R. § 1021.314(c).

<sup>114</sup> *Id.* §§ 1021.314(c)(2)(i)–(iii).

<sup>115</sup> Sierra Club Motion at 34-35.

Project. Consistent with its regulations<sup>116</sup> DOE used the information in the EIS to make a floodplain assessment of the Liquefaction Project site. DOE determined that the placement of some of the components in the Liquefaction Project within floodplains would be unavoidable but that the current design for the liquefaction facility minimizes floodplain impacts to the extent practicable.<sup>117</sup> The IPCC study<sup>118</sup> findings highlighted by Sierra Club are general findings that are not specific to any potential impacts of the proposed extension on the Liquefaction Project. Therefore, based on the information Sierra Club has presented, DOE would not alter its earlier NEPA consideration or analysis for the proposed extension of the authorization term.

b. Threatened, endangered, and other special status species. Sierra Club maintains that the proposed extension could “cause significant impacts to environmentally sensitive resources,” such as endangered species vulnerable to ship strikes and noise from vessel traffic which will be increased by the term extension, and must be investigated, even if the significance of the impacts is unclear.<sup>119</sup>

DOE finds that no additional environmental review is required for this resource area for two primary reasons. First, the proposed term extension—an addition of slightly more than two years – evaluated in the SA would not cause significant impacts beyond those previously considered. This is because DOE finds it reasonable to assume that Project-related ship traffic during the proposed extension period would be no greater than the authorized Project-related traffic during the existing authorization period, because the maximum authorized volume of LNG per year would remain fixed throughout the export term, including during the proposed

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<sup>116</sup> Compliance with Floodplain and Wetland Environmental Review Requirements, 10 C.F.R. Part 1022.

<sup>117</sup> U.S. Dep’t of Energy, Record of Decision and Floodplain Statement of Findings for the Lake Charles Exports, LLC Application To Export Liquefied Natural Gas to Non-Free Trade Agreement Countries, 81 Fed. Reg. 51,870, 51,872 (Aug. 5, 2016).

<sup>118</sup> Sierra Club Motion at 33-35 (citing IPCC Impacts Summary at 8, A.3).

<sup>119</sup> *Id.* at 27-28.

extension. Second, DOE evaluated impacts to wildlife during marine transport, and Sierra Club has not articulated how each of the species it identifies is particularly susceptible to the claimed harms, based on the species' physiology, behavioral patterns, ecology/habitat, or other relevant factors DOE could examine for any heightened risk.

c. Air Quality and Noise. Sierra Club's Motion raises arguments for why the additional GHG emissions from the proposed Liquefaction Project during the proposed term extension would be significant, as well as why new information that has come to light since preparation of the EIS necessitates additional environmental analysis.

d. First, Sierra Club urges DOE to take a hard look at GHG emissions occurring across the entire LNG life cycle. DOE has taken this hard look. Specifically, DOE's 2019 Update of its 2014 Life Cycle Analysis (LCA) of GHG emissions (collectively, the LCA GHG Analyses) carefully considered the GHG analysis and the public comments received on that 2019 study, in connection with the issuance of the 2050 Policy Statement. DOE's scrutiny of the GHG emissions impacts at the time of the EIS was subsequently updated by the GHG analysis in the 2019 Update which was incorporated into the 2050 Policy Statement, as applied to Docket Nos. 13-04-LNG and 16-109-LNG. Therefore, based on DOE's review of the EIS, as well as additional information presented in the record of the 2050 Policy Statement proceeding, including the 2019 Update, DOE maintains its finding that emissions attributable to the proposed term extension do not require additional NEPA review at this time.

Second, Sierra Club also argues that DOE's life cycle analyses only examine the short-term by focusing on how U.S.-sourced LNG would compete with coal or non-U.S. gas used in the power sectors in Europe and Asia, as opposed to the 2040s, the relevant time period for the term extension through 2050. Sierra Club also asserts the inconsistency of further development

of long-lived fossil fuel infrastructure in the United States and abroad; the specter of LNG displacing renewables, not coal, in overseas markets; and the need to examine the impacts of increased LNG exports on U.S. domestic emissions.

As discussed above, projections in EIA's IEO 2023 and analysis in IEA's Net Zero by 2050 report envision continued long-term use of natural gas. The analysis in the 2019 Update is consistent with this projected continued global natural gas demand.

Finally, Sierra Club argues broadly that DOE's LCA GHG Analyses are factually unsupported and understate the emissions or leak rate, citing studies measuring actual emissions that sized leak rates higher than the 2019 Update's use of 0.7%, as calculated by DOE's National Energy Technology Laboratory (NETL) on the basis of its bottom-up method. DOE finds that the conclusions of the 2020 Studies Sierra Club cites do not constitute significant new information that would require additional NEPA review at this time. NETL's bottom-up method provides results that are representative of U.S. natural gas production operations based on inherently variable industry data reported to the Environmental Protection Agency. DOE understands that methane emissions are an important part of assessing emissions from the natural gas supply chain. As a result, DOE uses USEPA's GHGRP data for modeling GHG emissions (including methane) from all stages of the supply chain. Certain updates have been made to GHGRP data to ensure that emissions from significant sources are not underestimated. For example, DOE uses updated throughput-normalized methane emissions data from current literature (Zaines et al. 2019) for accurately modeling emissions from the liquids unloading process.

## **2. Inter-Governmental Panel on Climate Change 6th Assessment Report**

Sierra Club argues that three recent documents from the IPCC's 6th Assessment Report –

issued after the 2050 Policy Statement -- constitute substantial new information supporting the urgent need to curb carbon emissions aggressively to avoid the climate-driven hazards at the Project site, its community and ecosystem that DOE must consider in its public interest analysis and NEPA review.<sup>120</sup> The documents stress the need to avoid current construction or planning of LNG facilities in order to reach net zero emissions by 2050.<sup>121</sup>

In its Motion, Sierra Club argues that the three reports underline “dual climate risks associated with the Lake Charles LNG facility: (1) that the facility’s staggering GHG emissions will fuel climate change, and (2) that the climate-driven hazards at the project site will increase the risk of significant contamination being released into the surrounding communities and ecosystems.”<sup>122</sup>

First, Sierra Club argues that the IPCC’s August 2021 *Climate Change 2021: The Physical Science Basis, Summary for Policymakers* report provides evidence demonstrating the “near-linear relationship” between human-caused GHG emissions and global warming, resulting in increased climate and weather extremes, especially in coastal cities, and concludes that cutting emissions now is critical.<sup>123</sup> The report stresses that “reaching net zero anthropogenic CO<sub>2</sub> emissions is a requirement to stabilize human-induced global temperature increase at any level.”<sup>124</sup> Although DOE agrees that reaching net zero is critical and human-caused GHG emissions and global warming has resulted in increased climate and weather extremes, Sierra Club did not provide any information or request on what DOE should do in this particular

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<sup>120</sup> Sierra Club Motion at 32, 36 (citing *Climate Change 2021: The Physical Science Basis, Summary for Policymakers*, IPCC, [https://report.ipcc.ch/ar6wg2/pdf/IPCC\\_AR6\\_WGII\\_SummaryForPolicymakers.pdf](https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf) (Oct. 2021) [hereinafter IPCC Physical Science Basis]).

<sup>121</sup> *Id.* at 10.

<sup>122</sup> Sierra Club Motion at 36.

<sup>123</sup> *Id.* at 32-33 (citing IPCC Physical Science Summary).

<sup>124</sup> *Id.* at 33 (citing IPCC Physical Science Summary at 28, D.1.1).

instance. DOE also finds in the SA that the IPCC study findings highlighted by Sierra Club concerning vulnerability of coastal infrastructure are general findings that are not specific to any potential impacts of the proposed extension on the Liquefaction Project.

Second, Sierra Club argues that the IPCC's February 2022 report on *Impacts, Adaptation, and Vulnerability, Summary for Policy Makers*, highlights the increasing climate-related risks to coastal infrastructure, like Lake Charles LNG Export,<sup>125</sup> with high to very high confidence that climate change will cause increasing adverse impacts from flood/storm damages in coastal areas and damage to key infrastructure and economic sectors in North America and result in cascading and compounding impacts.<sup>126</sup> Sierra Club emphasizes the IPCC's conclusion that "[t]he magnitude and rate of climate change and associated risks depend strongly on near term mitigation and adaptation actions."<sup>127</sup> According to Sierra Club, the IPCC concludes, with high confidence, that "[a]ctions that focus on sectors and risks in isolation and on short-term gains often lead to maladaptation if long-term impacts of the adaptation option and long-term adaptation commitment are not taken into account."<sup>128</sup> However, Sierra Club does not provide adaptation options with respect to DOE's review of whether to approve export due to the project's contribution to climate change. Therefore, DOE could not consider any adaptation options for this project.

Third, Sierra Club argues that the IPCC's April 2022 *Climate Change 2022: Mitigation of Climate Change, Summary for Policy Makers* report supports the premise that LNG exports need to be significantly curtailed before 2050 to avoid the lock-in of GHG emissions over the

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<sup>125</sup> *Id.* at 33-35 (citing IPCC Impacts Summary at 8, A.3).

<sup>126</sup> Sierra Club Motion at 33-34 (citing IPCC Impacts Summary at 8, A.3).

<sup>127</sup> *Id.* at 34 (citing IPCC Impacts Summary at SPM.B4).

<sup>128</sup> *Id.* at 34 (citing IPCC Impacts Summary at SPM.C.4.1).

lifetime of these long-lived infrastructure projects and the specter of stranded assets.<sup>129</sup> No new infrastructure is being installed in respect of the proposed two-year extension. Accordingly, the issue of GHG-emissions lock-in and stranded assets is beyond the scope of the narrow term extension before DOE.

In view of the foregoing, DOE finds that Sierra Club fails to demonstrate that the information it presents from the IPCC's 6th Assessment Report would render the proposed term extension inconsistent with the public interest under the NGA.

## V. FINDINGS

(1) Section 3(c) of the NGA was amended by section 201 of the Energy Policy Act of 1992 (Pub. L. 102-486) to require that applications requesting authority for (a) the import and export of natural gas, including LNG, from and to a nation with which there is in effect an FTA requiring national treatment for trade in natural gas, and/or (b) the import of LNG from other international sources, be deemed consistent with the public interest and granted without modification or delay. The portion of Lake Charles LNG Export's Application requesting an amendment to its FTA authorization, DOE/FE Order No. 3252, and the FTA portion of Order No. 4010, both as amended, falls within NGA section 3(c), as amended.<sup>130</sup> Therefore, DOE is charged with granting the requested term extension for these orders without modification or delay.

(2) Upon a review of the record, DOE finds that a grant of the non-FTA portion of the Application has not been shown to be inconsistent with the public interest under NGA section 3(a).<sup>131</sup> Additionally, based on DOE's analysis in the SA, the non-FTA portion of the

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<sup>129</sup> *Id.* at 35 (citing IPCC Mitigation of Climate Change Report).

<sup>130</sup> 15 U.S.C. § 717b(c).

<sup>131</sup> *Id.* § 717b(a).



Application requires no additional environmental review under NEPA at this time. DOE therefore grants the requested term extension for Lake Charles LNG Export's non-FTA authorizations, DOE/FE Order No. 3868, and the non-FTA portion of Order No. 4010, both as amended.

### **ORDER**

Pursuant to section 3 of the Natural Gas Act, it is ordered that:

A. The Application filed by Lake Charles LNG Export Company, LLC to amend the respective export terms set forth in DOE/FE Order Nos. 3252, 3868, and 4010, in each case, as amended, is granted.

B. In DOE/FE Order No. 3252, as amended by Order Nos. 3252-A and 3252-B (Docket No. 13-04-LNG), the relevant sentence in Ordering Paragraph A is further amended to state:

Lake Charles LNG Export Company, LLC (Lake Charles LNG Export) is authorized to export domestically produced LNG by vessel from the Lake Charles Terminal located in Lake Charles, Louisiana, in a volume up to the equivalent of 730 Bcf/yr of natural gas for a term commencing on the date of first export and extending through December 31, 2050.

This term extension supersedes any references to a 25-year or 30-year export term in the Ordering Paragraphs of DOE/FE Order No. 3252, as amended by Order No. 3252-A and Order No. 3252-B.

C. In DOE/FE Order No. 3868, as amended by Order Nos. 3868-A and 3868-B (Docket No. 13-04-LNG), the relevant sentence in Ordering Paragraph A is further amended to state:

Lake Charles LNG Export Company, LLC (Lake Charles LNG Export) is authorized to export domestically produced LNG by vessel from the Lake Charles Terminal located in Lake Charles,

Calcasieu Parish, Louisiana, in a volume equivalent to 730 Bcf/yr of natural gas for a term commencing on the date of first export and extending through December 31, 2050.

This term extension supersedes any references to a 20-year export term in the Terms and Conditions and Ordering Paragraphs of DOE/FE Order No. 3868, as amended by Order Nos. 3868-A and 3868-B.

D. In DOE/FE Order No. 4010, as amended by Order. Nos. 4010-A and 4010-B (Docket No. 16-109-LNG), the relevant sentence in Ordering Paragraph A is further amended to state:

Lake Charles LNG Export Company, LLC (Lake Charles LNG Export) is authorized to export domestically produced LNG by vessel from the Lake Charles Terminal located in Lake Charles, Louisiana, in a volume equivalent to 121 Bcf/yr of natural gas for a term commencing on the date of first export and extending through December 31, 2050.

This term extension supersedes any references to a 25-year or 30-year term, in the case of the FTA portion, or a 20-year term, in the case of the non-FTA portion, in the Terms and Conditions and Ordering Paragraphs of DOE/FE Order No. 4010, as amended by Order Nos. 4010-A and 4010-B.

E. These export terms lasting through December 31, 2050, are inclusive of any make-up period previously authorized in the orders, during which the authorization holder may continue to export any make-up volume that it was unable to export during the original export term.<sup>132</sup> Accordingly, as relevant here, any references to make-up periods and make-up volumes in the

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<sup>132</sup> See Section IV.D, *supra*; see also 2050 Policy Statement, 85 Fed. Reg. at 52,247.

Terms and Conditions or Ordering Paragraphs of DOE/FE Order Nos. 3252, 3868 and 4010, in each case, as amended, are now moot.

F. All other obligations, rights, and responsibilities established by DOE/FE Order Nos. 3252, 3868 and 4010, in each case, as amended, remain in effect.

Issued in Washington, D.C., on November 1, 2023.

**BRADFORD**  
**CRABTREE**

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Bradford Crabtree  
Assistant Secretary  
Office of Fossil Energy and Carbon Management