August 23, 2022

Christopher A. McLean
Acting Administrator
Rural Utilities Service
1400 Independence Avenue, SW,
Washington D.C., 20250

VIA EMAIL

Peter Steinour
Environmental Protection Specialist
USDA Rural Development
Rural Utilities Service
STOP 1548, Rm. 4121-S
1400 Independence Ave., S.W.
Washington, DC 20250-1548
peter.steinour@usda.gov

RE: ***MCEA, Sierra Club, Clean Wisconsin, and Honor the Earth Comments on Supplemental Environmental Assessment***
Dairyland Power Cooperative's Proposed Nemadji Trail Energy Center

Dear Mr. McLean and Mr. Steinour,

Minnesota Center for Environmental Advocacy ("MCEA"), Sierra Club, Clean Wisconsin, and Honor the Earth submit these comments on the Supplemental Environmental Assessment ("Supplemental EA") for the proposed Nemadji Trail Energy Center ("NTEC") fossil fuel gas plant. As detailed in the Supplemental EA and in the comments below, NTEC has the potential to directly emit up to 2.7 million tons of carbon dioxide equivalent ("CO_2e") each year, or over 109 million tons of CO_2e over a forty-year operating lifetime. Because of this enormous amount of emissions, we ask that the Rural Utilities Service ("RUS") deny the loan sought by Dairyland Power. In the alternative, we ask that RUS prepare an Environmental Impact Statement to adequately analyze the environmental and public health impacts of NTEC and consider appropriate alternatives to building it.

President Biden has called this "the decisive decade" for tackling climate change.[1] His administration has ordered all agencies to "immediately commence work to confront the climate

[1] Matt Magrath, *Biden: This Will Be 'Decisive Decade' for Tackling Climate Change*, BBC (Apr. 22, 2021), https://www.bbc.com/news/science-environment-56837927.

crisis."[2] As a federal agency, the Rural Utilities Service is tasked with commencing that work. Furthermore, RUS's regulations require "international cooperation in anticipating and preventing a decline in the quality of humankind's world environment in accordance with NEPA."[3] Studies have given us a roadmap for confronting the climate crisis with a straightforward takeaway: don't build new fossil fuel infrastructure.[4] Yet, Dairyland has approached the RUS and asked for a federal loan to build a new fossil fuel gas plant that is expected to run from 2027[5] until 2067,[6] emitting potentially millions of tons of greenhouse gases each of those forty years. This context clearly weighs on whether RUS should approve a loan for the NTEC Project — a loan that is far out of step with the Biden Administration's goals. But, this context also weighs on the environmental review process and the "significance" of NTEC's impacts.

Context is a key concept in NEPA analysis. Impacts are not felt in a vacuum. Instead, the "significance" of an impact depends on the context in which the impact occurs. In this case, Dairyland is seeking to lock in millions of tons of greenhouse gas ("GHG") emissions for decades to come. NTEC's GHGs would be emitted into a world where we cannot afford to replace old fossil fuel generation with new fossil fuel generation. Rather, our power sector must lead the way in transitioning to net zero emissions.

The Supplemental EA fails to adequately grapple with the significant climate impacts of building and operating NTEC. It obscures NTEC's direct climate impact using an unorthodox methodology that claims credit for reducing emissions at competing power plants and that would portray virtually any new fossil fuel plant as having net negative emissions. The Supplemental EA also fails to provide any frame of reference within which to judge NTEC's emissions, neither comparing them to quantified, science-based greenhouse gas emission reduction policies nor quantifying the emissions' impact using the federally-established Social Cost of Carbon. And despite Dairyland being instructed by RUS to quantify the project's indirect upstream emissions, the Supplemental EA fails to do so. It also fails to consider the short-term impact of methane emissions or to acknowledge how the project's climate impacts will disproportionately harm environmental justice communities.

Non-climate impacts are also overlooked in the Supplemental EA and the original EA, including NTEC's impact on human health and on wetlands. And neither EA considers the impact of cumulative emissions on air quality and health.

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[2] Exec. Order 13,990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 Fed. Reg. 7,037 (Jan. 20, 2021).
[3] 7 C.F.R. § 1970.4(f).
[4] See discussion of pathway studies *infra* Part I.C.4.
[5] RUS, *Suppl. Env't Assessment for the Nemadji Trail Energy Ctr. Project* at 1-1 (June 2022) (hereinafter "Supplemental EA").
[6] The Supplemental EA says NTEC would run for "at least 30 years," Supplemental EA at 2-1. However, Minnesota Power—the partner utility that would build and run NTEC—has stated in regulatory filings that the plant will have a 40-year economic useful life. *See* Minnesota Power, *In the Matter of Minnesota Power's Petition for Approval of the EnergyForward Resource Package,* Petition for Approval, Docket No. E015/M/AI-17-568, Appendix H: Unit Contingent Capacity Dedication Agreement Between South Shore and Minnesota Power, at 4 (July 28, 2017).

Dairyland could economically and feasibly meet its needs using carbon-free alternatives, like renewable energy and energy storage, instead of NTEC. However, the Supplemental EA fails to provide any analysis of these alternatives to NTEC, despite it being required to consider reasonable alternatives to this major new fossil fuel plant.[7] It similarly fails to consider requiring carbon capture as a condition of securing the loan.

MCEA, Sierra Club, Clean Wisconsin, and Honor the Earth request that the RUS require an environmental impact statement ("EIS") where RUS can explore renewable alternatives to the project and properly analyze NTEC's environmental impacts, including climate impacts, health and air quality impacts, and impacts to wetlands. Ultimately, our organizations urge RUS to reject Dairyland's forthcoming loan application. However, at a minimum, the RUS must fully comply with NEPA by requiring an EIS.

I. Background

A. Procedural History.

Dairyland seeks to finance and own a half-interest in a combined cycle natural gas-fired powerplant with an in-service date in 2027. In 2020, Dairyland asked the federal government to loan it money for Dairyland's portion of the proposed gas plant through an RUS loan. RUS and Dairyland completed an environmental assessment ("EA") on October 30, 2020. Construction and operation of a major new fossil fuel power plant like NTEC would have serious and known environmental consequences, especially on the climate. Yet, the climate impacts were not named or discussed in the EA. Despite this omission, on May 2, 2021, the RUS made a finding of no significant impact ("FONSI") for NTEC.

On June 23, 2021, MCEA, Sierra Club, Clean Wisconsin, and Honor the Earth petitioned RUS for a supplemental environmental assessment ("Supplemental EA") to address the climate impacts of the proposed NTEC. Petitioners specifically cited six studies related to climate change and upstream methane emissions.[8] Petitioners also cited Executive Order 13,990 which requires agencies to evaluate greenhouse gas emissions and climate impacts in NEPA review and Executive Order 14,008 which pledges to end all federal subsidies of fossil fuels and discourages new fossil fuel infrastructure. Red Cliff Band of Lake Superior Chippewa Indians and Fond du Lac Reservation Resource Management also submitted letters to RUS requesting a Supplemental EA.

In response, RUS agreed that a Supplemental EA was required and instructed Dairyland to address the impacts discussed in the petition. More specifically, RUS instructed Dairyland to:

- consider new relevant information since the release of the EA, including the six studies cited by petitioners;
- provide an analysis that quantifies the projected greenhouse gas emissions of the NTEC project, including an analysis of potential indirect upstream impacts;

[7] 40 C.F.R. §§ 1501.5(c)(2), 1508.1(z).

[8] Letter from Stephanie Fitzgerald, Staff Attorney, Minn. Ctr. for Env't Advoc., to Peter Steinour, Env't Prot. Specialist, Rural Util. Serv. at 4 (July 23, 2021). The six referenced studies, along with other studies and documents cited in these comments, are included in Appendix 3.

- and consider President Biden's Executive Order 13,990 and address the need for the project in light of the ultimate transition from fossil fuels.

In June 2022, RUS published this Supplemental EA.

B. Legal Landscape.

NEPA was enacted to create harmony between humanity and the surrounding environment.[9] NEPA's "sweeping commitment" to prevent environmental destruction is based on two key concepts: agencies must consider environmental impacts before acting, and agencies must inform the public about the environmental consequences of the action.[10] "By so focusing agency attention, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct."[11]

NEPA requires that an EA take a "hard look" at the environmental impacts of the proposed project.[12] Those impacts include direct impacts, indirect impacts, and cumulative impacts of the action. Furthermore, an adequate EA must explore reasonable alternatives.[13] An agency must prepare an EIS if the EA raises "substantial questions" about whether the proposed agency action will "significantly affect the quality of the human environment."[14]

In recent years, NEPA has undergone significant regulation changes. In 2020, the Trump administration made extensive changes to NEPA's implementing regulations. One of the most notable changes to the regulations was the change to the definition of "effects" to eliminate the reference to direct, indirect, and cumulative effects. However, as of April 2022, the Biden administration has restored the original definition of effects to include direct, indirect, and cumulative effects.[15] When changing back the rule, the Council on Environmental Quality ("CEQ") pointed out that the analysis of direct, indirect, and cumulative impacts are particularly important for analysis of climate change impacts.[16]

Similarly, the guidance surrounding climate change and NEPA implementation has been in flux, but the relevant guidance for this environmental assessment is the 2016 greenhouse gas emissions and climate change guidance. In 2016, the Obama administration CEQ released a NEPA climate and GHG guidance document: "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National

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[9] 42 U.S.C. § 4321.
[10] *Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 371 (1989).
[11] *Id.*
[12] *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 53 (D.D.C. 2019) (applying the same standard for EIS and EA).
[13] *N. Idaho Cmty. Action Network v. U.S. Dep't of Transp.,* 545 F.3d 1147, 1153 (9th Cir. 2008).
[14] *Cascade Forest Conservancy v. U. S. Forest Serv.,* No. 3:21-cv-5202-RJB, 2021 WL 6062629, at *14 (W.D. Wash. Dec. 22, 2021) (internal citation omitted).
[15] 87 Fed. Reg. 23453 (CEQ, Apr. 20, 2022).
[16] 87 Fed. Reg. 23463 (CEQ, Apr. 20, 2022) (noting this definition will "help ensure the proper scope of analysis that NEPA requires, including analysis of effects on climate change, communities with environmental justice concerns, and wildlife").)

Environmental Policy Act Reviews" ("2016 GHG Guidance").[17] The Trump administration replaced that guidance with new draft guidance. However, in February 2021, CEQ rescinded the 2019 Draft Guidance, and indicated that new guidance on GHG emissions would be forthcoming in a separate notice.[18]

The rescission noted that "[f]ederal courts consistently have held that NEPA requires agencies to disclose and consider climate impacts in their reviews"[19] and advised that, "[i]n the interim, agencies should consider all available tools and resources in assessing GHG emissions and climate change effects of their proposed actions, including, as appropriate and relevant, the 2016 GHG Guidance."[20] The reinstated 2016 GHG Guidance directs agencies to "quantify projected direct and indirect GHG emissions, taking into account available data and GHG quantification tools that are suitable for the proposed agency action."[21]

In addition to CEQ's NEPA regulations and guidance, RUS regulations shed light on how the agency must implement NEPA. The RUS "is responsible for all environmental decisions and findings related to its actions."[22] The RUS is required to encourage applicants to design environmentally responsible proposals.[23] Of particular importance to projects impacting climate change, the RUS must "recognize the worldwide and long-range character of environmental problems" and promote consistency with "international cooperation in anticipating and preventing a decline in the quality of humankind's world environment in accordance with NEPA."[24] The RUS must also ensure proposals minimize adverse environmental impacts and avoid disproportionate and adverse impacts to minority or low-income populations.[25]

The RUS rules require an EIS for proposals "for which an EA was initially prepared and that may result in significant impacts that cannot be mitigated."[26] They are also required for "new electric generating facilities, other than gas-fired prime movers (gas-fired turbines and gas engines) . . . with a rating greater than 50 average MW…."[27] And the RUS rules allow the RUS to "issue a FONSI or a revised FONSI only if the EA or supplemental EA supports the finding that the proposed action will not have a significant effect on the human environment."[28] If the EA does not support a FONSI, an EIS is required before the RUS can take action on the proposal.

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[17] Memorandum for Heads of Federal Departments and Agencies, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, CEQ (Aug. 1, 2016) [hereinafter "CEQ 2016 Guidance"], https://obamawhitehouse.archives.gov/sites/whitehouse.gov/files/documents/nepa_final_ghg_guidance.pdf.
[18] 86 Fed. Reg. 10,252 (CEQ Feb. 19, 2021).
[19] *Id.* (citing *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172 (9th Cir. 2008)).
[20] *Id*.
[21] 81 Fed. Reg. 51,866 (CEQ Aug. 5, 2016).
[22] 7 C.F.R. § 1970.5(a)(1).
[23] 7 C.F.R. § 1970.5(a)(1).
[24] 7 C.F.R. § 1970.4(f).
[25] 7 C.F.R. § 1970.4(a).
[26] 7 C.F.R. § 1970.151(b)(1).
[27] 7 C.F.R § 1970.151(b)(4).
[28] 7 C.F.R. § 1970.104.

C. Climate Landscape.

1. International climate agreements and the scientific basis.

In 2021 the US, along with the other nations of the world, signed the Glasgow Pact of 2021. This pact reaffirms the goal adopted under the Paris Agreement in 2015, of holding global warming to "well below 2 °C" above preindustrial levels and to "pursue efforts to limit the temperature increase to 1.5 °C."[29] (Humans have already caused global warming of around 1.1 degree C.[30]) The Glasgow Pact goes on to state that limiting global warming to 1.5 degrees C "requires rapid, deep and sustained reductions in global greenhouse gas emissions, including reducing global carbon dioxide by 45 percent by 2030 relative to the 2010 level and to net zero around mid-century, as well as deep reductions in other greenhouse gases."[31] Achieving these cuts "requires accelerated action in this critical decade."[32]

In June of this year, President Biden reaffirmed and expanded upon this commitment to limit warming to 1.5 degrees C, alongside the other members of the G7:

> "We will phase out new direct government support for international carbon-intensive fossil fuel energy as soon as possible, with limited exceptions consistent with an ambitious climate neutrality pathway, the Paris Agreement, 1.5°C goal and best available science…We will lead a technology-driven transition to Net Zero, noting the clear roadmap provided by the International Energy Agency and prioritising [sic] the most urgent and polluting sectors and activities."[33]

The enhanced urgency around limiting warming to 1.5 degrees C is solidly grounded in the science, including in a series of major reports produced by the Intergovernmental Panel on Climate Change (IPCC). When the world first agreed to pursue efforts to limit warming to 1.5 degrees C in the Paris Agreement of 2015, the IPCC was asked to issue a special report on the impacts of exceeding that limit. That special report, issued in 2018, found that while 1.5 degrees warming will poses many dangers, allowing warming to rise to 2 degrees warming poses far greater ones.

If warming hits 2 degrees the world faces more extreme heat, more heavy precipitation, more severe flooding, deeper droughts, higher sea level rise, more acidified oceans, more degraded ecosystems, and faster rates of extinctions on land and in the water.[34] For example, over 99% of the world's coral reefs are projected to be lost at 2 degrees C warming, whereas at 1.5 degrees C warming we might be able to limit the decline to 70% of coral reefs.[35] Allowing warming to exceed

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[29] *Glasgow Climate Pact: Advance Unedited Version*, United Nations Climate Change Conference, at para. 15 (Nov. 13, 2021) [hereinafter "Glasgow Pact"], https://unfccc.int/sites/default/files/resource/cop26_auv_2f_cover_decision.pdf.
[30] *Id.* at para. 3.
[31] Glasgow Pact at para. 17.
[32] *Id*. at para. 18.
[33] *Carbis Bay G7 Summit Communiqué*, The White House (June 13, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/13/carbis-bay-g7-summit-communique.
[34] *Summary for Policymakers*, Special Report: Global Warming of 1.5°C, IPCC, at 7-9 (2018) [hereinafter "IPCC 2018"], https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM_version_report_LR.pdf.
[35] IPCC 2018 at 8.

1.5 degrees also amplifies the impact on humans, including more heat-related deaths, the wider spread of vector-borne diseases, more food insecurity as crops and livestock are harmed, and a major increase in how many people face water stress.[36]

The IPCC special report found that having a reasonable chance of limiting warming to 1.5 degrees will require CO_2 emissions to drop by 45% (below 2010 levels) by 2030, reaching "net zero" by around 2050.[37] Even maintaining a reasonable chance to limit warming to the more dangerous 2 degrees C will require CO_2 emissions to drop by 25% by 2030 and reach net zero by around 2070.[38] According to the IPCC, "net zero carbon dioxide (CO_2) emissions are achieved when anthropogenic CO_2 emissions are balanced globally by anthropogenic CO_2 removals over a specified period."[39]

The IPCC's 6th Assessment of the science, a series of reports released by three working groups in 2021 and 2022, further identifies the harms climate change is doing right now and the grave dangers ahead, especially if we allow warming to surpass 1.5 degrees C.[40] The IPCC notes that by 2019, levels of CO_2 in the atmosphere were higher than at any time in at least the last two million years, and levels of methane and nitrous oxide, two other GHGs emitted by NTEC, were higher than at any time in at least 800,000 years.[41] And these reports confirm the need to reduce global CO_2 emissions by roughly half by 2030, and to reach net zero CO_2 emissions by midcentury if we are to limit warming to 1.5 degrees.[42]

2. Federal climate policies and emission reduction goals.

In response to the climate science and in compliance with nation's commitments under the Paris Agreement and Glasgow Pact, the Biden administration has adopted ambitious science-based greenhouse gas reduction goals. In April of 2021, the U.S. formally pledged to cut its economy-wide emissions of greenhouse gases by **50-52% below 2005 levels by 2030**.[43] This pledge constitutes the nation's official Nationally-Determined Contribution ("NDC"), submitted in accordance with the Paris Agreement under the U.N. Framework Convention on Climate Change

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[36] IPCC 2018 at 9.
[37] IPCC 2018 at 12.
[38] *Id.*
[39] IPCC 2018 at 24.
[40] *Summary for Policymakers*, Climate Change 2021: The Physical Science Basis, IPCC (2021), https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf; *Summary for Policymakers*, Climate Change 2022: Impacts, Adaptation and Vulnerability, IPCC (2022), https://report.ipcc.ch/ar6wg2/pdf/IPCC_AR6_WGII_SummaryForPolicymakers.pdf; *Summary for Policymakers*, Climate Change 2022: Mitigation of Climate Change, IPCC (2022), https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf.
[41] *Summary for Policymakers*, Climate Change 2021: The Physical Science Basis, IPCC at 8 (2021), https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf.
[42] *Summary for Policymakers*, Climate Change 2022: Mitigation of Climate Change, IPCC at 21, 27 (2022), https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf.
[43] *The United States Nationally Determined Contribution: Reducing Greenhouse Gases in the United States: A 2030 Emissions Target*, UNFCCC (2021) [hereinafter "US NDC"], https://unfccc.int/sites/default/files/NDC/2022-06/United%20States%20NDC%20April%2021%202021%20Final.pdf.

("Framework Convention").[44] The Framework Convention was ratified by the US Senate in 1992.[45] The nation's NDC reflects the greatly enhanced urgency around the climate crisis. As the President stated in Executive Order 14,008: "The scientific community has made clear that the scale and speed of necessary action is greater than previously believed. There is little time left to avoid setting the world on a dangerous, potentially catastrophic, climate trajectory."[46]

The US NDC 2030 goal is intended to put the nation on a path to achieve the longer-term US goal of "**net-zero emissions, economy-wide, by no later than 2050**." This 2050 goal has been expressed not only in the US submission under the Paris Agreement but in multiple executive orders and other documents. [47]

In addition to these economy-wide emission reduction goals, the Biden administration has established a policy goal of achieving **100 percent carbon-free electricity by 2035**.[48] The administration has stated that this steeper federal emission reduction target for the power sector is a key part of achieving the broader economy-wide reductions. For example, the report outlining pathways for achieving the 2050 goal states that achieving 100% clean electricity by 2035 is "a crucial foundation for net-zero emissions no later than 2050."[49] Working toward a completely decarbonized power sector is also part of the US strategy for achieving its NDC pledge of 50-52% reductions economy-wide by 2030.[50]

The Administration has adopted what it calls an "all-of-government" approach to achieving its climate goals. In Executive Order 14,008, "Tackling the Climate Crisis at Home and Abroad," the President establishes "the policy of my Administration to organize and deploy the full capacity of its agencies to combat the climate crisis to implement a Governmentwide approach that reduces

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[44] Under this treaty, the US committed itself to the objective of stabilizing greenhouse gas concentrations in the atmosphere "at a level that would prevent dangerous anthropogenic interference with the climate system." U.N. Framework Convention on Climate Change, UNFCCC, Article 2 (last visited Aug. 5, 2022), https://unfccc.int/resource/docs/convkp/conveng.pdf.

[45] Treaty Document 102-38, U.N. Framework Convention on Climate Change, Congress.gov (1992), https://www.congress.gov/treaty-document/102nd-congress/38.

[46] *Executive Order on Tackling the Climate Crisis at Home and Abroad*, The White House (Jan. 27, 2021), https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad.

[47] US NDC at 14, 22-23; *see also* Exec. Order 14,008, Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7619 (Feb. 1, 2021); Exec. Order 14,030, Climate-Related Financial Risk, 86 Fed. Reg. 27967 (May 25, 2021); Exec. Order 14,057, Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, 86 Fed. Reg. 70935 (Dec. 13, 2021); *The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050*, U.S. State Dep't and Exec. Office of the President (Nov. 2021), https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf.

[48] *Fact Sheet: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies*, The White House (Apr. 22, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies.

[49] *The Long-Term Strategy of the United States: Pathways to Net-Zero Greenhouse Gas Emissions by 2050*, U.S. State Dep't and Exec. Office of the President (Nov. 2021), https://www.whitehouse.gov/wp-content/uploads/2021/10/US-Long-Term-Strategy.pdf.

[50] US NDC at 3.

climate pollution in every sector of the economy…"[51] That order also requires that federal agencies "take steps to ensure that, to the extent consistent with application law, Federal funding is not directly subsidizing fossil fuels."[52]

The Administration has also stressed the need for federal agencies to assess the full costs of greenhouse gases when making decisions. Executive Order 13,990 states that "[i]t is essential that agencies capture the full costs of greenhouse gas emissions as accurately as possible, including by taking global damages into account," adding that "[a]n accurate social cost [of carbon, nitrous oxide, and methane emissions] is essential for agencies to accurately determine the social benefits of reducing greenhouse gas emissions when conducting cost-benefit analyses of regulatory and other actions."[53] In a subsequent executive order, the President required the establishment of processes to ensure that climate-related financial risk is integrated into "Federal financial management and financial reporting, especially as that risk relates to Federal lending programs."[54]

3. State climate policies and emission reduction goals.

A 2019 executive order by Governor Tony Evers states that "the State of Wisconsin has agreed to fulfill the carbon reduction goals of the 2015 Paris Climate Accord, [and] set a goal to ensure that all electricity consumed in Wisconsin is 100 percent carbon-free by 2050…"[55] This order also set up a Governor's Task Force on Climate Change to develop a state climate strategy.

The Governor's Task Force issued that strategy in 2020. It included a carbon-reduction goal for utilities that sought to "reduce net carbon emissions from the power sector by at least 60% below 2005 levels" by 2030.[56] The Report also reiterated the 2050 goal of reducing power sector emissions by 100%.[57]

Minnesota has recently released a draft Climate Action Framework that lists as a priority action establishing "a standard to achieve 100% carbon-free electricity and 55% renewable electricity by 2040."[58] Minnesota's climate goals are relevant to NTEC because Minnesota Power will build and operate the plant and take 20% of its energy output.[59] Minnesota also has a statutory goal set in 2007 to reduce statewide GHG emissions by 30% by 2025 and 80% by 2050 (below

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[51] Exec. Order 14,008, Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7619, 7622.
[52] 86 Fed. Reg. at 7625; Supplemental EA at 1-9. *See also,* Exec. Order 13,990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis, 86 Fed. Reg. 7037 (Jan. 25, 2021) (ordering all federal agencies "to immediately commence work to confront the climate crisis").
[53] Exec. Order 13,990, 86 Fed. Reg. 7037, 7040.
[54] Exec. Order 14,030, Climate-Related Financial Risk, 86 Fed. Reg. 27967, 27969 (May 25, 2021).
[55] Governor Tony Evers, State of Wisconsin, Executive Order #52, "Relating to the Creation of the Governor's Task Force on Climate Change," Oct. 17, 2019, available at https://evers.wi.gov/Documents/EO/EO052-ClimateChange.pdf.
[56] *Governor's Task Force on Climate Change Report*, State of Wis., at 40 (2020), https://climatechange.wi.gov/Documents/Final%20Report/GovernorsTaskForceonClimateChangeReport-LowRes.pdf.
[57] *Id.*
[58] *Minnesota's Climate Action Framework*, Draft, Our Minn. Climate at 45 (last visited Aug. 7, 2022), https://climate.state.mn.us/sites/climate-action/files/2022-01/Climate%20Action%20Framework%20Draft_2.pdf.
[59] Allete Announces Third Partner in Nemadji Trail Energy Center Project, Allete (Sept. 28, 2021), https://investor.allete.com/node/21306/pdf. Minnesota Power's affiliate, South Shore Energy LLC, will own 20 percent of NTEC. Both Minnesota Power and South Shore Energy LLC are subsidiaries of Allete, Inc.

2005 levels),[60] and it defines those emissions to include GHGs associated with energy generated outside Minnesota but consumed within it.[61]

Both Wisconsin and Minnesota are members of the U.S. Climate Alliance, a bipartisan coalition of governors working to "achieve the goals of the Paris Agreement and keep temperature increases below 1.5 degrees Celsius."[62] More specifically, members are committed to reducing collective net GHG emissions at least 26-28 percent by 2025 and 50-52 percent by 2030 (below 2005 levels) and to achieving net-zero emissions as soon as practicable, and no later than 2050.[63] These GHG reductions are consistent with the goals of the Paris and Glasgow agreements, and with the US NDC.

4. Emission reduction pathway studies.

Several national modeling studies have been conducted attempting to identify plausible pathways to achieving the emission reductions needed to limit warming to 1.5 °C. In its letter rescinding the FONSI for the NTEC project and requiring a Supplemental EA, the RUS told Dairyland Power that the Supplemental EA should consider "at least" three such studies released in 2021 – by the Maryland Center for Global Sustainability (N. Hultman, et al.), by Energy Innovation Policy and Technology LLC (R. Orvis), and by the International Energy Agency.[64] The Hultman, et al. and Orvis studies both conclude that new gas plants are incompatible with the pathways they identify for limiting warming to 1.5 degrees.

The Hultman, et al. study uses a leading modeling platform to chart a pathway to achieving the US NDC, cutting emissions economy-wide by 51% by 2030. It stresses the importance of largely eliminating coal-fired electricity without carbon capture and storage[65] by 2030, but it does not recommend replacing them with gas plants. On the contrary, the Hultman, et al. study states that "US climate ambition by 2030 hinges fundamentally on the ability to *rapidly shift to zero-emissions electricity generation*," which includes not just eliminating coal power but "making major progress in *reducing gas-fired electricity*."[66] The Hultman, et al. study therefore includes a

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[60] Minn. Stat. § 216H.02, subd. 1.
[61] Minn. Stat. § 216H.01, subd. 2.
[62] *Fact Sheet: Further. Faster. Together*, U.S. Climate Alliance at 1 (Apr. 19, 2022), https://static1.squarespace.com/static/5a4cfbfe18b27d4da21c9361/t/62a258211d5eab2536b9d7ba/1654806561848/USCA+2022+Fact+Sheet.pdf.
[63] *Id*., at 2.
[64] Letter from Christopher McLean, Acting Adm'r, Rural Utils. Serv., to Brent Ridge, President & CEO, Dairyland Power Coop. at 2 (Nov. 9, 2021); *see also* Nathan Hultman, et al., *Charting an Ambitious U.S. NDC of 51% Reductions by 2030*, Working Paper, Univ. Md. Center for Global Sustainability (Mar. 2021) [hereinafter "Hultman, et al., 2021"], https://cgs.umd.edu/sites/default/files/2021-03/Working%20Paper_ChartingNDC2030_Mar2021.pdf; Robbie Orvis, *A 1.5 Celsius Pathway to Climate Leadership for the United States*, Energy Innovation (Feb. 2021) [hereinafter "Orvis, 2021"], https://energyinnovation.org/wp-content/uploads/2021/02/A-1.5-C-Pathway-to-Climate-Leadership-for-The-United-States.pdf; *Net Zero by 2050: A Roadmap for the Global Energy Sector,* International Energy Agency (Oct. 2021), [hereinafter "IEA, 2021"], https://iea.blob.core.windows.net/assets/deebef5d-0c34-4539-9d0c-10b13d840027/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf.
[65] Hultman et al., 2021 at 2 (emphasis added).
[66] *Id.* (emphasis added).

policy that requires all new gas plants be built with 90% carbon capture and storage by 2025.[67] NTEC – a gas plant that would come online in 2027 and that would lack carbon capture and storage – could not be built under the pathway identified by Hultman, et al.

The Orvis study uses a different model, the US Energy Policy Simulator, to identify the policies needed to reduce emissions consistent with a 1.5 degree pathway, including by cutting US emissions in half by 2030 consistent with the US NDC. In addition to retiring coal plants, the Orvis analysis finds that "[c]utting electricity emissions in line with a 1.5 C target also requires *not building any new gas plants* that lack carbon capture. The United States already has a massive oversupply of gas plants, many of which are likely to become stranded assets, and no reason exists to build more plants."[68]

Other research also shows how incompatible new gas plants like NTEC are with achieving the nation's 2030 GHG emission goals. A modeling analysis published in 2021 by the Goldman School of Public Policy at the University of California Berkeley charts a pathway to achieving an 80% carbon-free US electric grid by 2030.[69] The study, known as the "2030 Report," notes that modeling of the US NDC goal of 50% economy-wide GHG reductions by 2030 converges with the need to reach at least 80% clean electricity by that year.[70] Using state-of-the-art capacity-expansion and production-cost models, the 2030 Report finds that the nation could achieve an 80% clean grid that is dependable *without coal plants or new natural gas plants*, even with significant new electricity demand from electrification of vehicles.[71] In the scenario charted by this study, all existing coal plants are retired by 2030 and no new fossil plants are built beyond those already under construction.[72] Moreover, it finds that this 80% carbon-free power grid could be achieved by 2030 without increasing the costs of generating and delivering electricity compared to today.[73]

A major global analysis by the International Energy Agency (IEA) similarly shows how incompatible NTEC is with global decarbonization efforts.[74] The IEA study – *Net Zero by 2050: A Roadmap for the Global Energy Sector* – was one of the studies Dairyland was instructed to consider by the RUS, and it is the roadmap President Biden was referring to in his G7 comments, above. The IEA roadmap charts a path where coal generation without carbon capture is phased out in all advanced nations by 2030.[75] Gas generation without carbon capture, like NTEC, begins to fall steeply in the mid-to-late 2020s and is virtually gone worldwide by 2040.[76] By 2035, advanced

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[67] *Id.* at 4; *see also,* Hultman et al., *Charting an Ambitious US NDC of 51% Reductions by 2030*, Working Paper, Technical App. at 4 (Mar. 2021), https://cgs.umd.edu/sites/default/files/2021-03/Charting%20NDC%202030_Technical%20Appendix.pdf.
[68] Orvis, 2021 at 8 (emphasis added).
[69] *2030 Report: Powering America's Clean Economy, A Supplemental Analysis to the 2035 Report*, Goldman Sch. Pub. Pol'y (Apr. 2021) [hereinafter "2030 Report"], https://energyinnovation.org/wp-content/uploads/2021/04/2030-Report-FINAL.pdf.
[70] *Id.*at 2.
[71] *Id, at 3, 13, 17.*
[72] *Id. at 22.*
[73] *Id. at 23.*
[74] IEA 2021.
[75] *Id.* at 116.
[76] *Id.* at 115-16, Figure 3.10.

nations achieve overall net zero emissions from electricity generation.[77] Clearly this is not a roadmap that includes NTEC.

II. RUS Must Prepare An EIS Because One Is Categorically Required Under RUS Rules

The RUS's rules require an EIS for certain categories of projects, including for: "[n]ew electric generating facilities, other than gas-fired prime movers (gas-fired turbines and gas engines) … with a rating greater than 50 average MW, and all new associated electric transmission facilities."[78] If NTEC were just a gas-fired turbine, it would fall under the exclusion for gas-fired prime movers, however NTEC also includes a heat recovery steam generator and a steam turbine generator.[79] These are not gas-fired prime movers but rather steam-driven prime movers, and their addition is what makes NTEC a plant that will run far more often than a peaker plant, and therefore with higher annual emissions. NTEC – a new electric generating facility more than ten times larger than the 50 megawatt ("MW") threshold – does not fit within this category's exclusion. An EIS is therefore required for NTEC under this categorical mandate.

III. RUS Must Prepare An EIS Because NTEC Will Significantly Impact The Climate

NEPA requires varying levels of review for projects depending on whether the action is likely to significantly affect the environment. In order to determine what level of NEPA review is required, CEQ regulations direct agencies to ask whether the proposed action "[i]s likely to have significant effects and is therefore appropriate for an environmental impact statement."[80] Similarly, the RUS NEPA regulations tell the agency to ask whether there is the potential for significant environmental impacts or whether there are "environmental conditions, scientific controversy, or other characteristics unique to a specific proposal" that would trigger a higher level of review.[81]

"Significance" is a key concept in NEPA. The CEQ regulations direct agencies to first consider the context the action takes place in, or the "affected environment."[82] Second, agencies must consider the intensity, or "degree of the effects of the action."[83] The degree of the effects includes: (1) short- and long- term effects, (2) beneficial and adverse effects, (3) effects on public health and safety, and (4) effects that would violate federal, state, Tribal, or local law protecting the environment.[84] When examining these effects, NEPA requires agencies to consider the direct, indirect, and cumulative impacts of the proposed action.[85]

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[77] *Id.* at 20.
[78] 40 CFR § 1970.151(b)(4).
[79] Supplemental EA at 1-1.
[80] 40 C.F.R. § 1501.3(a)(3).
[81] 7 C.F.R. § 1970.10.
[82] 40 C.F.R. § 1501.3(b).
[83] 40 C.F.R. § 1501.3(b).
[84] 40 C.F.R. § 1501.3(b)(2).
[85] 40 C.F.R. § 1508.1(g).

A. NTEC's GHG emissions are significant and require an EIS.

"Climate change is a fundamental environmental issue, and its effects fall squarely within NEPA's purview."[86] Under NEPA, agencies must examine the proposed project's impacts on climate change.[87] Because "the nature of the climate change challenge itself" is that each project will only have a relatively minute impact on global emissions, agencies are directed not to compare a project's emissions to total global emissions.[88] Rather, agencies must use "appropriate tools and methodologies for quantifying GHG emissions and comparing GHG quantities across alternative scenarios."[89]

Furthermore, the RUS's own NEPA regulations call on the agency to participate in the Biden administration's fight against climate change. The regulatory requirement that RUS lend support to international environmental initiatives[90] would certainly include the Paris Agreement and the Glasgow Pact, and the US commitment under those agreements to cut emissions in half by 2030. And, specifically related to GHG emissions, the RUS regulations require the agency to "use the NEPA process, to the maximum extent feasible, to identify and encourage opportunities to reduce greenhouse gas (GHG) emissions caused by proposed Federal actions that would otherwise result in the emission of substantial quantities of GHG."[91]

NTEC requires an EIS because it will have very high GHG emissions. NTEC will have the potential to directly emit up to 2,739,294 tons of GHGs each year.[92] While the Supplemental EA provides this annual number, it does not inform the public of NTEC's expected lifetime emissions. The plant is currently scheduled to go online in 2027.[93] While the Supplemental EA only says that NTEC will have "a term life of at least 30 years,"[94] regulatory filings by Dairyland's Minnesota partner establish that NTEC has an intended operating life of 40 years.[95] This amounts to potential new emissions of over 109 million tons CO_2e between 2027 to 2067,[96] during which time the US and the world will be struggling to slash GHG emissions to avoid catastrophic warming. (Moreover, as we discuss in Part III.E, if the Supplemental EA had estimated NTEC's upstream methane emissions, the plant's total estimated climate impact would be substantially larger.[97])

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[86] CEQ 2016 Guidance at 2.
[87] CEQ 2016 Guidance at 4.
[88] CEQ 2016 Guidance at 11.
[89] CEQ 2016 Guidance at 11.
[90] 7 C.F.R. § 1970.4(f).
[91] 7 C.F.R. § 1970.4(g).
[92] Supplemental EA at 3-21 (expressed as CO2-equivalent). This figure assumes constant operation rather than the average 76% capacity factor assumed in the Supplemental EA's modeling.
[93] Supplemental EA at 1-1.
[94] Supplemental EA at 2-1.
[95] NTEC has a 40-year economic useful life, according to Minnesota Power, the partner utility that would build and operate NTEC. *See* Minnesota Power, *In the Matter of Minnesota Power's Petition for Approval of the EnergyForward Resource Package,* Petition for Approval, Docket No. E015/M/AI-17-568, Appendix H: Unit Contingent Capacity Dedication Agreement Between South Shore and Minnesota Power at 4 (July 28, 2017).
[96] Telos Report at 3.
[97] PSE Report at 5.

By way of comparison, NTEC's potential direct annual emissions of GHGs are equivalent to the annual GHG emissions of over half a million passenger vehicles.[98] The EPA's database of major GHG sources shows that there are only five facilities in Wisconsin with 2020 emissions higher than NTEC's potential emissions, including two old coal plants scheduled to retire by 2025. If NTEC comes online in 2027, it will be the fourth largest source of GHGs in Wisconsin and the highest emitting new source built in the state for 16 years – since before the world understood the need to achieve dramatic emission reductions by 2030 and reach net zero by midcentury. NTEC's GHG emissions would only be exceeded in Wisconsin by two coal plants and one even larger gas plant. NTEC's potential GHG emissions are higher than the 2020 reported emissions of the entire power sector of South Dakota, a state to which some of NTEC's power will be sold.[99]

There can be no question that NTEC's direct GHG emissions are significant under NEPA and require an EIS. The Federal Energy Regulatory Commission (FERC) recently published a draft interim policy announcing that it would consider any project with GHG emissions of over 100,000 metric tons per year significant enough to conduct an EIS.[100] NTEC would have potential direct GHG emissions about 25 times greater than FERC's significance threshold.

The Supplemental EA nonetheless manages to come to the conclusion that NTEC will result in a "net decrease in GHG emissions."[101] This claim is based on its use of a novel and inappropriate methodology that credits NTEC for emission reductions at competing power plants. The Supplemental EA also fails to take a hard look at NTEC's climate impact by: failing to consider NTEC's emissions in the context of GHG reduction targets and schedules; failing to use available tools and methodologies to quantify NTEC's climate impact; failing to quantify upstream methane leakage; failing to address the short-term impacts of methane; and failing to consider how the project's climate impacts disproportionately harm environmental justice communities.

B. The Supplemental EA improperly employs a methodology that obscures NTEC's climate impact.

NEPA's fundamental goal is to ensure that the government and the public understand the environmental impact of proposed government actions, and it mandates a long-term and global perspective. If there was ever a time when government needed to understand the long-term environmental implications of its actions, it is now, as we combat the climate crisis and struggle to rapidly decarbonize the economy and especially the power sector.

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[98] Obtainable through the *Greenhouse Gas Equivalencies Calculator*, EPA (updated Mar. 2022), https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results.

[99] All facility emission figures reflect 2020 emissions data and can be obtained from EPA's "Facility Level Information on Greenhouse Gases Tool" ("FLIGHT"). *2020 Greenhouse Gas Emissions from Large Facilities*, EPA (data reported to EPA as of Aug. 7, 2021), https://ghgdata.epa.gov/ghgp/main.do.

[100] Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, 87 Fed. Reg. 14104, 14115 (FERC Mar. 11, 2022). FERC issued an order on March 24, 2022, turning this interim policy into a draft interim policy due to a US initiative to increase gas exports to Europe following the Russian invasion of Ukraine. Order on Draft Policy Statements, *Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews,* FERC Docket No. PL21-3-001 (Mar. 24, 2022). https://ferc.gov/media/c-1-032422.

[101] Supplemental EA at 3-25.

It follows that using taxpayer dollars to help build a huge new source of GHG emissions should, if done at all, only happen following the highest level of scrutiny under NEPA to determine the source's long-term impacts. And yet, the Supplemental EA relies on a novel type of analysis that we have not seen before and that would render NEPA useless when it comes to considering the GHGs of virtually any new power plant.

The Supplemental EA is inadequate because it relies on a flawed methodology to analyze the project's climate impacts. As set out below, the methodology: (i) would misleadingly portray any new gas plant as having negative carbon emissions; (ii) can be distinguished from the fuel substitution analyses used for fuel supply projects; (iii) can be distinguished from cases where a gas plant directly replaces a coal plant; (iv) compares NTEC to the most polluting plants on the grid rather than to reasonable alternatives; and (v) would be deeply flawed even if a substitution analysis were a valid way of assessing a power plant's direct emissions. As a result, RUS should order an EIS to fully evaluate the project's impacts.

1. Under the analytic approach used by the Supplemental EA, no new gas plant would ever register as having significant emissions and require a thorough evaluation in an EIS, because there will always be another generation source somewhere on the regional grid that is more polluting and more expensive to dispatch.

NTEC has the potential to emit 2.7 million tons of CO_2e every year of its intended working lifetime, or over 109 million tons of CO_2e over 40 years. As discussed above, NTEC would be one of the very largest GHG sources in Wisconsin and by the time it goes online the largest new source built in the state in 16 years. Yet the type of analysis relied on by the Supplemental EA yields the conclusion that NTEC will actually reduce system-wide emissions by an average of nearly one million tons per year during the period from 2025 to 2040. (The Supplemental EA's modeling analysis wrongly assumes NTEC will come online in 2025, even though its text acknowledges it will come online in 2027.)

The Supplemental EA reaches this extraordinary conclusion by claiming that NTEC will displace emissions from more polluting power plants using a novel approach to assessing a source's direct emissions. In support of these comments, we have commissioned an expert report from Telos Energy to analyze the Supplemental EA, and particularly its modeling methodology.[102] The Telos Report (attached as Appendix 1) explains that the approach used by the Supplemental EA would render insignificant the emissions of *any* new gas plant, as long as somewhere in the multi-state region there remains an existing power plant that is slightly more polluting and costs slightly more to run than the proposed plant.[103] The Supplemental EA's methodology thus clearly misrepresents the environmental impact of building a huge new fossil fuel power plant, suggesting

[102] Comments to the Suppl. Env't Assessment: Nemadji Trail Energy Center, Telos Energy (2022) [hereinafter "Telos Report"], attached as Appendix 1. Telos Energy is an analytics and engineering company specializing in renewable integration, including wind, solar, storage and transmission resources. Telos Energy's expertise includes energy market design and policy as well as electricity production cost modeling.
[103] Telos Report at 2.

it is harmless or even helpful when in fact we must rapidly phase out such plants to avoid catastrophic climate changes.

The model relied on by the Supplemental EA looks at the electric grid of the entire Midcontinent Independent System Operator (MISO) West region, which covers all or part of eight Midwestern states. MISO manages the regional electric grid, ensuring that enough power is generated at any moment to meet electric demand. It dispatches power first from the sources with the lowest generating cost, and then dispatches more expensive sources of power in order of cost, presuming they are available. (The system is more complex than this, but as described in the Supplemental EA, the modeling does not reflect those complexities.)

The Supplemental EA model thus lines up the sources of power in a "stack" based on their generation cost.[104] Because wind and solar power have no fuel costs, they are positioned lowest on the stack and dispatched first, followed by combined cycle gas plants like NTEC, followed in order by coal plants, gas peaker plants, and fuel oil peaker plants. Because NTEC is expected to have a lower production cost than coal, it would be dispatched before coal plants. NTEC would also be dispatched ahead of gas and fuel oil peaker plants, which are less efficient and thus cost more to run than a gas combined cycle plant. And since coal and peaker plants have higher carbon emissions per megawatt-hour, NTEC is given credit for displacing that higher-carbon power, yielding negative CO_2e emissions.

What this approach means, though, is that no power plant would ever have significant or even positive CO_2e emissions under NEPA unless it *polluted at a higher rate than every other plant* higher on the system-wide stack. As the Telos Report explains, this type of analysis "will always show a marginally more efficient fossil fuel resource as 'clean' with negative emissions until that unit becomes the dirtiest unit on the stack as coal and inefficient peaking units retire during the expected lifetime of the proposed resource."[105] It will take many years to retire all the dirtier fossil fuel plants on the grid, and meanwhile "virtually any new fossil fuel plant (expected to be more fuel efficient than existing plants) would be shown to have negative emissions" under the approach used by the Supplemental EA.[106] A proposed plant's emissions are not being compared to the cleanest generators, or even to a system-wide average, but to the most polluting and inefficient existing generators. As long as there is something both more polluting and costly anywhere within the multi-state region, the proposed plant's backers can claim that all of its emissions net out to below zero. And the Supplemental EA's analysis assumes there will indeed be more polluting and costly plants on the regional grid at least through 2040, when its analysis stops. As discussed below, it assumes a level of continued fossil fuel use, including coal generation, far higher than science-based national and global emission reduction goals would allow.

The Supplemental EA's approach to NTEC's emissions deviates from the way that power plant emissions are traditionally assessed under NEPA. For example, an EIS under NEPA was performed when the Four Corners coal plant and coal mine in New Mexico sought approval to

[104] Supplemental EA, Appendix B: Production Cost Modeling at 13.
[105] Telos Report at 2.
[106] *Id.*

extend the mine's and plant's life for 25 years. The EIS estimated the plant's air emissions, including its GHGs over the 25-year period, but it did not attempt to offset those emissions by claiming credit for any net reductions from other power plants that would operate instead if the Four Corners plant closed. On the contrary, the No Action alternative projected a steep reduction in emissions because the plant would close in two years.[107]

Counting power plant emissions the way the Supplemental EA does deviates from the way power plants have traditionally been assessed and it is utterly contrary to the goals of NEPA. Rather than environmental review helping the RUS and public understand the damage caused by the millions of tons of CO_2e emitted by NTEC, it obscures that damage, rendering those emissions invisible. Even worse, by enabling the construction of new fossil fuel plants with long operating lifetimes, this approach would lock that damage in for decades, perpetuating our dependence on such plants despite the urgent need to phase them out. If RUS and other agencies were to apply this approach to power plants generally, it would severely hinder efforts to combat the climate crisis.

2. The Supplemental EA's analysis of NTEC is much different than the type of fuel substitution analysis used for estimating the downstream combustion emissions associated with fossil fuel extraction or transportation projects.

Federal agencies often use a type of fuel substitution analysis when assessing the climate impact of fossil fuel supply projects. What the Supplemental EA is doing in this case, however, is very different. Fossil fuel supply projects – including fuel extraction projects (such as coal leases) and fuel transportation projects (such as new gas pipelines) -- typically have some of their own direct combustion emissions of GHGs, but these direct combustion emissions are far smaller than the indirect emissions that occur when the fuel being supplied is ultimately burned by power plants or other facilities. Thus, unlike NTEC, the majority of a fuel supply project's impact on the climate occurs as a result of indirect emissions that occur later in time but are nonetheless foreseeable impacts of agency action. The marketplace lies between the project and most of its climate impact.

The challenge for agencies and courts has been to decide how such indirect downstream combustion emissions should be estimated. One option is to count as part of the project the GHG emissions associated with burning *all* the fuel being supplied. The Federal Energy Regulatory Commission (FERC) in a recently published draft interim policy proposes to use this approach, which it calls the "full burn" assumption, when determining whether a gas pipeline project's emissions are significant enough to trigger an EIS.[108]

By contrast, some agencies formerly improperly discounted these downstream GHG emissions, claiming that the fuel extracted or transported by the proposed project was entirely substituting for fuel that would otherwise be obtained from another source or via other means of

[107] Office of Surface Mining Reclamation and Enforcement, *Final EIS for the Four Corners Power Plant and Navajo Mine Energy Project,* Section 4.2, Climate Change, p. 4.2-21, 4.2-28. This EIS is available through the EPA EIS database: https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/search/search#results.
[108] Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, 87 Fed. Reg. 14104, 14115 (FERC Mar. 11, 2022).

transportation. However, courts have rejected this so-called "perfect substitution" assumption, ruling that such an assumption violates basic economic principles.[109] Agencies making assumptions about fuel market behavior have been required to do more sophisticated analyses, including to factor in the proposed project's own impact on that market.[110] If a project adds enough fuel supply to lower fuel costs, the laws of supply and demand mean that the lower costs will increase fuel consumption. That, in turn, will increase GHG emissions, and that increase is attributable to the proposed extraction or transportation project.

There is a critical distinction, though, between a fuel supply project and a power plant like NTEC. NTEC would be a stationary source with its own enormous combustion emissions emitted directly from the project itself. There is no marketplace lying between the plant and its climate impact. The RUS does not need to consider the behavior of MISO's regional dispatch stack; it only needs to look at what will come directly out of NTEC's stack and then compare it to alternatives that would meet the purpose and need statement. Even when a fuel substitution analysis is used in the review of a fuel supply project, the substitution analyses is only used to discount the project's downstream indirect emissions, not its direct ones. The GHGs that would be directly emitted by, say, coal mining equipment or gas pipeline compressor stations are simply estimated; *they are not offset by any assumptions about how they might be displacing emissions from existing coal mines or gas pipelines with which the project would compete.*

There is simply no need to analyze of the workings of the marketplace to determine NTEC's direct emissions. They can and should be estimated the same way the direct emissions of other projects are estimated in an environmental review. The fact that the electricity NTEC produces is expected to displace electricity from competing generators does not mean the proposed project gets to claim credit under NEPA for reducing those generators' emissions. Any facility making a product to be sold into a marketplace may to some degree displace products manufactured by other facilities. A company proposing a new copper mine hopes its copper will displace copper made by competitors, but that mine would never be allowed under NEPA to offset its own direct emissions by claiming credit for reducing emissions from competing copper mines. The direct emissions of power plants should not be treated differently in this regard just because they are selling into the electricity market – and past power plant EISs have not treated emissions the way the Supplemental EA does, as noted above.

Indeed, a proposed power plant's GHG emissions should not be treated differently than its many other direct environmental impacts. Power plants emit enormous quantities of non-GHG air pollutants (including pollutants with deadly health impacts) and they have substantial water and land-use impacts. These impacts could all similarly be obscured if projects were allowed to claim credit for offsetting air, water, and land impacts elsewhere on the power grid. Yet this is not done even in this Supplemental EA or the original EA. This unorthodox approach is only taken toward NTEC's GHG emissions.

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[109] *WildEarth Guardians v. U.S. Bureau of Land Mgmt*., 870 F.3d 1222, 1234–38 (10th Cir. 2017).
[110] *See, e.g.*, *Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549 (8th Cir. 2003); *High Country Conservation Advocates v. U.S. Forest Service,* 52 F. Supp. 3d 1174, 1197-98 (D. Colo. 2020).

3. NTEC can be distinguished from cases where a gas plant directly replaces a coal plant, though even those cases have been subjected to a higher level of environmental review than NTEC has.

Nor is NTEC similar to cases that sometimes claim that a new gas plant will reduce emissions by replacing an old coal plant with higher emissions. For example, a 2015 6th Circuit case regarded the demolition of the Tennessee Valley Authority's (TVA's) Paradise coal plant and the construction of a new gas plant at the same site.[111] By contrast, NTEC is a new plant proposed to be built on a greenfield site, and it is not physically replacing any coal plant. (The 6th Circuit noted that the TVA "prepares an impact statement as a matter of course when it builds a new plant on an *undeveloped* site," just not always when it builds new units at an existing site.[112]) Moreover, the assessment of the Paradise project built upon an earlier EIS conducted for an earlier Integrated Resource Plan (IRP). The NTEC Supplemental EA does not build upon an earlier EIS, and if Dairyland has conducted an IRP comparing NTEC to no- or low-carbon alternatives it has not made it part of the Supplemental EA.[113]

The TVA is currently planning another coal-to-gas project, replacing its Cumberland coal plant with a gas plant at the same site. While we have objections to how that EIS was conducted, at least there has been an EIS, unlike for NTEC. And even though the Cumberland draft EIS analyzes a solar-plus-storage alternative to the gas plant, which has not been done for NTEC, the EPA has raised strong objections to the project based on the urgency of the climate crisis.[114] EPA urged the TVA to review the project within the context of science-driven GHG emission reduction policies and to more fully analyze lower carbon alternatives. Ultimately, it "strongly recommends the proposed action be modified or a different preferred alternative be selected."[115]

In short, even when a gas plant is directly replacing a coal plant, that gas plant warrants an EIS that considers a full range of alternatives and our GHG emission reduction targets. A new gas plant that, like NTEC, is not even directly replacing a coal plant should be subject to even greater scrutiny.

4. NTEC's emissions should be compared to alternatives that could reasonably meet Dairyland's energy needs, not to the most polluting power plants on the grid.

One reason that fuel supply projects use a fuel substitution analysis to estimate downstream emissions is because the nature of such projects makes it hard to do a traditional alternatives analysis under NEPA. The fuel being extracted or transported will be sold to others and dispersed to many locations. The alternatives to burning the fuel in question – such as building carbon-free

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[111] *Ky. Coal Ass'n v. Tenn. Valley Auth.*, 804 F.3d 799 (6th Cir. 2015).
[112] *Id.* at 805.
[113] Dairyland does submit a truncated sort of IRP to the Minnesota Public Utilities Commission, including a 2022 filing discussed in Part V.B. However, this document does not consider alternatives to NTEC, and as we discuss below, it seems to show that Dairyland has no need for NTEC given how much capacity the utility already has.
[114] Letter and Comments from Mark J. Fite, Director of Strategic Programs Office, EPA Region 4, to Ashley Pilakowski, NEPA Specialist, TVA, CEQ No. 20220059 at 3 (June 30, 2022).
[115] *Id.*

energy sources – lie in the hands of multiple downstream fuel consumers. That makes it difficult for an agency assessing a fuel supply project's environmental impact to answer the question, "compared to what?" A fuel substitution analysis represents a specialized approach to answering that question for a supply project's downstream emissions.

But that specialized approach is neither necessary nor appropriate to assess this project. NTEC's direct emissions are far easier to estimate than the indirect downstream emissions of a fuel supply project, and NTEC can be directly compared to alternatives that Dairyland itself could instead pursue, like building carbon-free renewable energy and energy storage rather than a new gas plant. Such projects are so economically viable that thousands of megawatts worth of renewable and battery projects are currently waiting to interconnect to the MISO grid.[116] As we discuss in Part V, the Supplemental EA fails to conduct such an alternatives analysis, in violation of NEPA, but it could and should do so rather than using a novel and inappropriate methodology that renders NTEC's millions of tons of GHG emissions insignificant.

5. Even if a substitution analysis were an appropriate way of assessing a power plant's direct emissions, the Supplemental EA analysis of NTEC is deeply flawed.

Our organizations believe the emissions-obscuring methodology used in the Supplemental EA is far from an "appropriate" methodology under the CEQ's 2016 GHG Guidance, as explained above.[117] However, even if it were appropriate to use such a methodology, this analysis is deeply flawed.

First, the Supplemental EA only looks at the period from 2025 to 2040. NTEC does not even come online until 2027, which the text acknowledges.[118] Yet the Supplemental EA relies on an analysis that claims NTEC is displacing higher-emitting power plants as early as 2025.[119] However the bigger problem is that the analysis stops at 2040, when NTEC would only be 13 years old.[120] With an operating life of 40 years, two-thirds of NTEC's operating life comes after 2040, and those emissions are left out of the Supplemental EA's analysis.[121] It especially troubling that the Supplemental EA ignores post-2040 emissions when we know that the climate crisis and the need to combat it will only have intensified by then.

Second, the Supplemental EA analysis is based on the assumption that the US and Wisconsin will fail to achieve its GHG emission reduction targets, and will remain heavily dependent on fossil fuel power plants for decades. Society's assumed continuing dependence on fossil power through 2040 is explicit in the Supplemental EA's analysis, portraying NTEC as reducing emissions through that year. Society's continued dependence on fossil power for decades

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[116] John Engel, *Solar, Storage Lead MISO's Record-Setting Interconnection Queue*, Renewable Energy World, (Sep. 17, 2021), https://www.renewableenergyworld.com/solar/solar-storage-lead-misos-record-setting-interconnection-queue/#gref.
[117] CEQ 2016 Guidance at 11.
[118] Supplemental EA at 1-1.
[119] Supplemental EA at 3-23.
[120] *Id.*
[121] Telos Report at 3.

beyond 2040 is implicit in the very idea of building a new gas plant with an operating lifetime of 40 years going online in 2027.

As discussed in Part I.C.1, the IPCC has established that the world must cut GHG emissions roughly in half by 2030 and reach net zero by midcentury to have a reasonable chance of limiting warming to 1.5 degrees. Even limiting warming to below 2.0 degrees will require dramatic near-term reductions in GHGs heading toward net-zero.[122] The Biden administration has set the goal of a carbon-free electric grid by 2035, along with setting economy-wide goals of cutting GHG emissions 50-52% by 2030 and reaching net zero by 2050. The governors of Wisconsin and Minnesota have endorsed a target of carbon-free power in their states by 2040. And now, as discussed more below, the nation has finally overcome years of political gridlock and passed the Inflation Reduction Act, making its largest investment ever in clean energy in support of achieving these ambitious decarbonization goals.[123]

The Supplemental EA analysis does not come close to reflecting this pace of grid decarbonization in assessing NTEC's "net" emissions through 2040. Obviously, if the power sector is fully decarbonized by 2035, there would be no carbon left for NTEC to displace after 2035 or during the subsequent decades of its operating life.

Instead of assuming the rate of decarbonization that the science says is necessary, that pathways studies show is plausible, and that decarbonization policies aim for, the Supplemental EA relies on MISO "Future 1" -- one of three visions of the future created by MISO in an exercise it uses to predict future transmission needs. None of the MISO futures reflects the rate of decarbonization we actually need and are targeting in federal and state policies. In fact, the MISO report projecting these futures does not reflect federal decarbonization goals at all, and MISO Future 1 assumes that utility goals and non-legislated state goals are only 85% achieved.[124] And among the three options, the Supplemental EA chose to base its analysis on the one future that is most inconsistent with science-based federal climate policy.

The Supplemental EA then makes changes to MISO Future 1 that weight it in favor of Dairyland's proposal by extending the dates of coal plant retirements in ways that do not comport with other public information. For example, the Supplemental EA's analysis postpones the retirement of Minnesota Power's Boswell 4 coal plant to 2050, but Minnesota Power has announced its plans to make Boswell 4 coal-free by 2035.[125] The Supplemental EA also extends the life of Coal Creek units 1 and 2 in North Dakota to 2050, but the new owners of these units

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[122] IPCC 2018, para. C.1.
[123] John Engel, *Inflation Reduction Act: Clean Energy Industry Cheers 'Monumental' Vote by Senate*, Renewable Energy World (Aug. 8, 2022), https://www.renewableenergyworld.com/solar/inflation-reduction-act-clean-energy-industry-cheers-monumental-passage-by-senate/#gref.
[124] Midcontinental Independent System Operator (MISO), MTEP21 Report at 5, https://www.misoenergy.org/planning/planning/previous-mtep-reports/#t=10&p=0&s=FileName&sd=desc.
[125] Brooks Johnson, *Minnesota Power shutting, converting final two coal plants by 2035*, Star Tribune, Jan. 12, 2021, https://www.startribune.com/minnesota-power-shutting-converting-final-two-coal-plants-by-2035/600009603/.

have announced their intention of using carbon capture and storage at these units,[126] which if successful would greatly reduce the GHGs available for NTEC to displace. Adjustments like these just serve to illustrate that the unorthodox approach used in the Supplemental EA depends on a myriad of assumptions about how other power plants over a multistate area will operate for decades to come.

Fourth, the Supplemental EA claims that NTEC would enable the use of more renewable energy by reducing some of the regional transmission congestion currently curtailing renewable generation.[127] As the Telos Energy analysis indicates, however, the amount of new renewable power the Supplemental EA claims NTEC would enable is the equivalent of a small, 35 MW wind project running at 50% capacity.[128] If Dairyland chose to meet its needs by investing directly in renewables and energy storage rather than investing in a 625 MW gas plant, it could increase renewable energy production by hundreds of MW.

And finally, the Supplemental EA's elaborate analysis yielding net negative emissions for NTEC is being done within an EA rather than an EIS. Rather than being part of a deeper analysis of NTEC's impacts, it is a means of avoiding that deeper analysis. Courts have held that where a project has adverse effects "and the agency is in the position of having to balance the adverse effects against the projected benefits, the matter must, under NEPA, be decided in light of an environmental impact statement."[129] FERC has essentially embraced this approach by adopting an interim policy that any pipeline project with emissions above 100,000 tons per year, even indirect emissions, is significant and requires an EIS.[130] FERC is willing to consider on a case-by-case basis more complex factors that could reduce a project's emissions, including fuel substitution considerations, in an EIS, but not when determining the threshold question of whether a project's emissions are significant enough to warrant an EIS.

In sum, the Supplemental EA deviates from past practices by using a methodology that not only obscures NTEC's millions of tons of direct GHG emissions but would portray any new gas plant as having negative emissions, despite the firmly established need to stop building new gas plants and to rapidly shift to zero-carbon energy. Even if it was appropriate to use such a methodology to assess a power plant's direct emissions, the Supplemental EA ignores most of NTEC's lifetime emissions as well as assuming the failure of climate policies critical to avoiding catastrophic warming. This approach – undermining the goals of NEPA just when we need it to inform our response to the climate crisis – cannot be considered a valid substitute for a genuine analysis of carbon-free alternatives to NTEC. RUS should order an EIS to thoroughly analyze the GHG impacts of the proposal and appropriate alternatives.

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[126] Eloise Ogden, *Hoeven: ND to lead country with carbon capture project at Coal Creek Station,* Minot Daily News, Jul. 2, 2021, https://www.minotdailynews.com/news/local-news/2021/07/hoeven-nd-to-lead-country-with-carbon-capture-project-at-coal-creek-station/.
[127] Supplemental EA at 3-26.
[128] Telos Report at 5.
[129] *Friends of Fiery Gizzard v. Farmers Home Admin.,* 61 F.3d. 501, 505 (6th Cir. 1995).
[130] Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, Interim Greenhouse Gas Policy Statement, 87 Fed. Reg. 14104, 14115 (FERC Mar. 11, 2022).

C. The Supplemental EA fails to assess NTEC's GHGs in the context of GHG reduction needs and policies.

Despite the enormity of NTEC's GHG emissions, the Supplemental EA fails to address the obvious question: is NTEC compatible with the pace and scale of GHG reductions we need to avoid catastrophic climate changes? One way to answer this question is to look at federal GHG reduction policies. The 2016 CEQ Guidance specifically instructs agencies to provide a frame of reference for GHG emissions by discussing "relevant approved federal, regional, state, tribal, or local plans, policies, or laws for GHG emissions reductions or climate adaptation to make clear whether a proposed project's GHG emissions are consistent with such plans or laws."[131] The EPA's July 26 comments in this docket similarly stress the need for RUS to analyze NTEC's GHG emissions in the context of national GHG reduction policies and state reduction targets.[132] Another way to answer this question is to look at the underlying science establishing the size and timing of needed GHG reductions. Courts have stressed the importance, when an agency is determining the significance of a project's GHG emissions, of "some articulated criteria for significance in terms of contribution to global warming that is grounded in the record and available scientific evidence."[133] The Supplemental EA does not look at either the emission reduction policies or the emission reduction science.

Indeed, while the Supplemental EA briefly discusses federal initiatives to address climate change, it fails to even mention the new federal GHG reduction targets and deadlines they establish.[134] The Supplemental EA even makes the claim that "the United States does not have an overarching policy for GHG reductions,"[135] ignoring the Biden Administration's commitment to achieving 100 percent carbon-free electricity by 2035, the nation's NDC pledging to cut national emissions by 50-52% below 2010 levels by 2030, and the longer-term target of reaching net zero carbon emission by 2050 (all discussed under Part I.C above).

The Supplemental EA briefly discusses the Paris Agreement and the Glasgow Climate Pact, along with their goals of holding warming well below 2 °C and pursuing efforts to limit warming to 1.5 °C.[136] However, once again the assessment fails to mention the part most relevant to assessing NTEC – how these goals translate into emission reduction targets and deadlines. It fails to mention the Glasgow Pact's statement on the need to reduce global carbon emissions by 45 percent below 2010 levels by 2030, and reach net zero by midcentury, in order to limit warming to 1.5 °C.[137] This failure is notable given the RUS's rule requiring it to lend appropriate support to international environmental initiatives to prevent the decline of the world environment.[138]

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[131] CEQ 2016 Guidance at 28-29.
[132] Letter with comments from Jennifer Tyler, Acting Deputy Director, EPA Region V, to Peter Steinour, Env't Prot. Specialist, USDA RUS, 3, (July 26, 2022) (re Supplemental Environmental Assessment, Nemadji Trail Energy Center Project).
[133] *350 Mont. v. Haaland,* 29 F.4th 1158, 1170 (9th Cir., 2022).
[134] Supplemental EA at 1-10.
[135] Supplemental EA at 1-8.
[136] Supplemental EA at 1-7.
[137] Glasgow Pact at para 17.
[138] 7 CFR § 1970.4(f).

In its discussion of the state of Wisconsin's 2020 climate plan, the Supplemental EA fails to acknowledge the plan's goal of reducing carbon emissions from the power sector by at least 60 percent below 2005 levels by 2030. The analysis briefly notes Wisconsin's goal of achieving 100 percent carbon-free electricity by 2050, but does not discuss how building NTEC, intended to operate well past 2050, is inconsistent with that goal.[139]

The failure of the Supplemental EA to assess NTEC's emissions relative to these quantified emission reduction targets, or to even acknowledge them, is particularly troubling given the multiple presidential executive orders increasing climate responsibilities for all federal agencies. These include the overarching responsibility to deploy the agency's full capacity to combat climate change, as part of the Administration's government-wide approach to the crisis.[140] The Supplemental EA also fails to discuss whether funding the construction of new fossil fuel plant violates the Administration's policy of ensuring that "federal funding is not directly subsidizing fossil fuels."[141] And by not assessing NTEC in the context of emission reduction goals, RUS is failing to ensure that climate-related financial risk is integrated into federal lending.[142]

As a federal agency, the RUS is bound to implement these executive orders to the extent allowed by law.[143] The RUS, is therefore obliged to pursue the Administration's goal of 100% carbon-free electricity by 2035 – a target that cannot be reconciled with lending money to build a new generator that will emit millions of tons of GHGs for decades.

The Supplemental EA exhibits a similar failure to reflect of the most relevant conclusions of the pathway studies discussed in Part I.C.4 above, three of which Dairyland was explicitly instructed to review by the RUS. As noted, these studies all clearly indicate that building new gas plants is incompatible with the pathways they chart to reduce GHGs at the pace needed to limit warming to 1.5 °C. However the Supplemental EA ignores these findings and cites those studies instead in support of the need to eliminate coal in order to limit warming to 1.5 degrees C.[144] The Orvis study is even cited in a way that suggests it supports the shift from coal to gas power, despite that study's statement that "[c]utting electricity emissions in line with a 1.5 C target also requires *not building any new gas plants* that lack carbon capture."[145] NTEC would be built without carbon capture, a technology that is not yet in commercial use and would require an as-yet unbuilt infrastructure to transmit any captured carbon and sequester it underground.

If we needed only gradual GHG emission reductions over several decades (and if we ignored upstream methane emissions), one might envision that a new gas plant like NTEC could

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[139] Supplemental EA at 1-9 to 1-10; Governor's Task Force on Climate Change Report, State of Wis., at 92-93 (2020), https://climatechange.wi.gov/Documents/Final%20Report/GovernorsTaskForceonClimateChangeReport-LowRes.pdf.
[140] Exec. Order 14,008, Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7619, 7622.
[141] *Id.,* 7625.
[142] Exec. Order 14,030, Climate-Related Financial Risk, 86 Fed. Reg. 27967, 27969.
[143] *Sherley v. Sebelius*, 689 F.3d 776, 784 (D.C. Cir. 2012) ("NIH may not simply disregard an Executive Order. To the contrary, as an agency under the direction of the executive branch, it must implement the President's policy directives to the extent permitted by law.").
[144] Supplemental EA at 1-7 to 1-8.
[145] Supplemental EA at 1-10; Orvis 2021 at 8 (emphasis added).

help us meet our emission targets. However, that vision cannot survive the recognition that we need to cut emissions in half by 2030, entirely decarbonize the power sector by 2035, and reach net-zero economy-wide by midcentury – all during the operating lifetime of this proposed plant. It is only by acknowledging the scale and pace of needed emission reductions that one can begin to determine whether NTEC helps or hinders our efforts to confront the climate crisis. That is why the failure of the Supplemental EA to assess NTEC's emissions within the context of these emission reduction targets is such a fatal flaw. A finding that NTEC has no significant impact on climate based on this Supplemental EA would be arbitrary and capricious.

D. The Supplemental EA fails to use existing tools to quantify the harms caused by NTEC's GHG emissions, even as it quantifies the anticipated economic benefits.

The Supplemental EA is inadequate because it fails to provide the public with an understanding of the context and significance of NTEC's enormous GHG emissions. "[M]ere quantification is insufficient" for addressing GHGs in NEPA review.[146] NEPA seeks to "inform the public about the environmental consequences" of federal actions.[147] This requires agencies to "consider and disclose [an action's] actual environmental effects" and demonstrate to the public that the agency "considered environmental concerns in its decisionmaking process."[148] In addition to failing to put NTEC's GHG emissions into a frame of reference by comparing them to GHG reduction schedules, the Supplemental EA fails to use other available tools that could provide a frame of reference for NTEC's emissions.

Without a tool for interpretation, the public remains uninformed of NTEC's "actual environmental effects," and it is unclear how the agency accounted for these emission levels in its decision making regarding NTEC.[149] These limitations of listing bare emission quantities are why federal courts emphasize that "mere quantification is insufficient" for addressing GHGs in NEPA review.[150]

1. Social Cost of Carbon provides a standardized and accurate metric for capturing NTEC's climate impacts.

The Social Cost of Carbon ("SCC") surpasses "mere quantification"[151] of GHG emissions by allowing agencies to measure those emissions' impact. The SCC is a widely used tool in NEPA review.[152] The tool works by assigning a monetary cost per ton of CO_2 (or other GHG) emitted by an action, which provides agencies and the public with a concrete means for weighing the harms

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[146] *California v. Bernhardt*, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020).
[147] *Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 371 (1989).
[148] *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 96-97 (1983).
[149] *Baltimore Gas*, 462 U.S. at 96 (1983).
[150] *California v. Bernhardt*, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020).
[151] *Bernhardt*, 472 F. Supp. 3d at 623.
[152] *See* Peter Howard & Jason A. Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COLUM. J. ENV'T L. 203, 270–84 (2017) (listing eight SCC assessments conducted under NEPA); *See also* 2016 GHG Guidance, 33, n. 86 ("[SCC] provides a harmonized, interagency metric that can give decision makers and the public useful information for their NEPA review").

of that action's GHG emissions.[153] The SCC is designed to measure the impact of an incremental increase in carbon emissions.[154] An Interagency Working Group of federal agencies determined the SCC by examining GHGs' effect on, among other things, "net agricultural productivity, human health effects, property damage from increased flood risk natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services."[155]

The Supplemental EA asserts that "there is no standard methodology to determine how a project's relatively small incremental contribution to GHGs will translate into physical effects on the global environment."[156] In fact, the SCC is precisely that: a standard methodology designed to measure physical effects on the environment, along with human health and social effects, caused by incremental contributions to GHGs. As one federal court explained in rejecting this same agency rationale in 2014, "a tool is and was available: the social cost of carbon protocol."[157] Federal agencies incorporate the SCC in their NEPA reviews because it is an effective and accurate tool. A claim that no standardized tool exists for measuring GHG impacts, is a "factually inaccurate justification" for omitting the SCC.[158]

Federal agencies are encouraged by the CEQ to "consider all available tools and resources in assessing GHG emissions and climate change effects of their proposed actions," explicitly including the Social Cost of Greenhouse Gases.[159] Courts emphasize that, for the SCC specifically, "taking a 'hard look' has to include a 'hard look' at whether this tool [the SCC] . . . would contribute to a more informed assessment of the impacts than if it were simply ignored."[160] The Supplemental EA's blunt dismissal of the SCC fails the hard look standard.

The failure of the Supplemental EA to consider the social cost of carbon is striking given Executive Order 13,990, which calls it "essential that agencies capture the full costs of greenhouse gas emissions as accurately as possible."[161] That order goes on to describe the social cost of carbon (SCC), along with the social cost of nitrous oxide (SCN) and the social cost of methane (SCM) as useful tools in capturing GHG costs. It orders that the federal Working Group establish updated interim values, "which agencies shall use when monetizing the value of changes in greenhouse gas

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[153] *See* Peter Howard & Jason A. Schwartz, Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon, 42 COLUM.J. ENV'T L. 203, 205-206 (2017).
[154] *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates Under Executive Order 13990*, Interagency Working Grp. on Soc. Cost of Greenhoues Gases, U.S. Gov't at 2 (Feb. 2021), https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf.
[155] *Id.* at 2.
[156] Supplemental EA at 3-18.
[157] *High Country Conservation Advocs. v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1190 (D. Colo. 2014).
[158] *High Country Conservation Advocs. v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014).
[159] National Environmental Policy Act Implementing Regulations Revisions, 86 Fed. Reg. 55757, 55763, n. 25 (CEQ, proposed Oct. 7, 2021); *See also* 2016 GHG Guidance at 33.
[160] *High Country Conservation*, 52 F. Supp. 3d at 1193.
[161] Exec. Order 13,990, Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis 86 Fed. Reg. 7037, 7040 (Jan. 25, 2021).

emissions resulting from regulations and other relevant agency actions until final values are published."[162]

In their comments on NTEC, EPA also "strongly recommends that agencies use estimates of the SC-GHG [Social Cost of Greenhouse Gases] to assess climate impacts and help weigh their significance in cost-benefit balancing for proposed projects."[163] EPA explains that by turning the multitude of impacts from GHGs into a single dollar value, the SC-GHG provides a measure of impacts that is more easily understood by decisionmakers and the public than a simple estimate of tons of emissions. And EPA's own calculation of the social costs of just part of NTEC's emissions illustrates just how significant NTEC's impact would be. EPA estimates that the social cost of carbon emissions from just the first 15 years of NTEC's operation (using potential emissions from the Supplemental EA) would be **$2.15 billion dollars**. This estimate does not include costs associated with upstream methane emissions or non-CO_2 direct emissions, nor any emissions after 2040.[164]

2. The Supplemental EA inconsistently monetizes NTEC's benefits but not its costs.

"It is arbitrary for an agency to quantify an action's benefits while ignoring its costs where tools exist to calculate those costs."[165] The Supplemental EA uses quantification to emphasize NTEC's socioeconomic benefits, but it ignores the SCC as a tool for quantifying the project's costs. This approach places a "thumb on the scale by inflating the benefits of the action while minimizing its impacts."[166]

The Supplemental EA repeatedly uses quantification to describe NTEC's projected socioeconomic impacts. The Supplemental EA quantifies job growth, that of 260 positions during "peak activity" of construction followed by "25 full time permanent jobs" during operation.[167] It also quantifies tax revenue of one million dollars for the surrounding municipalities.[168] This approach is similar to past EAs that quantified jobs,[169] tax revenue,[170] or decreased compliance cost,[171] but then excluded the SCC from their review of GHG emissions. In each case, courts held that the EA's analysis was unbalanced and internally inconsistent.[172] It is misleading for agencies to refuse to monetize the impact of GHG emissions, "then turn around and calculate down to the

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[162] *Id.*
[163] Letter with comments from Jennifer Tyler, Acting Deputy Director, EPA Region V, to Peter Steinour, Env't Prot. Specialist, USDA RUS, 3, (July 26, 2022) (re Supplemental Environmental Assessment, Nemadji Trail Energy Center Project) [hereinafter "EPA NTEC Comments"].
[164] *Id*., attached comments at 8.
[165] *California v. Bernhardt*, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020).
[166] *Montana Env't Info. Ctr. v. U.S. Off. of Surface Mining*, 274 F. Supp. 3d 1074, 1098 (D. Mont. 2017).
[167] Supplemental EA at 3-10.
[168] *See* Supplemental EA at 3-10.
[169] *See High Country Conservation*, 52 F. Supp. 3d at 1195; *Montana Env't*, 274 F. Supp. 3d at 1096.
[170] *See High Country Conservation*, 52 F. Supp. 3d at 1195; *Montana Env't*, 274 F. Supp. 3d at 1096.
[171] *See Bernhardt*, 472 F. Supp. 3d at 623.
[172] *See Montana Env't*, 274 F. Supp. 3d at 1096; *High Country Conservation*, 52 F. Supp. 3d 1174 at 1191; *Bernhardt*, 472 F. Supp. 3d at 623.

job and the nearest $100,000 the [projects'] economic impacts."[173] The Supplemental EA commits this same error. In doing so, it fails to take a "'hard look' that ensure[s] both the agency and the public [are] well-informed" about NTEC's true costs and benefits.[174]

Not only is the methodology inappropriate to this context, it is selectively applied throughout the analysis to benefit NTEC. For example, while emission reductions at theoretically retired coal units are somehow attributable to NTEC, the loss of jobs, tax revenue and other social benefits from those retired units are completely ignored.

E. The Supplemental EA is inadequate because it fails to account for indirect impacts from upstream methane emissions.

NEPA requires analysis of a project's indirect impacts. CEQ regulations define "effects or impacts" as including "[i]ndirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable."[175] Indirect impacts are particularly important in the context of climate change impacts and GHG emissions. The 2016 GHG Guidance "[r]ecommends that agencies quantify a proposed agency action's projected direct *and indirect* GHG emissions."[176] The CEQ recently reiterated the importance of indirect effects, calling the inclusion of indirect effects in the definition of effects "critical to ensuring that agency decision makers have a complete view of the reasonably foreseeable effects of their proposed actions."[177]

The NTEC proposal illustrates why quantifying upstream GHG emissions is so important for analyzing climate change impacts. The Supplemental EA calculates NTEC's total direct potential emissions of CO_2 alone (not counting NTEC's direct emissions of other GHGs) as 2,242,381 tons per year.[178] However, in support of these comments we commissioned an expert report from PSE Healthy Energy, and the PSE Report (attached as Appendix 2) makes clear that when a gas plant's indirect upstream methane emissions are included, its climate impact goes far beyond just its direct CO_2 emissions.[179] This is because, as the PSE Report explains, "[m]ethane, the primary constituent in natural gas, leaks throughout the entire process of production, processing, transmission, and use. Estimates suggest that this leakage would increase the radiative forcing of gas combustion by 92 percent over a 20-year timeframe and 31 percent over a 100-year timeframe."[180] (As we discuss more below, methane's potency relative to CO_2 varies based on the timeframe because methane has a much shorter atmospheric lifetime than CO_2). In reality, NTEC's

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[173] *High Country Conservation*, 52 F. Supp. 3d at 1195.
[174] *Montana Env't*, 274 F. Supp. 3d at 1098.
[175] 40 C.F.R. § 1508.1(g)(1)-(2).
[176] 2016 GHG Guidance at 4 (emphasis added).
[177] National Environmental Policy Act Implementing Regulations Revisions, 87 Fed. Reg. 23453, 23467 (CEQ Apr. 20, 2022).
[178] Supplemental EA at 3-22.
[179] Kelsey Bilsback, et al., *Nemadji Trail Energy Center Health and Equity Analysis,* PSE Healthy Energy (July 2022) [hereinafter "PSE Report"], attached as Appendix 2. PSE Healthy Energy is a multidisciplinary, nonprofit research institute that studies the way energy production and use impact public health and the environment.
[180] PSE Report at 5.

climate impacts almost double compared to its direct CO_2 emissions over a twenty-year timeframe when upstream methane emissions are taken into account.

There is growing urgency to reduce methane emissions as global atmospheric levels of methane have been rising rapidly in recent years. A major global assessment of methane in 2021 concluded that "without relying on future massive-scale deployment of unproven carbon removal technologies, expansion of natural gas infrastructure and usage is incompatible with keep warming to 1.5° C."[181]

In Petitioners' request for a supplemental EA, Petitioners stressed the importance of analyzing NTEC's expected upstream methane emissions in the light of new studies.[182] The RUS instructed Dairyland to "[p]rovide an analysis that quantifies the projected greenhouse gas emissions of the NTEC project, including an analysis of potential indirect upstream impacts."[183] However, Dairyland refused to attempt to quantify upstream methane emissions. And, instead of requiring Dairyland to remedy this omission, the RUS published the Supplemental EA for comment, making Dairyland's failure its own.

First, the Supplemental EA supports this omission by claiming the methane emissions "are not reasonably foreseeable to predict with any specificity."[184] Upstream methane emissions *are* reasonably foreseeable, and there is scientific data available to calculate those emissions, as the PSE Report shows.[185] EPA's comments also state that upstream emissions are reasonably foreseeable and "possible to estimate in a manner that provides reliable, important information to decisionmakers and the public for purposes of NEPA."[186] In any event, the complete failure to even attempt to calculate these indirect emissions renders the Supplemental EA inadequate: "It should go without saying that NEPA also requires the Commission to at least attempt to obtain the information necessary to fulfill its statutory responsibilities."[187]

Second, the Supplemental EA relies on a draft EIS for a dissimilar project to avoid evaluating the indirect impacts of NTEC.[188] The Supplemental EA claims that FERC has also determined that upstream methane emissions are not quantifiable for purposes of NEPA, citing a recent draft EIS that examines the environmental impacts of a new natural gas transmission pipeline.[189] The draft EIS actually defers the question of whether upstream methane emissions should be quantified until FERC could issue a new policy statement on the issue. Importantly, the

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[181] *Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions* U.N. Environment Programme at 10 (May 6, 2021), https://www.unep.org/resources/report/global-methane-assessment-benefits-and-costs-mitigating-methane-emissions.
[182] Letter from Stephanie Fitzgerald, Staff Attorney, Minn. Ctr. for Env't Advoc., to Peter Steinour, Env't Prot. Specialist, Rural Util. Serv. at 4 (July 23, 2021).
[183] Letter from Christopher McLean, Acting Adm'r, Rural Utils. Serv., to Brent Ridge, President & CEO, Dairyland Power Coop. at 2 (Nov. 9, 2021).
[184] Supplemental EA at 3-27.
[185] PSE Report at 5.
[186] EPA NTEC Comments, attached comments at 7.
[187] Birckhead v. FERC, 925 F.3d 510, 520 (D.C. Cir. 2019).
[188] Supplemental EA at 3-27.
[189] FERC, *Henderson County Expansion Project: Draft EIS*, (Apr. 2022) https://elibrary.ferc.gov/eLibrary/filelist?accession_number=20220414-3004&optimized=false (hereinafter "Henderson DEIS").

draft EIS that the Supplemental EA refers to does not make any finding of significance or insignificance in relation to climate impacts: "Regarding climate change impacts, this EIS is not characterizing the Project's greenhouse gas emissions as significant or insignificant because the Commission is conducting a generic proceeding to determine whether and how the Commission will conduct significance determinations going forward."[190] FERC's draft interim policy on GHGs, published in March of 2022, does not say that upstream methane emissions cannot be foreseen and estimated. On the contrary, it states that FERC has and will continue to consider upstream emissions "on a case-by-case basis," and project sponsors are encouraged to submit information about upstream impacts.[191]

Even if the Supplemental EA's characterization of FERC's position on upstream methane were accurate, though, there is an important distinction between a project that burns gas, like NTEC, and one that transmits it, like a pipeline. As discussed in Part III.B.2, projects that supply fuel, like pipelines, often require a more complicated analysis to determine their indirect emissions, including consideration of how the project affects fuel prices and therefore consumption. NTEC's upstream emissions can be estimated more straightforwardly, based on evidence about rates of methane leakage per ton of natural gas consumed.[192] Even where indirect emissions are much more speculative than the methane leaks ignored here, courts have found NEPA review inadequate for failure to include such emissions.[193]

Third, the Supplemental EA applies yet another inappropriate substitution analysis to dismiss NTEC's methane emissions.[194] The Supplemental EA states that "the potential upstream emissions from natural gas extraction and transportation are expected to be lower than coal in terms of GHGs emissions."[195] First, NEPA does not allow RUS to dismiss upstream emissions on the basis that NTEC would avoid other methane emissions. However, even if that type of analysis were appropriate in this context, RUS has provided no evidentiary support for its claim and it cannot be taken at face value. Methane, the main constituent of natural gas, leaks all through the supply chain, and because methane is such a potent GHG, a growing number of studies warn that

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[190] FERC, Henderson DEIS, at 1.
[191] Consideration of Greenhouse Gas Emissions in Natural Gas Infrastructure Project Reviews, 87 Fed. Reg. 14104, 14110 (FERC Mar. 11, 2022).
[192] For example, the 2018 Alvarez, et al. study, cited by PSE in Appendix 2, found that U.S. oil and gas supply chain methane emissions in 2015 were equivalent to 2.3% of natural gas production. Ramón A. Alvarez et al., *Assessment of Methane Emissions from the US Oil and Gas Supply Chain*, 361(6398) Science, 186-88 (2018), https://science.sciencemag.org/content/361/6398/186. Similarly, a 2020 study estimated that the Permian Basin loss rate is 3.7% of gas production. Yuzhong Zhang et al., *Quantifying Methane Emissions from the Largest Oil-Producing Basin in the United States from Space*, 6 Sci. Advances 17 (2020), https://advances.sciencemag.org/content/6/17/eaaz5120/tab-pdf. Much of the fossil natural gas delivered to Wisconsin is produced in Texas. *See also,* D. Burns and E. Grubert, *Attribution of production-stage methane emissions to assess spatial variability in the climate intensity of US natural gas consumption*, Environ. Res. Lett. 16 (2021) 044059, https://iopscience.iop.org/article/10.1088/1748-9326/abef33/pdf; *and* M. Lackner, et al., *Pricing Methane Emissions from Oil and Gas Production,* Environmental Defense Fund Economics Discussion Paper Series (April 28, 2021) https://www.edf.org/sites/default/files/content/Pricing%20Methane%20Emissions%20from%20Oil%20and%20Gas%20Production.pdf.
[193] *See Mid States Coal. for Progress v. Surface Transp. Bd*., 345 F.3d 520 (8th Cir. 2003) (remanding EIS that failed to consider emissions that "may occur" from additional coal consumption resulting from new rail line).
[194] Supplemental EA at 3-28.
[195] Supplemental EA at 3-28.

these upstream emissions gravely undermine the climate benefits of switching from coal to gas.[196] The Supplemental EA simply states that displaced coal would have produced more upstream emissions, citing no studies at all. NEPA does not allow for this type of bare assumption.[197]

F. The Supplemental EA fails to address the short-term impacts of methane emissions.

The Supplemental EA does estimate NTEC's direct annual methane emissions,[198] which are far less than the indirect methane emissions it fails to quantify at all. However, even with respect to the direct methane emissions, the Supplemental EA fails to address their short-term impact on the climate. Methane is a potent GHG, with far greater heat trapping characteristics than carbon dioxide. The Supplemental EA fails to take the required 'hard look' at both the short- and long-term climate impacts of the proposed project by failing to consider and disclose methane's 20-year global warming potential (GWP). NEPA specifically mandates agencies consider "the degree of the effects of the action," including "[b]oth short- and long-term effects"[199] and the Supplemental EA fails to meet this obligation by analyzing methane's long-term climate impact to the total exclusion of its short-term effects.

In order to standardize warming potentials across gases, scientists and federal agencies use GWPs to report all GHGs in carbon dioxide equivalents (CO2e). The standard GWP is based off the warming characteristics of one ton of carbon dioxide (CO_2), which by definition has the warming potential of 1.[200] Methane has greater radiative forcing (i.e., a greater capacity to warm the atmosphere), but a shorter atmospheric lifetime, than CO_2, and is therefore a more potent greenhouse gas in the near-term. For this reason, agencies and scientists often report methane's GWP in both long-term (100 year) and short-term (20-year) GWPs.

EPA estimates methane's 20-year GWP is 81 to 83, and its 100-year GWP as 27-30.[201] By contrast, the Supplemental EA relies exclusively on methane's 100-year GWP, which it lists as 25, and an even longer-term 50- to 200-year GWP, which it lists as 12.[202] The Supplemental EA's failure to even disclose that methane has a 20-year GWP, or to calculate CO_2e for methane emissions based on the 20-year GWP, is an important omission that results in the assessment understating the project's climate impacts.[203] This failure violates NEPA's mandate to consider

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[196] See, e.g., Alvarez, et al. (2018) and Zhang et al. (2020).
[197] *WildEarth Guardians v. U.S. Bureau of Land Mgmt.*, 870 F.3d 1222, 1234–38 (10th Cir. 2017) (rejecting the "perfect substitution" without any quantitative analysis).
[198] Supplemental EA at 3-21.
[199] 40 C.F.R. § 1501.3(b)(2)(i).
[200] Supplemental EA at 3-17.
[201] U.S. EPA, *Understanding Global Warming Potentials*, (last visited Aug. 19, 2022) https://www.epa.gov/ghgemissions/understanding-global-warming-potentials#Learn%20why.
[202] Supplemental EA at 3-17. For purposes of converting methane to CO2e, the Supplemental EA uses methane's 100-year GWP of 25. *Id.* at 3-15.
[203] The Supplemental EA discloses 1,227 tons of direct methane emissions per year. Supplemental EA at 3-21, T.3-6. 1227 tpy x 25 GWP = 30,675 tons CO_2e per year. 30,675 x 40 year life of project = 1.2 million tons of CO_2e from direct methane emissions over the life of the project. (These life-of-project emissions are not disclosed by the

"[b]oth short- and long-term effects" of an action when determining the appropriate level of NEPA review (i.e., whether to prepare an EA or an EIS).[204] Such consideration was readily available by applying the GWP for both the 100-year and 20-year time horizons. As explained by the federal District Court in Montana, which invalidated a federal agency's NEPA review for two resource management plans where the agency relied exclusively on the 100-year GWP for methane, "BLM's unexplained decision to use the 100-year time horizon, when other more appropriate time horizons remained available, qualifies as arbitrary and capricious under these circumstances."[205]

G. The Supplemental EA fails to acknowledge that the project's climate impacts will disproportionately harm environmental justice communities.

In January 2021, White House National Climate Advisor Gina McCarthy acknowledged that, "[c]limate change is a racial justice issue because it exacerbates the challenges in the communities that have been left behind. It goes after the very same communities that pollution has held back and racism has held back. And it's our opportunity to serve those communities -- to elevate them."[206]

As the RUS analyzes the climate impacts of its loan decisions, it must recognize that climate impacts in the United States are not and will not be felt evenly. Within the U.S., environmental justice communities currently suffer the greatest harms from climate change and will continue to do so in the foreseeable future.[207] If the RUS recognizes this fact, as it must, any decision to issue loans that allow for the construction and decades-long operation of gas-fueled power plants would amount to a deliberate choice to inflict climate harms most acutely on environmental justice communities. That unnecessary human suffering can and should be avoided. But if the RUS refuses to align its choices with the Biden Administration's climate and environmental justice priorities, the RUS must at a minimum own the impacts of its choices on low-income and communities of color.

A recent EPA report, released in September 2021, *Climate Change and Social Vulnerability in the United States*, concluded that climate change will disproportionately affect people of color and low-income communities.[208] The report examined how six impacts of climate change (1. air quality and health, 2. extreme temperature and health, 3. extreme temperature and

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Supplemental EA.) By contrast, using EPA's 20-year GWP for methane results in more than triple the lifetime CO_2e emissions attributable to methane: 1,227 tons direct emissions per year x 83 GWP = 101,841 tons CO_2e per year. 101.841 x 40 years = 4.07 million tons of CO_2e from direct methane emissions over the life of the project.

[204] 40 C.F.R. § 1501.3(b)(2)(i).

[205] *Western Organization of Resource Councils v. BLM*, 2018 WL 1475470 at *15 (D. Mont. 2018).

[206] *Gina McCarthy Talks About the Intersectionality of Climate Change*, YouTube, (Jan. 30, 2021), https://www.youtube.com/watch?v=z9RfN375QDI.

[207] Alex Lubben, et al., *These Communities Are Trapped in Harm's Way as Climate Disasters Mount,* Mother Jones (Aug. 4, 2022) https://www.motherjones.com/environment/2022/08/these-communities-are-trapped-in-harms-way-as-climate-disasters-mount/ ("People of color make up more than half the residents in counties that experienced at least three climate disasters in the past five years. These counties also have a higher proportion of residents who speak limited English and people in poverty than the rest of the country.")

[208] *Climate Change and Social Vulnerability in the United States,* U.S. Environmental Protection Agency (Sep. 2021), https://www.epa.gov/system/files/documents/2021-09/climate-vulnerability_september-2021_508.pdf.

labor, 4. coastal flooding and traffic, 5. coastal flooding and property, and 6. inland flooding and property) affect "socially vulnerable" groups based on income, education, race, and age.[209]

Of the four identified socially vulnerable groups, EPA found that racial minorities are most likely to currently live in areas that are at the highest risk for climate change related impacts such as increased mortality because of extreme temperatures, increased rates of childhood asthma, lost labor hours, and land loss due to higher sea levels.[210] EPA concluded that racial minorities are projected to be impacted significantly more than non-minorities by the extreme weather, air pollution, and ocean level rise that would be caused by a 2°C global warming. Notably, according to EPA, Black and African American individuals are 40% more likely to currently live in areas with the highest projected increase in mortality due to extreme temperatures.[211]

The RUS must disclose the climate and environmental justice impacts of its loan decisions, particularly where those decisions result in more than 100 million tons of direct GHG emissions and over $2 billion in social costs just in the first 15 years of operation.[212]

IV. The Supplemental EA Fails To Assess NTEC's Significant Impact On Human Health And Wetlands, And Fails To Consider Cumulative Emissions

A. NTEC's health impacts are significant.

The Supplemental EA is inadequate because it fails to consider the impact NTEC will have on the health of neighboring communities, especially environmental justice communities. The core of NEPA is examining how proposed federal actions impact "the quality of the human environment."[213] Because an action's "health, socioeconomic and cumulative consequences" can greatly impact the human environment, these consequences must be considered in NEPA review.[214]

1. NTEC would impose severe health impacts, especially on low income and Native populations.

NTEC's health and social effects are highlighted in the PSE Report. Overall, the facility's health impacts would be substantial: NTEC's emissions of criteria air pollutants are estimated to cause over one hundred million dollars in health-related harms over 40 years.[215] This estimate is not based on NTEC's full potential to emit, but on the average annual energy NTEC generates in the Supplemental EA's production cost modeling, extrapolated to cover its working life. The report specifies that these harms would include avoidable mortalities.[216]

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[209] *Id.* at 5-6.
[210] *Id. at 6.*
[211] *Id.*
[212] EPA NTEC Comments, attached comments at 8.
[213] *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 757 (2004); *see also* 42 U.S.C. § 4332(C).
[214] *Baltimore Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 106 (1983); *see also* 40 C.F.R. § 1508.1(g)(4).
[215] PSE Report at 3.
[216] *Id.*

These adverse effects would be concentrated in low income and Native populations. Communities near NTEC have a "high concentration of low-income households and people with low educational attainment."[217] Native people would experience particularly "elevated" risks because they are centrally located in the path of NTEC emissions.[218] The PSE Report projects Native populations would suffer health impacts "over 3 times as high as the overall population."[219]

Moreover, these impacted communities already experience "high cumulative pollution from other sources."[220] The area surrounding NTEC "ranks very high for air toxics and wastewater discharge sites . . . among other high pollutant indicators."[221] Because new sources of pollution compound the effects of existing pollution, nearby communities are more at risk for NTEC emissions. The facility would exacerbate "population vulnerability and risk of adverse health outcomes," [222] as low income and Native populations that are already overburdened by pollution will be further harmed by the plant's emissions.

2. RUS must prepare an EIS due to NTEC's significant health impacts.

NTEC's context, or its "affected environment,"[223] raises significant environmental justice concerns. Environmental justice plays a key role in how agencies should consider health and socioeconomic effects. The "principle of environmental justice encourages agencies to consider whether the projects they sanction will have a disproportionately high and adverse impact on low-income and predominantly minority communities."[224]

A 1994 Executive Order commits federal agencies to prioritizing environmental justice in their work.[225] 'To the greatest extent practicable and permitted by law," the Order requires federal agencies to "identify[] and address[], as appropriate, disproportionately high and adverse human health or environmental effects of [their] programs, policies, and activities on minority populations and low-income populations."[226] As part of this broad mandate, federal agencies must analyze environmental justice concerns in their NEPA reviews.[227]

The Supplemental EA fails to consider the health impacts of NTEC emissions on Native and low-income communities. While the Supplemental EA's Tribal Environmental Justice analysis broadly acknowledges that "criteria pollutants such as NOx, SO2, CO and particulates cause localized health impact. . ." it does not examine how this applies to Native and low-income

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[217] *Id.* at 1.
[218] *Id.* at 4.
[219] *Id.*
[220] *Id* at 2.
[221] *Id* at 1.
[222] *Id* at 2.
[223] 40 C.F.R. § 1501.3(b).
[224] Sierra Club v. FERC, 867 F.3d 1357, 1368 (D.C. Cir. 2017) (citation omitted).
[225] Exec. Order 12,898, Federal Actions to Address Environmental Justice in Minority Populations and Low–Income Populations, 59 Fed. Reg. 7629 (Feb. 11, 1994).
[226] *Id.* at § 1–101.
[227] *Sierra Club*, 867 F.3d at 1368.

communities specifically, or how criteria pollutants would exacerbate the high cumulative pollution already shouldered by these communities.[228]

Instead, the Supplemental EA repeats its claim that the facility will result in net GHG reductions,[229] and it never returns to analyze the localized health impacts of criteria pollutants it referenced.[230] Consequently, the Supplemental EA never examines the impact of NTEC criteria pollutant emissions on environmental justice communities.

The PSE Report establishes that these unexamined health impacts would be significant. Significance under NEPA is measured using four criteria: (1) short- and long- term effects, (2) beneficial and adverse effects, (3) effects on public health and safety, and (4) effects that would violate federal, state, Tribal, or local law protecting the environment.[231]

Each factor reinforces the significance of NTEC's health and social impacts. Over one hundred million dollars in health impacts,[232] effects that would disproportionately be experienced by environmental justice communities,[233] pose a clear adverse effect that centers on public health and safety. The PSE Report highlights that these effects would apply in both short and long term, up to four decades or longer if NTEC continues to operate.[234] Finally, NTEC violates Executive Order 12,898's environmental justice mandate by not identifying and addressing NTEC's "disproportionately high and adverse human health" effects "to the greatest extent practicable and permitted."[235]

The PSE Report finds that NTEC would "increase population vulnerability and risk of adverse health outcomes,"[236] while causing health impacts three times higher for Native communities than the general population.[237] These findings illustrate the significance of NTEC's health impacts, and those impacts necessitate EIS review.

3. The Supplemental EA fails to satisfy RUS regulations by not analyzing the environmental justice implications of NTEC's health and social impacts.

Separate from NEPA's significance analysis, RUS specifies in its regulations that loan applicants' proposals must, whenever practicable, "minimize adverse environmental impacts" and,

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[228] Supplemental EA at 3-40 to 4-2.
[229] Supplemental EA at 3-40.
[230] Supplemental EA at 3-30 to 4-2.
[231] 40 C.F.R. § 1501.3(b)(2).
[232] PSE Report at 3.
[233] *Id.* at 4.
[234] *Id.* at 2 (explaining the report "giv[es] a 40-year estimate of NTEC's generation, emissions, and health impacts").
[235] Exec. Order 12,898, Federal Actions to Address Environmental Justice in Minority Populations and Low–Income Populations, 59 Fed. Reg. 7629 § 1–101 (Feb. 11, 1994).
[236] PSE Report at 2.
[237] *Id.* at 4.

in particular, "avoid or minimize potentially disproportionate and adverse impacts to minority or low-income populations."[238]

Consistent with EPA's July 26, 2022 comments, the Supplemental EA should have included an assessment of whether NTEC's public health impacts fall disproportionately on Native American communities.[239] The same is true for NTEC's impacts on the high concentration of low-income households near the facility. But the Supplemental EA simply does not contain these assessments.[240] Without examining NTEC's health impacts on nearby minority and low-income communities, RUS cannot determine whether Dairyland's proposal satisfies the requirement to "avoid or minimize disproportionate impacts" for these communities.[241]

B. The Supplemental EA fails to consider cumulative impacts as is required under NEPA.

NEPA also requires consideration of cumulative impacts, defined in rule as "effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency . . . or person undertakes such actions."[242]

RUS should include a fuller cumulative impacts analysis of the public health impacts of NTEC in an EIS. Air pollution impacts are not experienced by surrounding communities in isolation; rather, they are experienced cumulatively with other pollution sources. As described in the PSE Report, the area surrounding the proposed NTEC site "has a high concentration of low-income households and people with low educational attainment; the area also ranks very high for air toxics and wastewater discharge sites as well as diesel particulate matter and traffic, among other high pollutant indicators."[243] According to the report, these multiple social and environmental health stressors increase the risk of adverse health outcomes.[244]

The Supplemental EA does not independently assess the impact of adding a significant amount of air pollution from the operation of NTEC to a community already burdened by some of the worst air quality in the state.[245] Instead, it relies wholly on the original EA's conclusion that NTEC will not "cumulatively contribute to significant adverse air quality impacts" because it will be permitted under the Clean Air Act and is not anticipated to result in a violation of the National Ambient Air Quality Standards (NAAQS).[246]

In December 2021, Dairyland submitted a new air permit application, analyzing the extent to which NTEC's emissions would increase the concentrations of certain air pollutants and worsen

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[238] 7 CFR 1970.4(a).
[239] EPA NTEC Comments, attached comments at 10.
[240] Supplemental EA, 3-30 to 3-40.
[241] 7 C.F.R. § 1970.4(a).
[242] 40 C.F.R. § 1508.1(g)(1)-(2).
[243] PSE Report at 1.
[244] PSE Report at 2.
[245] PSE Report at 2 (noting in Table 1 that the populations within 6 miles of the NTEC site rank in the top ten percent for exposure to Diesel Particulate, and Air Toxics per EPA's EJSCREEN 2.0 tool).
[246] Supplemental EA at 3-2; *See also* EA at 3-6 to 3-7.

the ambient air quality nearby.[247] This application, included in the Supplemental EA as Appendix A, shows that because of the operation of NTEC, ambient air levels of nitrogen dioxide (NO_2) are expected to nearly exceed the one-hour NO_2 standard.[248] In comments on the application and draft permit, the Sierra Club criticized the NO_2 modeling for two reasons. First, the Club noted that the background NO_2 concentration data used in the modeling were from 2018-2020 and were artificially low due to the COVID-19 pandemic.[249] Incorporating ambient NO_2 data from 2021, as car and truck traffic significantly increased as a result of the moderation of the pandemic, would increase the likelihood that actual cumulative NO_2 levels would exceed those modeled in the application. In addition, the application's modeling omits NO_2 emissions from the on-site 1490 horsepower diesel generator. Emissions from this engine should be included in the cumulative impacts analysis.

In other words, once NTEC begins operating, there is a significant risk that the cumulative NO_2 levels in nearby communities will exceed the short-term NAAQS, resulting in harm to people's health. Breathing high concentrations of NO_2, even for short periods of time, can "aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms … hospital admissions and visits to emergency rooms."[250] Without a full and independent assessment of the impacts of the air emissions from NTEC, considered cumulatively with the present-day poor air quality in the communities around the proposed site, the Supplemental EA is deficient and does not comply with NEPA.

C. NTEC's Impacts to Wetlands are Significant.

Both the Supplemental EA and the original EA underestimate the project's impact on wetlands, which would be significant. The EA indicates that the project will permanently impact 3.47 acres of wetlands, and temporarily impact 14.82 acres of wetlands.[251] However, DNR's wetland individual permit finds that NTEC's project will cause over 80 acres of impacted wetlands, including 44.32 acres of "temporary fill," 29.99 acres of wetland conversion, and 8.56 acres of permanent wetland fill.[252] DNR required purchase of 49.78 credits from wetland mitigation banks to compensate for the project's wetland impacts.[253]

The "temporary" fill is associated with access matting and staging areas.[254] Per the wetland fill permit, South Shore Energy (the Wisconsin affiliate of Minnesota Power) and Dairyland will provide a "Final Wetland Restoration and Revegetation Plan" and "Post-Construction Monitoring

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[247] Supplemental EA 3-14, 3-22
[248] Supplemental EA, Appendix A at 6-15. The NO2 concentration as modeled to reach 181.9 micrograms per cubic meter. The 1 hour NAAQS is 188.
[249] Letter from Elizabeth Ward, Chapter Dir., Sierra Club-Wis., to Jordan Munson, Air Mgmt. Eng'r, Wis. Dep't of Nat. Res. at 2 (May 21, 2022), https://www.sierraclub.org/sites/www.sierraclub.org/files/sce-authors/u560/Sierra%20Club%20NTEC%20comments_with%20exhibits.pdf.
[250] U.S. EPA, *Basic Information About NO_2*, https://www.epa.gov/no2-pollution/basic-information-about-no2#Effects (last updated Aug. 2, 2022).
[251] EA at 3-91.
[252] Wisconsin Department of Natural Resources, *Utility Permit* WP-IP-NO-2021-16-N00912, 932, 933 (July 15, 2022), Finding of Fact 33.
[253] *Id*., Finding of Fact 35.
[254] *Id.*, Findings of Fact 33, 36.

Plan" to DNR 45 days prior to construction. These plans must explain how these parties propose to restore wetlands in the access and staging areas to the functioning they had prior to construction, and how those restoration efforts will be monitored for success.[255]

The preliminary plans DNR has regarding wetland restoration and monitoring in these areas are cursory. They are just a few pages in length and comprised mostly of bullet points. If restoration fails, the impacts to these wetlands will not be temporary, but permanent, and the mitigation provided by the purchase of mitigation bank credits will not compensate for impacts to wetland functional values caused by the project. In other words, absent successful restoration in the access matting and staging areas, the project will not meet the standards for permit issuance under Wisconsin law.[256] Given this, it is concerning DNR issued the wetland permit without more information about what the final restoration and monitoring plans will look like.

It is also not clear that the wetland permit DNR issued covers the full impacts to wetlands the project will cause. For example, erosion and runoff issues could lead to significant impacts to wetlands along the Nemadji River downstream of the project site.

Wetlands have a critical role to play in limiting climate change impacts, because wetlands reduce the severity and incidence of flooding, a function that will become only more important as climate change makes Wisconsin warmer and wetter in coming years.[257] NTEC would not only worsen climate change by emitting GHGs for years into the future, but it could also impair water resources necessary for landscapes and communities to be resilient in the face of a changing climate. NTEC's wetlands impact is another reason the RUS cannot find that the project "will not have a significant effect on the human environment" under its rules, and so an EIS is required.[258]

V. The Supplemental EA Does Not Consider Reasonable Alternatives To NTEC

NEPA requires thorough exploration of project alternatives. Federal agencies are required to "study, develop, and describe appropriate alternatives" for project proposals.[259] This responsibility extends to "any actions that have an impact on the environment,"[260] and it "applies whether an agency is preparing an [EIS] or an [EA]." [261] The alternatives requirement entails "full and meaningful consideration [of] all reasonable alternatives."[262] CEQ defines reasonable alternatives as a "reasonable range of alternatives that are technically and economically feasible, and meet the purpose and need for the proposed action."[263]

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[255] *Id*., Permit Condition 6, Finding of Fact 79.
[256] Wis. Stat. § 281.36(3n)(c)3 (state wetland permit issuance is also how Wisconsin issues its water quality certification for purposes of Section 404 permits under the federal Clean Water Act).
[257] Wis. Admin. Code § NR 103.03(1)(a); *Governor's Task Force on Climate Change Report,* State of Wis., at 60-61 (2020).
[258] 7 C.F.R. § 1970.104.
[259] 42 U.S.C. § 4332(E).
[260] *City of N.Y. v. U.S. Dep't of Transp*., 715 F.2d 732, 742 (2d Cir. 1983).
[261] *N. Idaho Cmty. Action Network v. U.S. Dep't of Transp.*, 545 F.3d 1147, 1153 (9th Cir. 2008)
[262] *Id.*
[263] 40 C.F.R. § 1508.1(z).

RUS regulations more specifically require EAs to consider alternatives that would alleviate a proposal's environmental risks. Specifically, for "any specific project element that is likely to adversely affect a resource," EA's must "[a]t a minimum" consider both the "No Action alternative, and . . . at least one [other] alternative to that project element."[264] For example, if a project would likely damage a wetland, the EA would need to include an alternative that would not damage the wetland.

"Considering alternatives, including alternatives that mitigate GHG emissions, is fundamental to the NEPA process and accords with NEPA Sections 102(2)(C) and 102(2)(E).[265] The alternatives requirement "ensure[s] that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (**including total abandonment of the project**) which would alter the environmental impact and the cost-benefit balance."[266]

The Supplemental EA leaves out the obvious alternative approach that would mitigate GHG emissions: a renewable energy alternative to NTEC. It states, "[h]aving determined to advance the NTEC project, [Minnesota Power] and Dairyland sought to evaluate potential alternative sites for a new generation project."[267] Rather than explore the obvious generation alternative, the Supplemental EA narrowly suggests two possible alternative *locations*, approximately one and a half miles from each other, and two possible routes for the transmission lines. In addition to these siting alternatives, the Supplemental EA compares NTEC's emissions projections to a hypothetical future without NTEC which is based on its severely flawed displacement methodology, discussed in Part III.B. These "alternatives" are insufficient to meet the requirements of NEPA.

A. The Supplemental EA's No Action alternative wrongly assumes continued fossil fuel dependence.

The Supplemental EA's No Action alternative is based on its flawed modeling methodology, which inappropriately obscures NTEC's GHGs and credits NTEC for emission reductions at other power plants. And the Supplemental EA essentially assumes society will fail to achieve the emission reductions set forth in state and federal policies, as discussed in Parts III.B and III.C. Given how urgently we need these GHG reductions, and given that building a carbon-free power grid is key to achieving them, it is reckless and contrary to the purpose of NEPA to assume (and contribute to) such a failure. A more realistic No Action alternative would recognize that the grid is decarbonizing now and is under growing pressure to decarbonize faster. Moreover, thousands of megawatts worth of carbon-free renewable and battery projects are queued up waiting to interconnect to the MISO grid and aid in that decarbonization.[268] If NTEC is not built, rather

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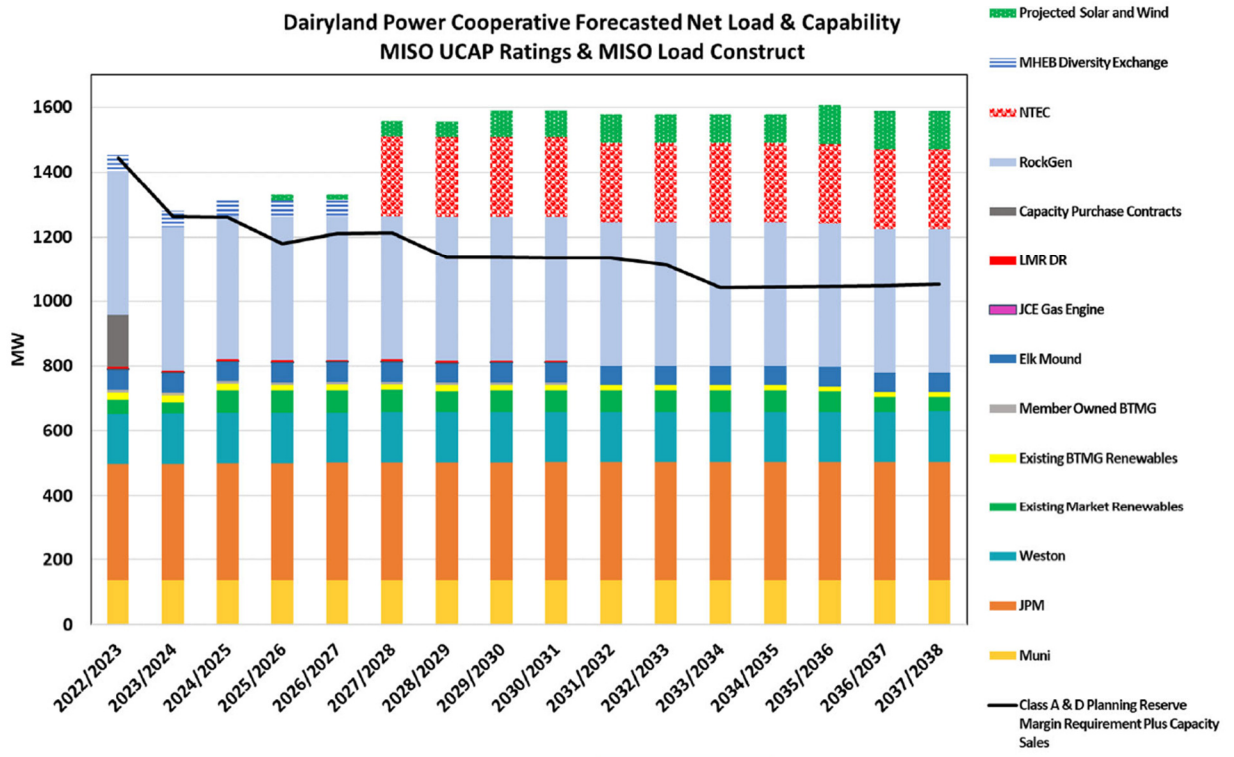
[264] 7 C.F.R. § 1970.102(a), (a)(3).
[265] 2016 GHG Guidance at 14.
[266] *Calvert Cliffs' Coordinating Committee, Inc. v. U.S. Atomic Energy Comm'n,* 449 F.2d 1109, 1114 (D.C. Cir. 1971). (emphasis added).
[267] Supplemental EA at 2-1.
[268] John Engel, *Solar, Storage Lead MISO's Record-Setting Interconnection Queue*, Renewable Energy World (Sept. 9, 2021), https://www.renewableenergyworld.com/solar/solar-storage-lead-misos-record-setting-interconnection-queue/#gref.

than deprive the system of "overall climatic benefits" as the Supplemental EA claims,[269] it will avoid locking in millions of tons of new GHG emissions.

B. Dairyland's need for NTEC is questionable given how much its current capacity exceeds its load.

A threshold question is raised by a recent regulatory filing by Dairyland: does the utility need NTEC at all? Dairyland recently submitted a document to the Minnesota Public Utilities Commission that appears to indicate that it already has far more capacity than it needs.[270] The figure below is taken from that filing.



The black line shows Dairyland's planning reserve margin requirement plus its capacity sales. Even including those sales, it shows that Dairyland has more than enough capacity to meet its needs without NTEC. Much of that capacity is represented by RockGen, a 503 MW gas plant that Dairyland purchased in December of 2021, after the initial EA and prior to the Supplemental EA. Dairyland's website explains that RockGen will help "support intermittent solar and wind resources."[271] Dairyland similarly describes the purpose of NTEC as, in part, "to facilitate the addition of new renewable energy sources to the power portfolio by complementing their

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[269] Supplemental EA at 3-29.

[270] Dairyland Power Cooperative, *2022 Optional-IRP Compliance Report of Dairyland Power Cooperative Pursuant to Minn. Stat. § 216B.2422, Subd. 2b,* at 6, Minnesota Public Utilities Commission, docket no.22-313 (July 1, 2022), https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={70FF617A-0000-CD16-BDB3-46BC35B8FED9}&documentTitle=20216-175746-01.

[271] *Dairyland Acquires RockGen Energy Center*, Dairyland Power Cooperative, https://dairylandpower.com/dairyland-acquires-rockgen-energy-center (last visited Aug. 10, 2022).

intermittent nature."[272] RockGen was purchased after Dairyland agreed to participate in the NTEC project and after the original EA. Its purchase, combined with Dairyland's apparently ample capacity shown in the figure above, raises the question of whether Dairyland still "needs" NTEC at all. Certainly, Dairyland's purchase of RockGen gives the utility additional flexibility to consider carbon-free alternatives to NTEC, especially renewables.

The Supplemental EA makes the additional claim that NTEC will help address a 1230 MW capacity shortfall identified by MISO.[273] However, as the Telos Report explains, the shortfall in question is for the 2022/2023 Planning Resource Auction (PRA). NTEC would not come online until 2027, so it could not address this short-term concern.[274] As for longer term capacity concerns, there are a large number of other resource additions already in the MISO queue that will likely address the shortfall before 2027.[275] In addition, over $10 billion in new transmission investments were recently approved by MISO, which as Telos states, will "largely increase transmission capability from the renewable rich MISO West regions to those regions experiencing the capacity shortfall (Zones 4-7 in the east of MISO)."[276] The recent enactment of the Inflation Reduction Act, making available hundreds of billions of dollars of new incentives, will spur even greater investment in renewable energy and storage across MISO.[277]

Moreover, the projected regional capacity shortfall for the 2022/2023 PRA is not due to a shortfall in the MISO West subregion, where NTEC would be. The shortfall is projected to be in states to the east and south of Wisconsin, in different MISO zones. Even if NTEC could be built in time to address the short-term capacity concern, Dairyland has apparently ample capacity to meet its own customers' needs, and as Telos states, "it would be extremely unusual for Dairyland to specifically acquire capacity to meet the shortfall of different load serving entities located in entirely different MISO zones."[278]

C. The Supplemental EA fails to consider carbon-free alternatives to NTEC.

The Supplemental EA also describes NTEC as intended to "secure capacity and energy resources that meet the system peak and demand for electricity for the years to come."[279] As discussed, there is reason to question whether this purpose and need is valid given Dairyland's current level of capacity. However, even if the need exists, both the original EA and the Supplemental EA are flawed because they fail to assess whether carbon-free alternatives could satisfy the stated purpose and need.

Rather, the Supplemental EA explains that Dairyland conducted "strategic planning sessions" with its own managers and board.[280] Dairyland also issued an RFP and obtained

[272] Supplemental EA at 1-6 to 1-7.
[273] Supplemental EA at 1-1.
[274] Telos Report at 7.
[275] Telos Report at 7.
[276] Telos Report at 7-8.
[277] Telos Report at 8.
[278] Telos Report at 8.
[279] Supplemental EA at 1-6.
[280] Supplemental EA at 2-1.

proposals that included a "variety of alternatives to meet Dairyland's supply needs."[281] These alternatives could supply "over 350 annual MW" (compared to 300MW from NTEC) and "included renewable projects."[282] Yet, the Supplemental EA fails to explore these renewable alternatives and only briefly reports that "Dairyland determined that none of these alternatives would be superior to participation in the NTEC Project." Not only is there no renewables-based alternative actually assessed in the EA or Supplemental EA, but there has been no public integrated resource planning process to consider whether Dairyland's needs could be met with renewable power rather than NTEC.[283]

RUS sidestepped its responsibility to analyze renewable alternatives that "meet the purpose and need for the proposed action" while vaguely referencing a decisionmaking process that happened outside of the NEPA process.[284] It is accepting Dairyland's prior and unsupported determination to choose NTEC over alternatives, even though RUS has the legal duty to analyze the alternatives itself as part of this environmental review process, under the standards imposed by NEPA and RUS's own rules. The Supplemental EA does not describe the renewable energy proposals Dairyland considered. It does not identify the emission reductions those alternatives would result in, the relative costs involved of building them, or even what type of renewable energy was analyzed.[285] Rather, the Supplemental EA generally acknowledges the existence of renewable alternatives to NTEC, but it dismisses them without further discussion.[286] It then pivots to reviewing alternative sites for NTEC.[287] Dairyland identified two locations for building NTEC's facility and two "macro-corridors . . . for transmission line development."[288] The Supplemental EA compares these options for building NTEC. However, this comparison assumes that a natural gas plant is the ideal means for supplying "capacity and energy resources" to the nearby region.[289]

D. Carbon-free alternatives are technically and economically feasible.

The Supplemental EA fails to provide the opportunity to evaluate meaningful low-carbon alternatives, particularly a renewable energy alternative to NTEC, possibly combined with batteries if needed to ensure reliability. There is ample evidence that a renewable energy alternative is reasonable. First, as presented in the Telos Report, the cost of energy from renewables is competitive with the cost of energy from combined cycle (CC) gas plants like NTEC. Second, modeling presented in the Minnesota Power Integrated Resource Plan proceedings currently in front of the Minnesota Public Utilities Commission shows that gas power can be economically and reliably replaced with renewable power and batteries. Third, Rocky Mountain Institute has analyzed proposed gas plants across the United States, including NTEC, and shown that clean energy portfolios are viable and often preferable alternatives. Fourth, Xcel Energy recently canceled its own proposed CC plant in Minnesota in favor of greater investment in renewables.

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[281] *Id.*
[282] *Id.*
[283] *Id.*
[284] 40 C.F.R. § 1508.1(z).
[285] Supplemental EA at 2-1.
[286] *See id.*
[287] *See* Supplemental EA at 2-2.
[288] *Id.* at 2.5.
[289] Supplemental EA at 1-6; *See* Supplemental EA at 2-2.

Fifth, the EPA has recently emphasized the importance of considering renewable alternatives to gas plants in environmental review, including in its comments to RUS on NTEC. And, finally, the decarbonization pathway studies discussed in Part I.C.4 establish the viability of meeting electric needs using carbon-free alternatives rather than new gas plants.

The Telos Report shows that, on a levelized cost of electricity basis, wind, solar, and solar hybrid facilities (which combine solar power with batteries) are cost competitive and sometimes cheaper than combined cycle gas plants, and that the costs of renewables and batteries are projected to continue to fall long-term.[290] In addition to having no GHG emissions, renewables and batteries protect ratepayers from gas price volatility, fuel shortages and potential future carbon regulatory costs.[291] If Dairyland met its energy needs with these carbon-free alternatives it could displace existing fossil fuel generation without adding the 2.7 million tons of potential GHG emissions per year from NTEC. An energy storage investment would also provide co-benefits: "batteries can be more efficient at providing capacity, ancillary services and responsive reserves" because they do not have minimum up or down times, unlike gas plants like NTEC.[292] Additionally, investments in storage would directly enable more renewable energy to be stored during overproduction times and used during peak demand times to mitigate transmission congestion.[293]

The Integrated Resource Planning ("IRP") proceedings currently before the Minnesota Public Utilities Commission ("PUC") also provide evidence that a renewable portfolio is an obvious and feasible alternative to NTEC. In the IRP proceedings, Minnesota Power, Dairyland's Minnesota partner, has presented its plans to build, operate, and use a portion of the power from the proposed NTEC gas plant. Clean Energy Organizations[294] ("CEOs") have presented compelling evidence that NTEC is not needed to meet the future energy demands of Minnesota Power's customer base. The CEOs conducted extensive modeling to show that increased investment in renewable energy resources, such as wind, solar, and battery storage, can reliably meet the energy demands at less cost than NTEC.[295]

In the IRP proceedings, CEOs show that a clean energy portfolio is cost-effective and reduces the financial, policy, and climate risks presented by NTEC, without sacrificing reliability. In particular, the Energy Futures Group Report ("EFG Report"), submitted with the CEOs' comments, shows the resource mixes of Minnesota Power's preferred plan (which includes NTEC) and the CEOs' plan (which excludes NTEC and replaces it with renewables).[296] The EFG Report shows that the CEOs' renewable energy plan is not just economically feasible—it is slightly

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[290] Telos Report at 4.
[291] *Id*.
[292] Telos Report at 4-5.
[293] Telos Report at 5.
[294] The coalition of various environmental and energy organizations in the Minnesota Power IRP includes both MCEA and Sierra Club, along with others.
[295] Clean Energy Organizations' Initial Comments, *In the Matter of Minnesota Power's Application for Approval of its 2021-2035 Integrated Resource Plan*, Minnesota PUC Docket No. E015/RP-21-33 (Apr. 28, 2022), and attached expert reports: Energy Futures Group, *A Clean Energy Alternative for Minnesota Power* (Apr. 2022) [hereinafter "EFG Report"]; and Telos Energy, *Transmission Reliability Analysis of Minnesota Power's Integrated Resource Plan* (Apr. 2022).
[296] EFG Report at 20.

cheaper than the plan with NTEC.[297] CEOs' evidence in the IRP proceeding shows that a renewable energy alternative is feasible and economic for at least the 20% share of NTEC's capacity that would be dedicated to Minnesota Power, and the same analysis should be done for the whole of NTEC.

Confining the climate impacts analysis to a comparison between a new gas plant or continued coal use does not reflect the current reality. The obvious alternative is to replace NTEC with renewable energy, or a Clean Energy Portfolio ("CEP") combining renewables with storage, energy efficiency and demand response. RMI released a 2021 report showing that over 90% of new capacity entering interconnection queues in 2020 came from the components of CEPs, including wind, solar, and energy storage.[298] It found that more than half of proposed new gas plants scheduled to enter service in the previous two years were canceled due to a combination of economics and advocacy.[299] Moreover, it shows that 80% of the remaining proposed gas plants (and 90% of CC plants like NTEC) could be economically avoided with CEPs, saving $22 billion and 873 metric tons of CO_2 emissions over a 20-year lifetime.[300]

In 2022, RMI specifically analyzed NTEC and its viability against CEPs.[301] RMI developed various CEPs to replace NTEC. CEPs were shown to be a technically viable option: each was able to provide the same services in terms of expected monthly generation and in maximum output during the top 50 peak hours of the year.[302] Furthermore, they are an economic option – RMI Found that "[g]as may not be the least-cost option for meeting the need NTEC is proposed to meet."[303]

Other utilities are catching on and shifting away from new gas. In 2017, Xcel Energy proposed to build a large new gas plant, similar to NTEC, to meet customer needs.[304] This proposed new gas plant, the "Sherco CC," would have been in the MISO West territory, like NTEC, and was proposed as an even larger 800MW resource.[305] Clean Energy Organizations, like in the Minnesota Power IRP concerning NTEC, pushed back with a clean energy plan during the Xcel IRP proceedings. In those proceedings, the Organizations presented evidence that a renewable energy portfolio was a technically feasible alternative and was actually cheaper than building the

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[297] EFG Report at 23.
[298] RMI, *Headwinds for US Natural Gas Power: 2021 Update on the Growing Market for Clean Energy Portfolios*, at 3, https://rmi.org/insight/headwinds-for-us-gas-power/.
[299] *Id,* at 14.
[300] *Id.* at 25-26.
[301] RMI, *Analysis of Alternative Clean Energy Portfolios (CEPs) for the Proposed Nemadji Trail Energy Center (NTEC)* (2022).
[302] *Id.* at 5.
[303] *Id*. at 6.
[304] Elizabeth Dunbar, *Replace Sherco Coal Plant with Natural Gas? Xcel Brings Debate to the Capitol*, MPR News (Feb. 2, 2017), https://www.mprnews.org/story/2017/02/02/xcel-sherco-coal-plant-replacement-natural-gas.
[305] John Farrell & Karlee Weinmann, *Sherco Power Plant: The Wrong Project, for the Wrong Reasons, at a Big Cost*, Star Tribune (Feb. 13, 2017), https://www.startribune.com/sherco-power-plant-the-wrong-project-for-the-wrong-reasons-at-a-big-cost/413648453/.

large new gas plant.[306] After years of promoting the Sherco CC, Xcel Energy changed course, and voluntarily abandoned the gas plant plans in favor of a lower-carbon portfolio.[307]

EPA has also been emphasizing the importance of fully exploring renewable alternatives to proposed gas plants. In its comments to the RUS in this docket, EPA notes that "[r]enewables and storage are not only projected to continue declining in cost over time while substantially reducing GHG and non-GHG pollution, but also to help stabilize domestic energy supply, e.g., renewable energy is less subject to global price fluctuations than natural gas."[308] EPA also stressed the importance of renewable alternatives to gas power in its recent comments on the Tennessee Valley Authority's ("TVA's) EIS for a proposed gas plant to replace the Cumberland coal plant. Unlike RUS with NTEC, the TVA conducted an EIS to study its proposed gas plant and in the EIS it explored a renewable solar generation and storage alternative. However, EPA asked TVA to go further by including other clean energy alternatives that were not fully analyzed to create blended alternatives for analysis. In its comments to the RUS and to the TVA, EPA has also warned of the risks of locking-in fossil fuel use and urges the agency to assess the plant emissions in the context of GHG reduction schedules.[309]

Finally, the multiple pathway studies discussed in Part I.C.4 above clearly model futures where gas power plants are replaced with renewable energy and batteries. The US studies chart out pathways that include rapid increases in the rates of renewables and batteries deployed, while new gas power plants lacking carbon capture are not built at all. The IEA global study similarly charts a path where renewable generation nearly triples by 2030, increasingly paired with batteries, while generation from gas plants lacking carbon capture plummets.[310]

All the examples listed above indicate that renewable power and batteries were economically viable alternatives to gas power even before the passage of the landmark Inflation Reduction Act (IRA), signed into law on August 16, 2022. The IRA -- hailed as the largest investment in combating climate change in U.S. history and as a monumental boost to clean energy -- invests $369 billion in the clean energy transition.[311] Analysts estimate that the law could greatly accelerate U.S. decarbonization, closing two-thirds of the emissions gap between current policy and the U.S. 2030 emission reduction target, and it does this largely through reducing the cost of

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[306] Robert Walton, *Clean Energy Groups, Xcel Energy Battle Over Future of Minnesota Coal Facility*, Utility Dive (July 23, 2015), https://www.utilitydive.com/news/clean-energy-groups-xcel-energy-battle-over-future-of-minnesota-coal-facil/402780/.

[307] *In the Matter of the 2020-2024 Upper Midwest Integrated Resource Plan of Northern States Power Company d/b/a Xcel Energy,* Order Approving Plan with Modifications and Establishing Requirements for Future Filings, Minnesota Public Utilities Commission Docket No. E-002/RP-19-368 (Apr. 15, 2022).

[308] EPA NTEC Comments, attached comments at 2.

[309] Letter and Comments from Mark J. Fite, Director of Strategic Programs Office, EPA Region 4, to Ashley Pilakowski, NEPA Specialist, TVA, CEQ No. 20220059 at 8 (June 30, 2022), https://cleanenergy.org/wp-content/uploads/2022-06-30-EPA-comments-on-Cumberland-CUF-DEIS.pdf.

[310] IEA 2021 at 114.

[311] John Engel, *Inflation Reduction Act: Clean Energy Industry Cheers 'Monumental' Vote by Senate*, Renewable Energy World (Aug. 8, 2022), https://www.renewableenergyworld.com/solar/inflation-reduction-act-clean-energy-industry-cheers-monumental-passage-by-senate/#gref.

clean energy in the power sector.[312] The previously intermittent tax credits for wind and solar power are effectively extended until 2032, new tax credits are provided for energy storage, and there are tax credits to incentivize domestic clean energy manufacturing to overcome supply chain problems.[313] The US currently has over 211 gigawatts ("GW") of clean power capacity, and this is expected to more than triple by 2030 to 750 GW.[314] And rural electric co-ops like Dairyland, which previously had trouble taking advantage of tax credits used by for-profit utilities, now have access to direct federal payments to deploy carbon-reducing technologies including renewables and energy storage.[315]

Renewable energy is an obvious alternative to NTEC that the Supplemental EA must explore. Not only would a renewable alternative meet the purpose and need for the project, there is also ample evidence that renewable alternatives are technically and economically feasible and becoming even more so. By choosing to ignore clean energy options, RUS has predetermined that NTEC is the preferred option, rather than using NEPA to fully inform the decisionmaking process.

E. The failure to explore renewable alternatives violates NEPA and RUS regulations, rendering the Supplemental EA inadequate.

"NEPA review cannot be used 'as a subterfuge designed to rationalize a decision already made.'"[316] The Supplemental EA openly states that Dairyland decided to build NTEC rather than renewables before doing any alternatives analysis under NEPA.[317] By accepting Dairyland's predetermined choice, the RUS has deprived itself and the public of a full picture of the alternatives to NTEC and undermined the purposes of NEPA: to fully inform government decisionmakers and the public of the impacts of a federal action.[318]

In addition to undermining the purpose of NEPA, the failure to consider a renewable alternative also violates RUS regulations. For any action under review, RUS requires EA's to analyze the "[e]nvironmental impacts of the proposed action including the No Action alternative, and, *if a specific project element is likely to adversely affect a resource, at least one alternative to that project element*."[319] Because greenhouse gas emissions adversely affect the climate, RUS was responsible for analyzing at least one NTEC alternative that would avoid the high emitting "element" of the NTEC proposal. Incorporating renewable energy proposals into the Supplemental

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[312] Jesse D. Jenkins, et al., *Preliminary Report: The Climate and Energy Impacts of the Inflation Reduction Act of 2022*, at 9-10, Princeton University Zero Lab, Aug. 2022, https://repeatproject.org/docs/REPEAT_IRA_Prelminary_Report_2022-08-12.pdf.
[313] John Hensley, *It's a Big Deal for Job Growth and for a Clean Energy Future*, The Power Line (Aug. 5, 2022), https://cleanpower.org/blog/its-a-big-deal-for-job-growth-and-for-a-clean-energy-future/.
[314] *Id.*
[315] Jennifer Runyon, John Engel, *The Inflation Reduction Act is Signed into Law*, PowerGrid International (Aug. 16, 2022), https://www.power-grid.com/td/the-inflation-reduction-act-is-signed-into-law/#gref.
[316] *Envtl. Def. Ctr. v. Bureau of Ocean Energy Mgmt.*, 36 F.4th 850, 882 (9th Cir. 2022) (quoting *Metcalf v. Daley*, 214 F.3d 1135, 1142 (9th Cir. 2000)).
[317] Supplemental EA at 2-1.
[318] *See Marsh v. Oregon Nat. Res. Council*, 490 U.S. 360, 371 (1989)("NEPA promotes its sweeping commitment to 'prevent or eliminate damage to the environment and biosphere' by focusing Government and public attention on the environmental effects of proposed agency action.").
[319] 7 C.F.R. § 1970.102(a)(3) (emphasis added).

EA would accomplish this goal. In contrast, an alternative sites analysis, where no site influences NTEC's rate of emissions,[320] does not fulfill RUS's responsibilities under its rules.

NTEC's emissions will adversely impact the climate. The Center for Global Sustainability at the University of Maryland stressed in 2021 that making the emission reductions we need by 2030 "hinges fundamentally on the ability to rapidly shift to zero emissions electricity generation."[321] This project, emitting up to 2.7 million tons of CO_2e each year for decades, clearly interferes with that critical shift.[322] The Supplemental EA does not consider alternative proposals for avoiding that damage.

The Supplemental EA's alternatives analysis fails to comply with both NEPA's statutory requirements and RUS's regulatory requirements. It therefore cannot provide a reasonable basis for a finding of no significant impact.

F. The RUS failed to consider requiring carbon capture as a mandatory condition of securing RUS loan assistance.

In addition to the clean energy alternatives described above, RUS fails to consider the alternative of requiring carbon capture and sequestration as a means to mitigate the project's climate impacts. Before the RUS uses public dollars to make a decision that facilitates four decades of gas combustion, it should at least consider an alternative that reduces the harm that the project inflicts on the public by requiring mandatory climate mitigation as a prerequisite to issuing the loan. Here, one available way to do that is to condition RUS's loan decision on the project applicant's enforceable commitment to use carbon capture and sequestration technology. While NEPA requires both consideration of reasonable alternatives, and a description of feasible mitigation measures, MCEA, Sierra Club, Clean Wisconsin, and Honor the Earth are proposing that RUS consider an alternative that would mitigate the project's climate harm by requiring use of carbon capture and sequestration as a condition of receiving RUS's federal loan assistance. This mandatory-mitigation alternative is feasible, within RUS's statutory mandate, and is the type of alternative that federal courts have required of other agencies.[323]

As EPA states in its comments on NTEC, "RUS should consider additional conditions for the Owners to receive federal funding, including … installation of carbon capture equipment at the proposed facility."[324] According to EPA, carbon capture and sequestration technologies "can be applied to both new and existing gas power plants, again avoiding lock-in of CO_2 emissions for the life of the power plant. The Supplemental EA did not discuss the potential for and option to implement post combustion CO_2 capture at the proposed project."[325]

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[320] *See* Supplemental EA at 3-2
[321] Hultman, et al., 2021 at 2.
[322] Supplemental EA, at 3-21.
[323] *WildEarth Guardians v. Bernhardt*, 423 F. Supp. 3d 1083, 1097 (D. Colo. 2019) (finding that NEPA obligated the Department of the Interior to analyze an alternative that would require a coal mine to flare its methane emissions, thereby mitigating climate impacts, as a condition of receiving federal authorization to mine coal on public lands).
[324] EPA Comments at 2-3.
[325] EPA Comments, attached comments at 5.

VI. Conclusion

The Supplemental EA fails to assess NTEC's climate impact, as required under NEPA, in the following ways:

- It obscures NTEC's millions of tons of new GHG emissions using a novel methodology that would make virtually any new power plant appear to reduce GHGs by effectively letting the proposed plant claim credit for emission reductions at competing power plants. The Supplemental EA's analysis also stops in 2040, when NTEC would be only 13 years into its intended 40 year operating life, thereby missing most of NTEC's lifetime emissions.
- While it quantifies NTEC's annual direct GHG emissions, it fails to estimate its lifetime emissions or to assess them within the context of the GHG emission reductions we need to avoid catastrophic warming. Without acknowledging the pace and scale of emission reductions that the science shows we need, and that federal and state climate policies reflect, the RUS and public cannot reasonably assess the significance of NTEC's emissions.
- It fails to apply the Social Cost of Carbon, which would allow it to estimate NTEC's negative climate impacts in monetary terms. The represents another failure to provide a frame of reference for NTEC's emissions, and it is particularly inappropriate when the analysis does quantify the plant's monetary benefits.
- It fails to quantify upstream methane emissions, despite the RUS request to do so and despite studies indicating upstream methane leakage greatly increases the climate impact of gas power.
- It fails to consider the short-term impacts of methane emissions, only looking at them in a 100-year timeframe rather than the widely-used 20-year timeframe.
- And, it fails to acknowledge that NTEC's climate impacts will fall disproportionately upon environmental justice communities.

The Supplemental EA also fails to assess NTEC's other impacts, in the following ways:

- It fails to address the significant health impacts associated with NTEC's emissions, including the 107.8 million dollars' worth of health impacts over forty years, falling disproportionately on Native Americans.
- It fails to consider NTEC's cumulative impact on air quality, including how its emissions of NO2 would bring an already polluted area close to nonattainment.
- And, it fails to sufficiently consider the damage NTEC would cause to wetlands.

And finally, the Supplemental EA completely fails to do the necessary analysis of alternatives to building NTEC or mitigating its emissions. The obvious alternative to building NTEC – which is feasible and would avoid all the above impacts – would be to instead build

renewable resources, possibly combined with batteries. And the possibility of mitigating NTEC's carbon emissions using carbon capture technologies is nowhere considered.

For these and other reasons described in these comments, a finding of no significant impact based upon this Supplemental EA would be arbitrary and capricious. Our organizations urge the RUS to find instead that an EIS is necessary prior to funding NTEC, and that the EIS must correct the deficiencies of the Supplemental EA, including by conducting a thorough analysis of carbon-free alternatives to NTEC.

Alternatively, the RUS should simply reject Dairyland's forthcoming loan application on the grounds that building a huge new source of GHG emissions is utterly incompatible with the climate protection policies that RUS is required to advance, including the goal of achieving a carbon-free electric grid by 2035.

Sincerely,

/s/Evan Mulholland
Evan Mulholland
Stephanie Fitzgerald
Barbara Freese
Minnesota Center for Environmental Advocacy
1919 University Ave. West, Suite 515
St. Paul, MN 55104
651-223-5969 ext. 4874
emulholland@mncenter.org
sfitzgerald@mncenter.org
bfreese@mncenter.org

/s/Laurie Williams
Laurie Williams
Senior Attorney
Sierra Club
1536 Wynkoop St. Suite #200
Denver, CO 80202
303-454-3358
laurie.williams@sierraclub.org

/s/Katie Nekola
Katie Nekola
General Counsel
Clean Wisconsin
634 W. Main St., Suite 300
Madison, WI 54703
608 251-7020 ext. 14
knekola@cleanwisconsin.org

/s/Paul Blackburn
Paul Blackburn
Staff Attorney
Honor the Earth
PO Box 63
607 Main Ave.
Callaway, MN 56521
218-375-3200
paul@honorearth.org

cc: Farah Ahmad, USDA Rural Development Chief of Staff
Xochitl Torres Small, Under Secretary for Rural Development
Gina McCarthy, White House National Climate Advisor
Ali Zaidi, Deputy White House National Climate Advisor
Joseph S. Badin, USDA Rural Development Deputy Assistant Administrator
Tom Vilsack, U. S. Secretary of Agriculture
Adrien D. Lindsey, USDA Director of the Office of Secretariat