Department of Energy
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Subject: Informational Questions for the Department of Energy's Environmental Assessment for NFE Altamira FLNG, S. de R.L. de C.V.'s (NFE Altamira) Application to Export LNG, Docket No. 22-110-LNG

The U.S. Department of Energy (DOE) is requesting additional clarification and supplemental information to support DOE's development of an Environmental Assessment of the proposed project in the referenced application to export LNG.

DOE will post this communication and your written responses to the questions below (upon receipt) in the DOE FECM docket. The information provided will be used by DOE to assist in developing the Environmental Assessment.

Please provide written responses by email to timothy.skone@hq.doe.gov at your earliest convenience. DOE would like to receive the information within the next two weeks from receipt of this request.

Clarification and Supplemental Questions

1. Is there an expectation of which basin(s) natural gas for the NFE Altamira liquefaction project (Project) is likely to be sourced from?

2. Can you provide an average pipeline distance travelled from the anticipated source(s) of production of the natural gas to the Mexican liquefaction plant? If unknown, please estimate a pipeline range based on likely U.S. natural gas basins.

3. What is the liquefaction plant technology type?

4. Can you speak to any of the plant operations that may operate differently for this liquefaction operation that is set to be sited offshore versus onshore LNG plant operations?

5. For example, since both Fast LNG 1 (FLNG1) and Fast LNG 2 (FLNG2) are essentially "fixed" platforms once in place, can you speak to whether there is additional energy is spent to maintain the platform in position once in place?

6. Each FLNG will contain three offshore platforms - are they all self-elevating or fixed for all three platforms consisting of a FLNG Unit?

7. What are the compression energy requirements for transporting the natural gas from the United States Gulf of Mexico cross border connection point to the NFE Altamira FLNG units?

8. Appendix F Question: Please provide supporting information for how the values in Appendix F were derived?
    a. Questions #8 thru #18 below are specific clarifying questions of interest with respect to Appendix F.

A copy of the Appendix F table is provided below from the application (page F-2).

FLNG Altamira Emissions Profile (per FLNG Unit)	
Pollutant	**Emissions (tons per year)**
NOx	9.16
CO	18.28
VOCs	2.97
PM10/PM2.5	0.49
SO2	35.76
HAP	0.12
Pb	3.3E-05
H2SO4	2.77
CO2	92,222
CH4	27.68
N2O	0.01
GHGs (as CO2e)	92,918
H2S	0.194

9. Appendix F Question: Emissions are reported per FLNG Unit per year. Are these based on 100% planned operating capacity?
    a. LNG Facility Size Statements from Application (for reference only – not questions):
        i. Each FLNG will receive ~79 Bcf/y of natural gas.
        ii. 6.5 Bcf/y will be consumed as (a) fuel in the liquefaction process and (b) process gas loss during the pre-treatment process.
        iii. Total productive capacity of ~2.1 MTPA of LNG per FLNG; equivalent to 72.5 Bcf of natural gas, HHV @ 100% operating capacity.

10. Appendix F Question: Is the emissions profile the same for the FLNG1 as FLNG2?
    a. Comment: Noting different platform technology (fixed versus self-elevating (jack-up rig)

11. Appendix F Question: How is the floating storage unit accounted for in Appendix F?

12. Appendix F Question: How will boil off gas emissions from the floating LNG storage tanker be managed?

13. Appendix F Question: What is the boil-off rate based on residence time?

14. Appendix F Question: What IPCC Global Warming Potential values are used in deriving and reporting in CO_2 equivalents (CO_2e)?

15. Appendix F Question: What emissions sources are included, what is excluded?

16. Appendix F Question: Can you provide a contribution analysis for the 92,222 tons/year of CO_2 estimated in Appendix F?

17. Appendix F Question: Can you provide a contribution analysis for the 27.68 tons per year of methane (CH_4) emissions reported?

18. Appendix F Question: Are the emissions in Appendix F representative of only LNG or LNG plus other products (NGL/LPG)?

19. Appendix F Question: Follow-on to Question #17, if the emissions are allocated to multiple products – how was the allocation performed?