



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

December 5, 2022

REPLY TO THE ATTENTION OF:
Mail Code RM-19J

E-FILED VIA FERC ONLINE

Kimberly D. Bose
Federal Energy Regulatory Commission,
888 First Street NE, Room 1A
Washington, District of Columbia 20426

RE: EPA comments: Draft Environmental Impact Statement for the proposed Northern Lights 2023 Expansion Project - Freeborn, Scott, Sherburne, Stearns, and Washington Counties, Minnesota, and Monroe County, Wisconsin - Docket No. CP22-138-000

Dear Ms. Bose:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) prepared for the proposed Northern Lights 2023 Expansion Project (Project) in Minnesota and Wisconsin. The Federal Energy Regulatory Commission (FERC) is the lead agency under the National Environmental Policy Act (NEPA) and the Northern Natural Gas Company (Northern) is the project proponent. This letter provides EPA's comments on the DEIS pursuant to NEPA, the Council on Environmental Quality's NEPA Implementing Regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

Northern proposes to construct six new pipeline segments (four pipeline extensions and two pipeline loops) in Freeborn, Washington, Scott, Sherburne, and Stearns Counties, Minnesota and Monroe County, Wisconsin, totaling 9.8 miles of new pipeline. The pipelines would range in size from 4 to 36 inches in diameter. Northern also proposes construction of four new valve settings, modifications at six existing above ground facilities, and abandonment and removal of two existing valve settings. The DEIS states that the project's purpose is to provide incremental winter firm service of 44,222 dekatherms per day (Dth/d) to Northern's residential, commercial, and industrial customer market and 6,667 Dth/d of additional firm service that will allow a shipper enhanced reliability and flexibility in natural gas transportation capacity for electric generation.

EPA previously provided scoping comments to FERC for this project on June 14, 2022. The enclosed detailed comments reiterate and build on EPA's recommendations to fully analyze, disclose, and commit to protective measures related to (1) climate change and greenhouse gas (GHG) emissions; (2) noise and vibration impacts; and (3) impacts to communities with environmental justice (EJ) concerns. EPA is concerned by the potential for disproportionate

impacts and strongly encourages community engagement and measures to minimize or mitigate such impacts.

We look forward to working with you as this project advances and to reviewing the Final Environmental Impact Statement (FEIS) when it is prepared for this project. If you have any questions or comments regarding the contents of this letter or would like to discuss our comments in more detail, please contact the lead NEPA reviewer, Liz Pelloso, at 312-886-7425 or via email at pelloso.elizabeth@epa.gov.

Sincerely,

**KATHY
TRIANAFILL
OU**

Digitally signed by
KATHY TRIANAFILLOU
Date: 2022.12.05
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Kathy Triantafillou
Acting NEPA Section Supervisor
Tribal and Multimedia Programs Office
Office of the Regional Administrator

Enclosure:
EPA's Detailed DEIS Comments

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EPA Detailed Technical Comments and Recommendations
Draft EIS - Northern Lights 2023 Expansion Project (MN & WI)
December 5, 2022

1. CLIMATE CHANGE

Executive Order 14008: Tackling the Climate Crisis at Home and Abroad states, “*The United States and the world face a profound climate crisis. We have a narrow moment to pursue action...to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents.*”

In the current CEQ Guidance for Consideration of Greenhouse Gas (GHG) Emissions and the Effects of Climate Change in NEPA Reviews (2016)¹, CEQ declares that agencies "should consider the potential effects of a proposed action on climate change as indicated by assessing GHG emissions"... and "recommends that agencies quantify a proposed agency action's projected direct and indirect GHG emissions, taking into account available data and GHG quantification tools that are suitable for the proposed agency action."

Estimating both upstream and downstream emissions provides useful information to the public and decisionmakers as to the scale of the Project's indirect impacts and the long-term public interests at stake. It is important for the FEIS to fully quantify and adequately disclose the impacts of the GHG emissions from the proposed Project and discuss the implications of long-term carbon lock-in in light of science-based policies established to avoid the worsening impacts of climate change.

Consistent with CEQ's position expressed in the October 7, 2021, notice of proposed NEPA rulemaking², EPA emphasizes the importance of estimating potential upstream emissions associated with the Project. In this Project, there are three categories of emissions: (1) the upstream emissions associated with obtaining the natural gas and any potential leaks during transport; (2) the direct emissions associated with Project operation and construction; and (3) the downstream emissions from any potential leaks after gas leaves the Project area and the final combustion of natural gas; and (3). The DEIS does not estimate or monetize the impacts of upstream emissions.

Using data from EPA's GHG inventory³, it is possible to compute a rough estimate of the potential upstream emissions from this project. Using the project capacity of 50,889 Dth per day, we estimate annual upstream emissions as follows: 96,035.2 metric tonnes of CO₂, 2,268 metric tonnes of CH₄, and 0.2 metric tonnes of N₂O. Applying the social cost of GHGs

¹ https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf

² <https://www.regulations.gov/document/CEQ-2021-0002-0002>

³ EPA's Inventory of U.S. Greenhouse Gas Emissions and Sinks is available at:

<https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

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(SC-GHG)⁴ to these figures yields monetized impacts⁵ of \$45.2 million (5%), \$134.5 million (3%), \$191.8 million (2.5%), and \$385.7 million (95th percentile). Although these figures are approximations derived from national averages (meaning they may need adjustment depending on regional or local factors), they represent large undisclosed impacts of the project that were omitted by FERC in the DEIS.

We acknowledge that the DEIS did provide speciated GHG emissions for operation and construction activities. However, to confirm the estimates of the social cost of GHG (SC-GHG) from operation, construction and downstream emissions (provided in Section 4.9 of the DEIS), FERC should also provide the speciated GHG emissions of downstream emissions. Because the DEIS provided downstream emission estimates for Minnesota and Wisconsin in CO₂e⁶, and not by individual GHG, EPA is unable to replicate or confirm FERC's SC-GHG calculations. Additionally, page 4-101 of the DEIS states "The Commission has not determined which, if any, modifications are needed to render the SCC tool useful for project-level analyses." We remind FERC that there is existing CEQ guidance from 2016 on using the SC-GHG in NEPA analysis at the project level.⁷

While we commend FERC for comparing the Project's emissions to state GHG reduction goals, FERC notes that Minnesota is not projected to meet its GHG reduction targets and that the Project is expected to represent approximately 3% of the projected 2050 goal levels (with even higher impacts after upstream emissions are included). The implications of this notable increase in emissions due to the Project's implementation, and the ramifications of making it more difficult to meet state emissions goals, was not discussed in the DEIS.

Recommendations for the forthcoming FEIS:

Emissions & SC-GHG Disclosure and Analysis

- Quantify upstream emission estimates. Omitting upstream emissions results in an underestimation of likely environmental effects. Though the originating hydrocarbon resource may not be known, we recommend the FEIS include a description of regionally known accumulations.
- Provide the speciated GHG emissions of downstream emissions by individual gas. This will allow for EPA to calculate and confirm FERC's estimates of the Project's SC-GHG.
- Quantify estimates of all direct and indirect GHG emissions from the proposed project over its anticipated lifetime for all alternatives, including the No Action

⁴ SC-GHG collectively refers to the SC-CO₂ and other GHGs (including, for example, the social cost of methane (SC-CH₄) and social cost of nitrous oxide (SC-N₂O)). The SC-GHG quantifies the net harm to society of adding one ton of emissions of each of these GHGs in a year. SC-GHGs provide a range of dollar estimates that can be used to incorporate the social benefits of reducing emissions into cost-benefit analyses.

⁵ The percentage and percentile numbers here reference discount rates of 5%, 3%, and 2.5%. The fourth value corresponds to the 95th percentile of the frequency distribution of SCC estimates based on a 3% discount rate. Given the long time horizons analyzed, SC-GHG estimates are highly sensitive to the discount rate.

⁶ CO₂e, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO₂ that would create the same amount of warming. That way, a carbon footprint consisting of multiple different greenhouse gases can be expressed as a single number.

⁷ https://ceq.doe.gov/docs/ceq-regulations-and-guidance/nepa_final_ghg_guidance.pdf - see footnote 86.

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Alternative, broken out by GHG type. In addition to the potential downstream GHG emissions, potential upstream emissions should be included in calculations. This should include reasonably foreseeable emissions from the production, processing, transportation, and combustion of natural gas.⁸

- Avoid expressing the overall project-level GHG emissions as a percentage of the state or national GHG emissions. In the DEIS, FERC compares the size of the project to national and state-level total emissions. This approach diminishes the significance of the climate damages caused by project-scale GHG emissions and is misleading given the cumulative nature of the climate crisis; the U.S. must reduce GHG emissions from a multitude of sources, each making relatively small individual contributions to overall GHG emissions, in order to meet national climate targets.

Consistency with Climate Policy

- Provide an analysis of GHG emissions in the context of state GHG reduction targets and policies. This includes Minnesota's 2050 goals and Wisconsin Governor Evers' order that Wisconsin achieve a goal of ensuring all electricity consumed within the State of Wisconsin is 100 percent carbon-free by 2050. A revised analysis should inform and improve FERC's consideration of mitigation measures.
- Include a detailed discussion of the project's GHG emissions in the context of national and international GHG emissions reduction goals, including the U.S. 2030 Paris GHG reduction target and 2050 net-zero policy. This is a reiteration of our previous scoping recommendation from June 14, 2022.
- Discuss how the Inflation Reduction Act (IRA) may impact energy consumption patterns and GHG emissions. The IRA is expected to reduce dependence on fossil fuels while increasing availability for renewable energy sources. The Department of Energy has estimated the impacts of the IRA on clean energy and greenhouse gas emissions.⁹ That report, and its appendix, contain several resources on future energy consumption patterns and forecasts.¹⁰
- Include a more complete discussion of the extent to which the estimated GHG emissions from the proposed project and alternatives may be inconsistent with the need to take actions necessary to achieve science-based GHG reduction targets.¹¹ EPA acknowledges that the DEIS did include some mention of national GHG emission reduction goals, including reaching net zero GHG emissions by 2050. However, in addition to the IRA, there are proposed EPA climate change regulatory

⁸ This is supported by CEQ's preamble to its notice of proposed rulemaking relating to NEPA Implementing Regulations Revisions, which states: "[E]ven where an agency does not exercise regulatory authority over all aspects of a project, it may be appropriate to consider and compare the air pollution and greenhouse gas emission effects that the proposal and the reasonable alternatives would have on the environment, even if the agency does not have control over all of the emissions that the alternatives would produce. The consideration of such effects can provide important information on the selection of a preferred alternative; for example, an agency decision maker might select the no action alternative, as opposed to a fossil fuel leasing alternative, on the basis that it best aligns with the agency's statutory authorities and policies with respect to greenhouse gas emission mitigation." 86 FR 55757, 55763 (2021).

⁹ https://www.energy.gov/sites/default/files/2022-08/8.18%20InflationReductionAct_Factsheet_Final.pdf

¹⁰ Appendix and resources can be found at: <https://www.energy.gov/policy/methodological-appendix>

¹¹ See, e.g., Executive Order 14008; U.S. Nationally Determined Contribution to the Paris Agreement (April 20, 2021).

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actions and initiatives that address greenhouse emissions from transportation, oil and gas, and power sectors.

- Discuss carbon lock-in and stranded assets concerns and challenges. As the U.S. transitions away from fossil fuels to low-carbon energy sources, reserves will be left in the ground and fossil fuel companies could be left with stranded assets and value losses in the form of untapped output, idle oil rigs and pipelines.

Resilience and Adaptation

- Describe changing climate conditions (i.e., temperatures and frequency and severity of storm events) and assess how such changes could impact the proposed project and the environmental impacts of the proposed project and alternatives. This would include the risks of pipeline exposure and damage, potentially increasing accidental releases, as well as other project impacts that could be affected by climate change.
- Request that Northern incorporate robust climate resilience and adaptation considerations into (1) project design and engineering; (2) construction oversight; (3) emergency response planning; (4) commitments for protective measures related to stormwater and erosion; and (5) routine monitoring during operations. The FEIS should describe how Northern has addressed such considerations and provide a rationale for any reasonable alternatives to enhance resilience that were not adopted or discussed in detail.
- Discuss how climate change could worsen long term impacts/risks from the Project to communities with EJ concerns and also to Tribes, if applicable. For any such impacts, consider mitigation and adaptation measures.

GHG Reductions and Mitigation

- Identify practices Northern could take to reduce and mitigate GHG emissions; include commitments from Northern in the FEIS and as conditions of FERC's approval, if applicable. EPA has compiled information on technologies and practices to help reduce methane emissions at <https://www.epa.gov/natural-gas-star-program/recommended-technologies-reduce-methane-emissions>.

2. NOISE AND VIBRATION

Northern proposes to use the Horizontal Directional Drilling (HDD) construction method at 10 locations during Project construction. Northern anticipates that the majority of typical Project construction, including HDD work, would occur during daylight hours, generally between the hours of 7am to 7pm, Monday through Saturday. However, 24-hour drilling operations are proposed at 6 of the 10 HDD locations to increase the likelihood of HDD success. Nighttime HDD construction (between 10pm and 7am) would be subject FERC requirements to limit noise at nearby noise sensitive areas (NSAs) to 55 dBA¹² or lower. According to Northern's analysis, expected noise levels associated with HDD construction

¹² EPA has indicated that an L_{dn} of 55 dBA protects the public from indoor and outdoor activity interference. FERC has adopted this criterion and uses it to evaluate potential Project-related noise impacts at NSAs.

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may exceed the 55 dBA L_{dn} threshold¹³ (even with mitigation) at the NSAs in range of HDD locations that will utilize 24-hour construction.

Health effects are associated with noise. “Problems related to noise include stress related illnesses, high blood pressure, speech interference, hearing loss, sleep disruption, and lost productivity...[R]esearch has shown that exposure to constant or high levels of noise can cause countless adverse health effects.”¹⁴

Recommendations for the forthcoming FEIS:

- EPA supports FERC’s DEIS recommendation that Northern submit a noise mitigation plan and agree to implement noise mitigation measures prior to the start of construction at any HDD location. The noise mitigation plan should (1) describe industry best practices for noise reduction and mitigation and (2) commit to reducing the projected noise level attributable to the proposed drilling operations to levels not to exceed an L_{dn} of 55 dBA at any NSA.
- Identify any locations where engineering controls (including installation of noise barriers) are not projected to meet an overnight L_{dn} of 55 dBA and describe any additional mitigation measures to be required by FERC to reduce impacts on NSAs after implementation of engineering controls.

3. ENVIRONMENTAL JUSTICE (EJ) AND TRIBES

Outreach and meaningful engagement are underlying pillars of environmental justice. EPA appreciates FERC’s efforts, as documented in the DEIS, to notify and engage with Tribes with current and ancestral ties to the project area.

As described in the Noise and Vibration Comments section, noise impacts associated with HDD construction will affect several NSAs. Specifically, the DEIS states that approximately 1.5 miles of the Project’s proposed Princeton Extension would cross one block group defined as an EJ low-income population. Specifically, “HDD PRB P4-7¹⁵ along the Princeton Extension would be fully within an identified low-income community, and the nearest residence is about 176 feet north of the HDD entry location. Additionally, the HDD exit point for PRB P4-6 is also within the same environmental justice census block with the closest residence about 256 feet northwest of the HDD exit location.” (p. ES-8).

The DEIS states that EJ impacts associated with the pipeline, aboveground facility modifications, and HDDs along the Princeton Extension would be disproportionately high and adverse as they would be predominately borne by communities with EJ concerns.

¹³ Two measures that relate the time-varying quality of environmental noise to its known effect on people are the 24-hour equivalent sound level (L_{eq}) and L_{dn} . The L_{eq} is an A-weighted sound level containing the same energy as the instantaneous sound levels measured over a specific time period. Noise levels are perceived differently, depending on length of exposure and time of day. The L_{dn} takes into account the duration and time the noise is encountered. Specifically, the L_{dn} is the L_{eq} plus a 10 dBA penalty added to account for people’s greater sensitivity to sound levels during late evening and early morning hours (between the hours of 10pm and 7am).

¹⁴ <https://www.epa.gov/clean-air-act-overview/clean-air-act-title-iv-noise-pollution#:~:text=Health%20Effects,sleep%20disruption%2C%20and%20lost%20productivity>

¹⁵ This is one of the 6 HDD locations proposed for use of 24-hour construction.

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However, FERC goes on to state that with mitigation, project impacts associated with construction noise would be temporary and less than significant.

Recommendations for the forthcoming FEIS:

- Describe past activities and future plans Northern will undertake to meaningfully engage minority populations, low-income populations, and/or Tribes during the environmental review and planning phase and during construction and operations.
- Compare project impacts on identified low-income populations with an appropriate reference community to determine whether there may be disproportionate impacts. Consider operations as well as air quality and noise impacts due to construction. Clarify FERC's analysis and conclusion regarding whether the Proposed Project may have disproportionately high and adverse impacts on low income or minority communities, as specified in CEQ's Environmental Justice Guidance.¹⁶ Specifically, it's unclear how impacts would not be significant since nighttime noise is expected to exceed the 55 dBA L_{dn} threshold (even with mitigation) at the low-income NSAs in range of HDD locations that will utilize 24-hour construction.
- Evaluate the specific impacts of the proposed construction noise on sensitive receptors (e.g., children, people with asthma, etc.) within the identified communities with EJ concerns.
- Consider any disproportionate non-project-related pollution exposures that communities of concern may already be experiencing, as well as any disproportionate non-pollution stressors that may make the communities susceptible to pollution, such as health conditions, other social determinants of health, and disproportionate vulnerability related to climate change.
- In line with the above comments on noise impacts, identify measures to (1) minimize adverse community impacts; and (2) avoid disproportionate impacts to communities with EJ concerns.
- Consider cumulative environmental impacts to minority populations, low-income populations, Tribes, and indigenous peoples in the project areas within the environmental justice analysis.
- Establish material hauling routes away from places where children live, learn, and play, to the extent feasible. Consider homes, schools, daycares, and playgrounds. In addition to air quality benefits, careful routing may protect children from vehicle-pedestrian accidents.

¹⁶ CEQ's Environmental Justice Guidance Under the National Environmental Policy Act. See Section III, Part C-4. https://www.epa.gov/sites/default/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf?VersionId=78iNGtdwSTz5E2x.H0aHq.E96_Tphbgd

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