December 30, 2025

Submitted via email only

DEQCoal@mt.gov
Montana Department of Environmental Quality
Coal Mining Section
Mining Bureau
P.O. Box 200901
Helena, MT 59620-0901

RE: Our Children's Trust Comments on DEQ's Draft Environmental Assessment for Spring Creek Mine Amendment 6, Navajo Transitional Energy Company, LLC, Permit No. C1979012

To Montana Department of Environmental Quality ("DEQ"):

On behalf of the 16 youth Plaintiffs in the constitutional climate case *Held v. State of Montana*, Our Children's Trust respectfully submits this comment letter on DEQ's Draft Environmental Assessment for Spring Creek Mine Amendment 6 ("AM6") for surface coal mining permit, No. C1979012, held by Navajo Transitional Energy Company, LLC. The AM6 permit, if approved, would add hundreds acres of mineable coal to the current surface mining operations of Spring Creek Mine, allowing for the extraction of an additional 39.4 million tons of coal over the anticipated 15-year life of the mine expansion.[1] Importantly, the lifecycle greenhouse gas ("GHG") emissions that would result from AM6 is approximately 68.10 million metric tons ("MMT") of carbon dioxide equivalent ("CO_2e").[2]

The *Held* Plaintiffs appreciate this opportunity for public comment and wish to highlight the ways in which the Draft EA's climate analysis for AM6 is inconsistent with the best available science and the *Held* factual findings. The roughly 68 MMT of CO_2e emissions AM6 would produce over its lifecycle is greater than the 2020-2022 average of Montana's gross statewide emissions, including agriculture and land use change (roughly 50.7 MMT CO_2e).[3] Put differently, the roughly 68 MMT CO_2e emissions AM6 would produce over its lifecycle is greater than the 2024 *country-wide* CO_2e emissions (including land use change) of over 120 countries, including countries such as Norway, Sweden, Austria, Uganda, Ireland, and Singapore – each with multiple times the population of Montana.[4]

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[1] *Id*. at 61.
[2] *Id*. at 65, Table 10.
[3] *Id*. at 59, Table 6.
[4] Our World in Data, *Annual greenhouse gas emissions including land use*, OURWORLDINDATA.ORG (2024), https://ourworldindata.org/grapher/total-ghg-emissions?tab=table&country=~USA (table view of "Greenhouse gas emissions" data for year 2024). Each of the referenced countries had total 2023 CO_2e emissions, including land use, registering around or under 68 million tons.

The Draft EA, based on faulty use of the Model for the Assessment of Greenhouse Gas Induced Climate Change ("MAGICC") model, concludes that AM6's contribution to climate change is not significant because the project's lifecycle emissions are "only" modeled to result in 0.004°C of Montana's warming over the next decade.[5] DEQ's conclusion that AM6 will not significantly contribute to climate change cannot withstand scientific scrutiny for several reasons.

First, this conclusion ignores the scientific reality, as reflected in the *Held* factual findings, that *the Earth's climate system is already dangerously over saturated with* CO_2, causing a significant energy imbalance, and that there is *currently an unconstitutional degree of degradation of Montana's environment and natural resources* due to the existing concentration of CO_2 in the atmosphere and state of climate change. As the uncontroverted scientific evidence adduced in *Held* demonstrated, each additional ton of CO_2 emissions worsens the Earth's already significant energy imbalance, leads to further warming, and causes further injuries to Montana's children and youth. In other words, given the already dangerous current state of climate destabilization and the fact that *every additional ton of* CO_2 *emitted into the atmosphere makes the problem worse and more difficult to solve*, a project which would cause more CO_2e emissions over its lifetime than the annual (2024) emissions of over 120 countries on Earth simply cannot be considered not significant.[6]

Second, the Draft EA's conclusion that AM6 is not a significant contributor to global climate change is erroneous and is premised on a flawed use of MAGICC and Representative Concentration Pathways ("RCPs"). As noted in OCT's October 30, 2025, public comments on DEQ's Draft Greenhouse Gas Guidance document,[7] while there is nothing inherently wrong with the MAGICC model and RCPs (or the RCP's successor Shared Socioeconomic Pathways, "SSPs"), these are tools that reflect *collective global societal actions* and as such are ill-suited to ascertain the incremental contributions of specific GHG-emitting projects in Montana to global temperature change. Employing MAGICC to determine the individual contribution to future global temperature change from an individual fossil fuel project will *necessarily* lead to even the largest and highest-emitting projects being deemed non-significant contributors to global climate change because *of course* any one project standing alone compared to either collective global emissions or collective global temperature change will appear small. Here, *the fact that AM6 is, by itself, anticipated to increase global temperatures by 0.000035°C (rather than not registering at all or registering as an infinitesimally small decimal like* 1^{-10}*) demonstrates the project's massive impact rather than its insignificance*.

Finally, the approval of AM6 is contrary to DEQ's affirmative constitutional obligations to maintain and approve a clean and healthful environment for present and future generations and inconsistent with MSUMRA.

Ultimately, given the fundamental rights at stake for the 16 youth Plaintiffs in *Held,* as well as other Montana youth, the current degradation and depletion of Montana's environment and natural resources, and the current harms to Montana's children and youth caused by fossil fuel pollution and climate change, DEQ must demonstrate there is a compelling need for such a major

[5] Draft EA at 65.
[6] *See* Our World in Data, *supra* note 4.
[7] Attached as Exhibit 1.

permit revision and increased coal mining and that approving AM6 is the least burdensome means to meet any compelling need. Absent such a showing, the permit must be denied.

I. AM6 Would Cause and Contribute to Climate Change Disruptions in Montana and Harm Montana's Children and Youth

As noted above, AM6 would result in the extraction of an additional 39.4 million tons of coal and would result in lifecycle GHG emissions (including the coal combustion) of approximately 68 MMT CO_2e. These levels of emissions are significant when compared to Montana's annual gross emissions from all sources, including land use—approximately 50.74 MMT CO_2e (2020 to 2022 average). Not only are the lifecycle GHG emissions from AM6 greater than Montana's gross annual emissions, they are more than double Montana's 2023 CO_2 emissions from energy consumption of 29.4 MMT CO_2 (i.e., not including agriculture and land use change).[8] The lifecycle GHG emissions from AM6 are over *eight times greater* than Montana's 2023 CO_2 emissions from the state's transportation sector (7.9 MMT CO_2).[9] Additionally, the lifecycle GHG emissions from AM6 are greater than the 2024 country-wide CO_2e emissions (including land use change) of over 120 countries—including many countries with multiple times the population of Montana.[10]

DEQ was a defendant in *Held v. State of Montana*, and is aware of, and bound by, the ruling in that case, including the District Court's August 14, 2023, Findings of Fact and Conclusions of Law Order,[11] and the December 18, 2024, Montana Supreme Court decision that fully affirmed the District Court's Order.[12]

The District Court's August 14, 2023, Order in *Held v. State of Montana* set forth detailed findings of fact and conclusions of law relating to Montanans' fundamental rights, including their right to a clean and healthful environment. The Order also made detailed factual findings related to the array of serious harm that fossil fuel pollution and climate change has already caused and will increasingly cause to Montana's environment and citizens.

Importantly, based on the testimony of the youth Plaintiffs and their experts at trial, the District Court detailed how Montana children, including the 16 youth Plaintiffs, are already suffering grave injuries because of DEQ's historic and ongoing approval of fossil fuel activities. The District Court made clear that these injuries to children will get worse if fossil fuel permitting and activities continue. Based on the uncontested evidence presented at trial, the District Court found, in part, that:

> 89. Until atmospheric GHG concentrations are reduced, extreme weather events and other climactic events such as drought and heatwaves will occur more

[8] U.S. Energy Information Administration, *Table CO2.1. Total CO2 emissions estimates from energy consumption by source, 2023 (million metric tons of carbon dioxide (CO2))*, EIA.GOV, https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_sum/html/sum_co2_tot.html&sid=US.
[9] U.S. Energy Information Administration, *Table CO2.9. Total CO2 emissions estimates from energy consumption by sector, ranked by state, 2023*, EIA.GOV, https://www.eia.gov/state/seds/sep_sum/html/pdf/rank_co2_sector.pdf.
[10] Our World in Data, *supra* note 4.
[11] *Held v. State of Montana*, No. CDV-2020-307, Findings of Fact, Conclusions of Law, and Order (Mont. 1st Jud. Dist. Ct., Lewis and Clark County, Aug. 14, 2023) (hereinafter "*Held District Court Order*").
[12] *Held v. State*, 2024 MT 312.

frequently and in greater magnitude, and Plaintiffs will be unable to live clean and healthy lives in Montana.

92. Every ton of fossil fuel emissions contributes to global warming and impacts to the climate and thus increases the exposure of Youth Plaintiffs to harms now and additional harms in the future.

104. Children are uniquely vulnerable to the consequences of climate change, which harms their physical and psychological health and safety, interferes with family and cultural foundations and integrity, and causes economic deprivations.

108. The physical and psychological harms are both acute and chronic and accrue from impacts to the climate such as heat waves, droughts, wildfires, air pollution, extreme weather events, the loss of wildlife, watching glaciers melt, and the loss of familial and cultural practices and traditions.

140. Anthropogenic climate change is impacting, degrading, and depleting Montana's environment and natural resources, including through increasing temperatures, changing precipitation patterns, increasing droughts and aridification, increasing extreme weather events, increasing severity and intensity of wildfires, and increasing glacial melt and loss.

193. The science is clear that there are catastrophic harms to the natural environment of Montana and Plaintiffs and future generations of the State due to anthropogenic climate change. . . . The degradation to Montana's environment, and the resulting harm to Plaintiffs, will worsen if the State continues ignoring GHG emissions and climate change.[13]

Based on the compelling factual record presented by Plaintiffs and their experts, the District Court held, as a conclusion of law, that:

6. Every additional ton of GHG emissions exacerbates Plaintiffs' injuries and risks locking in irreversible climate injuries.

7. Plaintiffs' injuries will grow increasingly severe and irreversible without science-based actions to address climate change.

8. Plaintiffs have proven that as children and youth, they are disproportionately harmed by fossil fuel pollution and climate impacts.

49. Based on the plain language of the implicated constitutional provisions, the intent of the Framers, and Montana Supreme Court precedent, climate is included

[13] *Held District Court Order* at 24, 28-29, 35, 46.

> in the "clean and healthful environment" and "environmental life support system" Mont. Const. Art. II, Sec. 3; Art. IX, Sec. 1.
>
> 50. Montana's climate, environment, and natural resources are unconstitutionally degraded and depleted due to the current atmospheric concentration of GHGs and climate change.[14]

The Montana Supreme Court affirmed the District Court's Order in full, finding that:

> Montana is heating faster than the global average and the rate of warming is increasing. Overwhelming scientific evidence and consensus shows that this warming is the direct result of greenhouse gas (GHG) emissions that trap heat from the sun in the atmosphere, primarily from carbon dioxide (CO_2) released from human extraction and burning of fossil fuels such as coal, oil, and natural gas.
>
> These emissions result in extreme weather events that are increasing in frequency and severity, including droughts, heatwaves, forest fires, and flooding. These extreme weather events will only be exacerbated as the atmospheric concentration of GHGs continues to rise. Projections indicate that under a business-as-usual emissions scenario, Montana will see almost ten additional degrees of warming by 2100 compared to temperatures in 2000. By 2050, Montana will have 11–30 additional days per year with temperatures exceeding 90 degrees and a similar loss of days below freezing. Montana has already seen (and will increasingly see) adverse impacts to its economy, including to recreation, agriculture, and tourism caused by a variety of factors including decreased snowpack and water levels in summer and fall, extreme spring flooding events, accelerating forest mortality, and increased drought, wildfire, water temperatures, and heat waves.
>
> We reject the argument that the delegates—intending the strongest, all-encompassing environmental protections in the nation, both anticipatory and preventative, for present and future generations—would grant the State a free pass to pollute the Montana environment just because the rest of the world insisted on doing so. The District Court's conclusion of law is affirmed: Montana's right to a clean and healthful environment and environmental life support system includes a stable climate system, which is clearly within the object and true principles of the Framers inclusion of the right to a clean and healthful environment.[15]

DEQ is bound by the *Held* factual findings and its climate analysis in the Draft EA for AM6 cannot *ignore* these factual findings and legal holdings. By any reasonable metric, a permit expansion which authorizes a permittee to continue to mine such significant quantities of coal with the resulting significant GHG emissions is a state action of monumental significance. In conducting a constitutionally compliant MEPA review of AM6's climate impacts, DEQ must proceed with a clear-eyed understanding of the state of climate change-driven degradation of Montana's environment and infringement of Montanans' fundamental rights, and of its obligations

[14] *Id*. at 87, 97-98.
[15] *Held v. State of Montana,* 2024 MT 312, ¶¶ 3-4, 30.

under the Montana Constitution. Such a clear-eyed understanding would make clear that there is no justification for approving the permit expansion.

II. The Draft EA's Conclusion That AM6's Contribution to Climate Change is Not Significant is Erroneous and Contrary to Science and Law

The Draft EA concludes that AM6's contribution to climate change is "not significant" since, based on MAGICC projections, the project is anticipated to raise global temperatures by 0.000035°C by 2046 and contribute to 0.004% of the anticipated warming in Montana over the next decade.[16] This conclusion is incorrect and reflects both DEQ's fundamental misunderstanding concerning climate change and disregard of the factual findings in *Held*.

As the Draft EA accurately notes, the buildup of anthropogenic CO_2 in Earth's atmosphere due to fossil fuel emissions and the warming it creates is, fundamentally, a problem stemming from collective action and the cumulative emissions that have built up over time. The MAGICC tool reflects this reality as it is designed to determine global temperature response to a high-emissions or fossil fuel heavy future versus a low-emissions or clean, renewable energy future versus a trajectory somewhere in between these scenarios. Likewise, the RCPs simply predict the possible range of radiative forcing the Earth will experience under different future atmospheric CO_2 concentrations arrived at via hypothetical future *collective global behavior*.[17] Both MAGICC and the RCPs are *not* focused on individual fossil fuel projects pursued in a single state within one nation.

Collective global action drives current and future emissions and ultimately determines the RCP or trajectory that the Earth's climate system will traverse. In other words, the RCPs reflect possible futures based on collective action to either reduce emissions by curtailing fossil fuel use or increase emissions by expanding fossil fuel use. Accordingly, the Draft EA's calculation of the surface temperature change ostensibly attributable to AM6 by running the MAGICC model for RCP 2.6 and RCP 8.5, reflects a fundamental misunderstanding of both MAGICC and the RCPs. Because the RCPs reflect *global actions in the aggregate* it is not possible to ascertain the potential global temperature impact of an individual project by simply subtracting the project's anticipated emissions from a given RCP.

Instead, *the approval or rejection of individual fossil fuel projects like AM6 make a given RCP more or less likely*. Approving AM6 and condoning the continued extraction and combustion of millions of tons of coal for 15 years to come is an action that is inconsistent with RCP 2.6 and moves the globe towards RCP 8.5 (i.e., makes RCP 2.6 less likely and makes RCP 8.5 more likely). Denying, rejecting, or preventing AM6 and similar fossil fuel expansion projects from materializing is consistent with RCP 2.6 and moves the globe away from the high-emission RCPs to the lower-emission RCPs. Put simply, the collective approval or rejection of fossil fuel projects like AM6 determines the RCP trajectory the planet will follow. Montana's actions here are of great import – locally, regionally, and globally – given the vast fossil fuel reserves in the State. This is

[16] Draft EA at 65.

[17] *See* Malte Meinshausen, et al., *The RCP greenhouse gas concentrations and their extensions from 1765 to 2300* 214 CLIMACTIC CHANGE 109:213-241 (2011) (noting the RCPs "provide a range of possible futures for the evolution of atmospheric composition" and are "based on multi-gas emission scenarios").

especially true when considering that DEQ is also considering permits to expand other coal mines at the same time as this Spring Creek coal mine expansion.

The Draft EA's conclusion that AM6's contribution to climate change is not significant is a reflection of using the wrong tool for the job. Any comparison of an individual project to overall global emissions or overall global temperature change is going to appear small by this fundamentally flawed method. This is unsurprising as it is simply a reflection of the reality that the climate change crisis is driven by myriad sources of anthropogenic CO_2 emissions that collectively build up in the atmosphere, driving warming. More fundamentally, concluding that a single project's contribution to climate change is insignificant because the project's emissions appear small when compared to collective global emissions or because the future global warming ostensibly attributable to an individual project appears small *ignores the fact that every ton of additional fossil fuel CO_2 emissions matters because the Earth's atmosphere is already dangerously over-saturated with CO_2 and each new ton of CO_2 emissions will persist in the atmosphere and drive warming for centuries*. Again, as found in *Held,* every additional ton of CO_2 emitted exacerbates Plaintiffs' injuries and risks locking in irreversible climate injuries.

Here, AM6's cumulative GHG emissions are, albeit with the wrong tools, modeled to raise global temperatures 0.000035°C by 2046. On this basis the Draft EA concludes the project is an insignificant contributor to climate change. To the contrary, *the fact that the project even moves the needle, so to speak, and is measurable at all (instead of some infinitesimally small number like 1^{-10}) demonstrates its significance*. As detailed above, by any reasonable metric, a project that has lifetime CO_2e emissions greater than the annual emissions of more than 120 countries on Earth is monumentally significant.

As established in *Held*, Montana has a constitutional duty to reduce its fossil fuel activities and resulting GHG emissions, which are proven to be harming the *Held* Plaintiffs, as well as other Montanans, and unconstitutionally degrading Montana's life support system. It was also established that Montana's GHG emissions nationally and globally significant and the State contains significant fossil fuels reserves. As the District Court found:

> 222. Montana is a major emitter of GHG emissions in the world in absolute terms, in per person terms, and historically.
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> 230. Montana's land contains a significant quantity of fossil fuels yet to be extracted.
>
> 231. Montana's GHG emissions have grown significantly since the passage of the 1972 Montana Constitution.
>
> 233. Defendants have authorized fossil extraction, transportation, and combustion resulting in high levels of GHG emissions that contribute to climate change.
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> 237. What happens in Montana has a real impact on fossil fuel energy systems, CO_2 emissions, and global warming.[18]

[18] *Held* District Court Order at 68-70.

And as the Montana Supreme Court cogently summed up: "global GHG emissions do not insulate the State from its affirmative constitutional duties with regards to projects that it permits. The fact that climate change impacts extend beyond Montana's borders, as does selenium pollution and other environmental harms, does not allow the state to disregard its contributions to environmental degradation within Montana."[19] Constrained by their affirmative constitutional obligations, DEQ and other state agencies, thankfully, need not, and legally cannot, follow other states and countries in jumping off the bridge[20] and wantonly permit additional new fossil fuel projects like AM6 amidst an already degraded climate system in Montana and ongoing constitutional injuries to its most vulnerable citizens, children and youth.

III. DEQ's Approval of AM6 is Inconsistent with MSUMRA and DEQ's Obligation to Maintain and Improve a Clean and Healthful Environment for Present and Future Generations of Montanans.

Despite the above-identified flaws in the Draft EA's climate impacts analysis, and despite the recent MEPA amendments which again prevent DEQ and other state agencies from ascertaining the full environmental and climate impacts of proposed fossil fuel projects, the primary takeaway here is that AM6 is a project with monumentally significant lifecycle GHG emissions that will affirmatively worsen the *already unconstitutional* degradation to Montana's environment, in violation of both MSUMRA and the Montana Constitution. As DEQ is aware, a fully informed MEPA analysis helps "bring the Montana Constitution's lofty goals into reality by enabling fully informed and considered decisionmaking, thereby minimizing the risk of irreversible mistakes depriving Montanans of a clean and healthful environment."[21] It is imperative that DEQ accurately evaluate the *full scope* of a project's GHG emissions and contribution to climate impacts in Montana so that the agency has the necessary information to make fully informed and constitutionally compliant permitting decisions under the substantive statutes it administers.[22]

The Montana Legislature enacted the Strip and Underground Mine Siting Act to fulfill its constitutional duties and intended that the requirements of that Act would provide for "adequate remedies for the protection of the environmental life support system from degradation."[23] The Montana Legislature similarly enacted MSUMRA.[24] Accordingly, DEQ's administration and implementation of these statutes must effectuate the Legislature's intent and prevent the worsening degradation of Montana's environmental life support system.[25] In addition to its statutory obligations, DEQ cannot issue permits that violate Montana's Constitution. In the context of the AM6, DEQ must act in a manner consistent with the express legislative intent, its constitutional

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[19] *Held*, ¶ 66.
[20] *See Held*, ¶ 49.
[21] *Held*, ¶ 42 (internal quotation marks omitted, quoting *Park Cnty. Env't Council v. Mont. Dep't of Env't Quality*, 2020 MT 303, ¶ 70).
[22] DEQ, of course, has ample discretion under the substantive statutes it administers to deny a permit for a fossil fuel project that would cause or contribute to unconstitutional degradation of Montana's environment. *Held* District Court Order at 13, 89-90.
[23] Mont. Code Ann. § 82-4-102(1).
[24] Mont. Code Ann. § 82-4-202(1), (2).
[25] *See* Mont. Code Ann. § 82-4-202(2)(a), (c).

obligations, and must prevent the further degradation of Montana's environmental life support system that would result if AM6 were approved and the mining carried out.

Given the already unconstitutional degree of degradation and depletion of Montana's environment, natural resources, and climate (i.e., environmental life support system) as a result of the current state of atmospheric GHG concentrations and climate change,[26] DEQ's approval of AM6 is not consistent with the Legislature's intent that MSUMRA be implemented in a manner that prevents degradation of Montana's environmental life support system and that upholds and realizes Montanans' fundamental constitutional right to a clean and healthful environment and stable climate system. Nor is it consistent with DEQ's affirmative constitutional obligations to maintain and improve a clean and healthful environment for present and future generations of Montanans.

When a MEPA review, or other information before the agency, shows that approving a permit would violate the permitting statute or Montana's Constitution, the DEQ, of course, has the authority – and legal duty – to deny such permits. That is the case here as DEQ's approval of AM6 is unlawful under MSUMRA and violates DEQ's obligation to maintain and improve a clean and healthful environment. As the District Court in *Held v. State of Montana* made clear, holding as conclusions of law that:

> 18. Defendants can alleviate the harmful environmental effects of Montana's fossil fuel activities through the lawful exercise of their authority if they are allowed to consider GHG emissions and climate change during MEPA review, which would provide the clear information needed to conform their decision-making to the best science and their constitutional duties and constraints, and give them the necessary information to deny permits for fossil fuel activities when inconsistent with protecting Plaintiffs' constitutional rights.
>
> 22. Permitting statutes give the State and its agents discretion to deny permits for fossil fuel activities.
>
> 24. [T]his Court clarifies that Defendants do have discretion to deny permits for fossil fuel activities that would result in unconstitutional levels of GHG emissions, unconstitutional degradation and depletion of Montana's environment and natural resources, or infringement of the constitutional rights of Montanans and Youth Plaintiffs.[27]

The constitutional rights of Montana's youth, including the *Held* Plaintiffs, are currently being violated, in part, due to DEQ's historic and ongoing permitting of fossil fuel activities. *Held* requires a change in DEQ's longstanding permitting practices. DEQ cannot continue to approve every fossil fuel permit application it receives. Consistent with its affirmative constitutional obligations, the State, and DEQ in particular, must take actions to reduce Montana's GHG emissions and not approve permits for fossil fuel projects that increase Montana's GHG emissions for decades to come.

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[26] *Held District Court Order* at 98; *Held*, ¶¶ 3, n.1, 18, 29.
[27] *Id*. at 88-90.

Moreover, given the currently unconstitutional degradation of Montana's clean and healthful environment, DEQ must demonstrate there is a compelling government interest for such a major permit revision and that approving AM6 is the least burdensome means to meet any compelling need. DEQ has not demonstrated any evidence of a compelling need for expanded coal mining at Spring Creek Mine, nor that such expanded coal mining is the least burdensome way to meet any government needs. Nor can DEQ because, as established in *Held*, Montana can meet all it current and future energy needs with 100% renewable energy no later than 2050. As the Court found:

> 272. It is technically and economically feasible for Montana to replace 80% of existing fossil fuel energy by 2030 and 100% by no later than 2050, but as early as 2035.
>
> 275. Converting from fossil fuel energy to renewable energy would eliminate another $21 billion in climate costs in 2050 to Montana and the world. Most noticeable to those in Montana, converting to wind, water, and solar energy would reduce annual total energy costs for Montanans from $9.1 to $2.8 billion per year, or $6.3 billion per year (69.6% savings).
>
> 276. Wind, water, and solar are the cheapest and most efficient form of energy. Cost per unit of energy in a 100% WWS system in Montana would be about 15% lower than a business-as-usual case by 2050, even when including increased costs for energy storage. New wind and solar are the lowest cost new forms of electric power in the United States, on the order of about half the cost of natural gas and even cheaper compared to coal.
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> 280. Montana's energy needs in 2050 under a 100% WWS roadmap would decline significantly (over fifty percent) compared to a business-as-usual energy system due to a mix of gains in energy efficiency in vehicles and appliances, and through eliminating the significant amounts of energy required to extract, transport, and refine fossil fuels.
>
> 281. Transitioning to WWS will keep Montana's lights on while saving money, lives, and cleaning up the air and environment, and ultimately using less of Montana's land resources.[28]

Simply put – there are clean, renewable alternative means for Montana to produce the energy it needs all without producing dangerous amounts of GHG pollution and harming Montana's children and youth.

IV. Conclusion

DEQ has an affirmative constitutional obligation to refrain from conduct that causes an increase in Montana's GHG emissions and further degradation and diminution to Montana's

[28] *Id*. at 81-84.

climate and environmental life support system. Every additional ton of GHG emissions exacerbates the ongoing damage to Montana's environment and the constitutional violations the *Held* Plaintiffs and young Montanans are already suffering. For the reasons outlined herein, DEQ should amend the Draft EA's climate analysis to conclude that AM6 will have a significant contribution to climate change and the permit should be denied. To the extent DEQ believes it is constrained from denying the permit it should identify the source of the perceived constraint on its ability to deny the permit.

Sincerely,

Nathan Bellinger
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Our Children's Trust
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Exhibit 1

October 30, 2025

Submitted via email only

Montana Department of Environmental Quality
Attn: Craig Jones
PO Box 200901
Helena, MT 59620-0901

Re: Our Children's Trust Comments on DEQ's Draft Greenhouse Gas Guidance

To Montana Department of Environmental Quality ("DEQ"):

On behalf of the 16 youth Plaintiffs in the constitutional climate case *Held v. State of Montana*, Our Children's Trust respectfully submits this comment letter on DEQ's Draft Greenhouse Gas ("GHG") Guidance.[1] The *Held* Plaintiffs appreciate this opportunity for public comment and appreciate DEQ's efforts to develop a detailed, science-based guidance document for Montana's state agencies to follow when evaluating the GHG and climate impacts of a proposed state action in an Environmental Assessment or Environmental Impact Statement conducted under the Montana Environmental Policy Act ("MEPA").

While DEQ's Draft GHG Guidance acknowledges some of the credible climate science climate impacts that are occurring in Montana *now*, the Draft Guidance suffers from several key flaws that impede it from satisfying MEPA's requirements and, more importantly, prevent DEQ and other agencies from meeting their affirmative constitutional obligations. The undersigned respectfully provide the following constructive feedback and suggested changes to the Draft Guidance.

First, although the Draft Guidance discusses *Held*, it nevertheless ignores the factual findings of *Held* establishing that every additional ton of GHG emissions from fossil fuel activities in Montana contributes to global warming and exacerbates local harms in Montana. This factual finding was undisputed by Defendants, including the DEQ. The Draft Guidance overlooks the fact that Montana's constitutionally-protected environmental life support system—which includes Montana's climate—is *already unconstitutionally degraded due to the current atmospheric concentration of GHGs and climate change*, and that each additional ton of GHG emissions exacerbates that constitutional violation. Montana's youth, including the *Held* Plaintiffs, are already suffering constitutional harms. DEQ must update the Draft Guidance to reflect this scientific reality, which should be the starting point for future environmental reviews and the subsequent permitting decisions. As a consequence, agencies should use their GHG reviews to determine whether there is a compelling state interest in projects that would increase GHG emissions, and if so, whether that interest can be met through alternatives means with fewer, or no, GHG emissions.

[1] https://deq.mt.gov/News/publiccomment-folder/ghg-guidance-10-01-25.

Second, in the context of fossil fuel activities or other projects that require a MEPA GHG analysis, Montana's agencies cannot make fully-informed (let alone constitutionally compliant) permitting decisions without considering the full scope of emissions—both up- and down-stream—associated with the project under consideration. To the extent that DEQ believes that recent amendments to MEPA enacted during the 2025 Montana Legislative Session prevent it and other state agencies from considering up- and down-stream GHG emissions in MEPA analyses,[2] DEQ should amend the Draft Guidance to articulate what it and other agencies will do to otherwise gather the necessary information to enable fully-informed decision making. The Draft Guidance should explain how its MEPA reviews are constitutionally compliant, especially given the *Held* decision, and should provide agencies with tools to determine the up- and down-stream emissions associated with a proposed project so that the agency can inform itself of the full impact of its contemplated action as required by the Constitution's mandate that "[t]he state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations."

Third, the Draft Guidance errs in curtailing the scope of MEPA reviews through its flawed use of the Model for the Assessment of Greenhouse Gas Induced Climate Change ("MAGICC") to calculate a project's climate impacts and its misunderstanding of how individual projects fit into the Shared Socioeconomic Pathways ("SSPs") of projected future climate warming scenarios. While there is nothing inherently wrong with MAGICC and the SSPs, they are tools to reflect global societal actions, not the incremental contributions of specific GHG-emitting projects in Montana, and the use of these ill-fitted tools to determine an individual project's contribution to future global temperature change effectively ensures that even the largest projects are deemed to cause no significant harm to Montana's environment. This concern is already playing out exactly as feared. For example, DEQ's Draft Supplemental Environmental Assessment for Rosebud Area B[3] uses MAGICC to arrive at the erroneous conclusion that the GHG emissions from the contemplated coal mine expansion are not significant, when in reality, the GHG emissions and impact on global temperature (not to mention the other adverse impacts that will ensure) are *massive* for a single project, especially when considering there is already unconstitutional depletion and degradation of Montana's environment and natural resources.

Fourth, the Draft Guidance should require an economic tool like the Social Cost of Greenhouse Gases ("SC-GHG") so that DEQ and other agencies have a metric to understand real-world costs to Montana communities, public health, and environment from proposed projects. The Draft Guidance's discussion of uncertainty and the discount rate in Appendix D is flawed as there is no "correct" discount rate in an objective sense—here, DEQ's and other agencies' constitutional obligations to future generations indicate that the Draft Guidance should employ a *non-discounted* SC-GHGs so that the costs analysis does not inappropriately minimize the value current generations assign to the harms that will be suffered by Montana's youth and future generations.

Our Children's Trust respectfully request that DEQ revises the Draft Guidance in light of these comments so that DEQ and Montana's agencies can: (1) fully assess the GHG emissions and

[2] *See, e.g.*, Draft Guidance at 3 (referencing SB 221).
[3] https://deq.mt.gov/Files/Land/CoalUranium/Rosebud%20AM5%20Supplemental%20Environmental%20Assessment.pdf

climate impacts of proposed projects; (2) conduct such an assessment from a factually-sound and scientifically-grounded perspective that recognizes the harms already inflicted on Montana's environment and citizens and adequately considers harms to future generations; (3) use this GHG analysis to evaluate whether there is a compelling state interest in any project that will increase GHG emissions and if so, whether there is an alternative means to achieve that state interest with fewer or no GHG emissions; and (4) ensure that it is meeting its constitutional obligations to maintain and improve and clean and healthful environment for present and future generations.

DEQ and Montana's agencies cannot meet their affirmative constitutional obligations to *maintain and improve* a clean and healthful environment in Montana for present and future generations by simply acknowledging that each project's GHG emissions adds incrementally to a global total, and then conclude the project is, by itself, not a significant contribution to global temperature increase and thus environmental degradation in Montana. Such a framework is effectively designed to minimize and downplay a project's significance and to ensure that even the largest GHG-emitting projects will be deemed to have a negligible environmental impact in Montana (*see, e.g.,* the Rosebud mine example, *supra*). This flawed approach ignores the science-based factual findings of *Held* that make clear climate change is *already* causing dire harm to Montana's environment and youth and that such constitutional injuries worsen with each additional ton of GHG emissions.

I. The Draft Guidance Ignores *Held*'s Factual Findings

While the Draft Guidance and its Appendices succinctly summarize some of the key findings from accepted, credible climate science sources and acknowledge Montana will experience worsening climate impacts over the coming decades including increasing temperatures, declining snowpack and melting glaciers, increasing wildfire season, and worsening drought, the Draft Guidance ignores key aspects of climate science reality—Montana's climate is *already* dangerously destabilized by the *current* atmospheric concentration of GHGs and that *every ton of GHG emissions from fossil fuel combustion contributes to further warming and local harms*. As DEQ is aware, this scientific reality is set forth in the detailed Findings of Fact the Montana First Judicial District Court found in *Held*, which were not disputed by Defendants (including DEQ) and were upheld by the Montana Supreme Court.[4]

Based on the uncontested evidence presented at trial, the District Court found, in part, that:

> 89. Until atmospheric GHG concentrations are reduced, extreme weather events and other climactic events such as drought and heatwaves will occur more frequently and in greater magnitude, and Plaintiffs will be unable to live clean and healthy lives in Montana.
>
> 92. Every ton of fossil fuel emissions contributes to global warming and impacts to the climate and thus increases the exposure of Youth Plaintiffs to harms now and additional harms in the future.

[4] *Held v. State of Montana*, No. CDV-2020-307, Findings of Fact, Conclusions of Law, and Order, FOF #90-92 (Mont. 1st Jud. Dist. Ct., Lewis and Clark County, Aug. 14, 2023) (hereinafter "*Held District Court Order*"); *Held v. State*, 2024 MT 312, ¶¶ 3 n.1, 18, 29.

> 104. Children are uniquely vulnerable to the consequences of climate change, which harms their physical and psychological health and safety, interferes with family and cultural foundations and integrity, and causes economic deprivations.
>
> 108. The physical and psychological harms are both acute and chronic and accrue from impacts to the climate such as heat waves, droughts, wildfires, air pollution, extreme weather events, the loss of wildlife, watching glaciers melt, and the loss of familial and cultural practices and traditions.
>
> 140. Anthropogenic climate change is impacting, degrading, and depleting Montana's environment and natural resources, including through increasing temperatures, changing precipitation patterns, increasing droughts and aridification, increasing extreme weather events, increasing severity and intensity of wildfires, and increasing glacial melt and loss.
>
> 193. The science is clear that there are catastrophic harms to the natural environment of Montana and Plaintiffs and future generations of the State due to anthropogenic climate change. . . . The degradation to Montana's environment, and the resulting harm to Plaintiffs, will worsen if the State continues ignoring GHG emissions and climate change.[5]

Based on the compelling factual record presented by Plaintiffs and their experts, the District Court held, as a conclusion of law, that:

> 6. Every additional ton of GHG emissions exacerbates Plaintiffs' injuries and risks locking in irreversible climate injuries.
>
> 7. Plaintiffs' injuries will grow increasingly severe and irreversible without science-based actions to address climate change.
>
> 8. Plaintiffs have proven that as children and youth, they are disproportionately harmed by fossil fuel pollution and climate impacts.
>
> 49. Based on the plain language of the implicated constitutional provisions, the intent of the Framers, and Montana Supreme Court precedent, climate is included in the "clean and healthful environment" and "environmental life support system" Mont. Const. Art. II, Sec. 3; Art. IX, Sec. 1.
>
> 50. Montana's climate, environment, and natural resources are unconstitutionally degraded and depleted due to the current atmospheric concentration of GHGs and climate change.[6]

The Montana Supreme Court affirmed the District Court's Order in full, finding that:

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[5] *Held District Court Order* at 24, 28-29, 35, 46.
[6] *Id*. at 87, 97-98.

> Montana is heating faster than the global average and the rate of warming is increasing. Overwhelming scientific evidence and consensus shows that this warming is the direct result of greenhouse gas (GHG) emissions that trap heat from the sun in the atmosphere, primarily from carbon dioxide (CO2) released from human extraction and burning of fossil fuels such as coal, oil, and natural gas.
>
> These emissions result in extreme weather events that are increasing in frequency and severity, including droughts, heatwaves, forest fires, and flooding. These extreme weather events will only be exacerbated as the atmospheric concentration of GHGs continues to rise. Projections indicate that under a business-as-usual emissions scenario, Montana will see almost ten additional degrees of warming by 2100 compared to temperatures in 2000. By 2050, Montana will have 11–30 additional days per year with temperatures exceeding 90 degrees and a similar loss of days below freezing. Montana has already seen (and will increasingly see) adverse impacts to its economy, including to recreation, agriculture, and tourism caused by a variety of factors including decreased snowpack and water levels in summer and fall, extreme spring flooding events, accelerating forest mortality, and increased drought, wildfire, water temperatures, and heat waves.
>
> We reject the argument that the delegates—intending the strongest, all-encompassing environmental protections in the nation, both anticipatory and preventative, for present and future generations—would grant the State a free pass to pollute the Montana environment just because the rest of the world insisted on doing so. The District Court's conclusion of law is affirmed: Montana's right to a clean and healthful environment and environmental life support system includes a stable climate system, which is clearly within the object and true principles of the Framers inclusion of the right to a clean and healthful environment.[7]

Accordingly, the *Held* factual findings should be incorporated and made central to the Draft Guidance. It is not enough to say that "every project's GHG emissions incrementally add to global GHGs and, thus, to cumulative climate impacts"[8] as the key fact is not, to use an analogy, that each water droplet contributes to the water level in a tub but rather that the tub is already overflowing and the faucet continues to run. Divorced from the crucial context that each additional ton of fossil fuel GHG emissions contributes to an already unconstitutional level of environmental degradation in Montana, this statement is just a rephrasing of the fact that "the cumulative effect of GHG emissions causes the impacts to the climate being experienced today,"[9] and does little to inform Montana's agencies about how to assess the severity of *further* GHG pollution in the context of an ongoing overshoot scenario where each additional ton of GHG emissions exacerbates ongoing constitutional harms.

The Montana Constitution's environmental provisions are the strongest found in any state constitution and are both anticipatory and preventative, requiring the State and its agencies take

[7] *Held v. State of Montana,* 2024 MT 312, ¶¶ 3-4, 30.
[8] Draft Guidance at 13.
[9] *Held District Court Order* at FOF #72.

affirmative steps realize the right.[10] The intent of the framers was to allow for no degradation of Montana's environmental life support system from the state it existed in 1972 and to "affirmatively require enhancement of what we have now."[11] In failing to acknowledge the full weight and import of the *Held* factual findings and legal holdings, the Draft Guidance fails to sufficiently aid both DEQ and other agencies in meeting their affirmative constitutional obligations under the substantive statutes they administer that permit or authorize fossil fuel projects and which a MEPA review informs.[12] DEQ and other state agencies cannot meet their affirmative constitutional obligations to prevent further unconstitutional degradation to Montana's environment, natural resources, and climate (let alone remedy the existing damage) by simply acknowledging that each project's GHG emissions adds incrementally to a global total, comparing the project's GHG emissions to the global total, and concluding the project is not a significant source of harm to Montana's environment.

Starting from the proper scientific and legal framework that there is already a dangerous and unconstitutional amount of GHG emissions in the atmosphere, in part due to Montana's significant historic and ongoing fossil fuel activities and GHG emissions, the GHG Guidance should require agencies to use the GHG review to establish: (1) whether there is a compelling government interest in any proposed projects that would increase Montana's GHG emissions; and (2) whether the project is narrowly tailored and the least burdensome means to achieve the compelling interest. As part of this inquiry, tied to the alternatives analysis required by MEPA, agencies should consider whether there are alternative means to accomplish the purpose of the project in a manner that would result in fewer, or no, GHG emissions. By way of example, if a gas-fired power plant was proposed to be constructed on the basis of need for energy to power Montanans' homes or businesses, but that project would result in the burning of gas and release significant GHG emissions, the GHG review should consider whether there is an alternative means to generate the power for Montanans' homes that would not result in GHG emissions. Such a review would reveal that indeed there is, through renewable energy projects. As the Court found in *Held* (again, these facts were undisputed by Defendants, including DEQ)*:*

> 272. It is technically and economically feasible for Montana to replace 80% of existing fossil fuel energy by 2030 and 100% by no later than 2050, but as early as 2035.
>
> 275. Converting from fossil fuel energy to renewable energy would eliminate another $21 billion in climate costs in 2050 to Montana and the world. Most noticeable to those in Montana, converting to wind, water, and solar energy would reduce annual total energy costs for Montanans from $9.1 to $2.8 billion per year, or $6.3 billion per year (69.6% savings).
>
> 276. Wind, water, and solar are the cheapest and most efficient form of energy. Cost per unit of energy in a 100% WWS system in Montana would be about 15%

[10] *Held*, ¶¶ 23-24, 28, 30, 36, 49.
[11] *Held*, ¶ 24 (internal quotation marks and citation omitted).
[12] *See* § 75-2-102, MCA; § 82-4-102, MCA; *see also Park Cnty. Env't Council v. Mont. Dep't of Env't Quality*, 2020 MT 303, ¶ 70 (MEPA necessary to bring Montana Constitution's lofty goals into reality by "enabling fully informed and considered decision making"); *Held*, ¶ 60.

> lower than a business-as-usual case by 2050, even when including increased costs for energy storage. New wind and solar are the lowest cost new forms of electric power in the United States, on the order of about half the cost of natural gas and even cheaper compared to coal.
>
> 280. Montana's energy needs in 2050 under a 100% WWS roadmap would decline significantly (over fifty percent) compared to a business-as-usual energy system due to a mix of gains in energy efficiency in vehicles and appliances, and through eliminating the significant amounts of energy required to extract, transport, and refine fossil fuels.
>
> 281. Transitioning to WWS will keep Montana's lights on while saving money, lives, and cleaning up the air and environment, and ultimately using less of Montana's land resources.[13]

Because Montana's life support system is unconstitutional degraded due to *current* levels of GHG emissions, agencies must demonstrate a compelling government interest in projects that will increase GHG emissions and show that the project is narrowly tailored and the least burdensome means to achieve that interest. Agencies should use their GHG assessment to provide this analysis and justification as to why a projects' GHG emissions are either justified, or not justified, using the appropriate constitutional framework and scientific starting point.

II. The Draft Guidance Should Provide Agencies With Resources for Determining a Project's Up- and Down-Stream GHG Emissions

During the 2025 Legislative Session, the Montana Legislature amended MEPA to confine the scope of an agency's MEPA analysis to a project's "proximate" impacts, which are defined as excluding the upstream or downstream GHG emissions that result from a project.[14] The Draft Guidance appears to concede that SB 221's amendments will control future MEPA GHG analyses.[15]

MEPA's "ability to avert potential environmental harms through informed decision making" makes it "unique" among other environmental statutes and renders MEPA "complementary to, rather than duplicative of, them."[16] The Legislature has a "duty to use MEPA as a source of information when substantive statutes are not fulfilling constitutional obligations."[17] The Legislature's amendment of § 75-1-201, MCA, to limit the scope of MEPA reviews to the "proximate" impacts of a project improperly constrict the scope of MEPA reviews and impose a blinder upon state agencies akin to the "blindfold[]" imposed by the MEPA Limitation found

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[13] *Held District Court Order* at 81-84.
[14] 2025 Mont. Laws Ch. 348, § 2 (SB 221 – amending § 75-1-201(1)(a)(iv)(A)-(B), MCA); Draft Guidance at 2-3.
[15] It is worth noting that in addition to the passage of SB 221, the Montana Legislature passed other bills during the 2025 legislative session, including SB 285 and HB 291, that seek to further undermine MEPA's purpose, block DEQ's ability to regulate GHG emissions under Montana's Clean Air Act, and thwart compliance with Montana's Constitution.
[16] *Held*, ¶ 60.
[17] *Held*, ¶ 47.

unconstitutional in *Held*.[18] SB 221's new "proximate" limitation constricts the scope of MEPA reviews and ensures a project's true GHG and climate impacts will be unexamined and unknown to both the agency and the Montana public.

By un-scientifically constricting the scope of agencies' GHG analysis to a project's "proximate" impacts (i.e., excluding upstream and downstream emissions), the Montana Legislature is attempting to ensure that agencies cannot make adequately informed decisions.[19] For example, a MEPA analysis for a coal mine expansion that excluded the GHG emissions that would result from the ultimate combustion of the coal would be ignoring a central component of the project's environmental harm. This curtailment of a MEPA analysis' scope, in turn, impedes Montana's agencies from using the information garnered "to inform and strengthen substantive permitting or regulatory decisions or any mutual mitigation measures or alternatives that might be considered when the environmental harms of the project are fully understood."[20]

DEQ should amend the Draft Guidance to provide Montana agencies with a list of well-vetted and trusted resources for calculating a project's up- and down-stream GHG emissions. Only by documenting and considering the full scope of a project's anticipated GHG emissions can DEQ and other state agencies make the sort of fully informed decisions that both MEPA and the Montana Constitution require. Regardless of legislative constraints, ultimately, DEQ's GHG analysis, and subsequent permitting decisions, must be constitutionally compliant.

III. The Draft Guidance's Use of MAGICC and SSPs is Flawed

a. MAGICC is an Ill-Suited Tool to Determine a Project's Impacts

On page 13 of the Draft Guidance, the following guidance is given for determining "secondary impacts" and "cumulative climate impacts". "To provide a quantitative perspective on potential climate impacts from projects with large GHG emissions, DEQ recommends MAGICC. MAGICC is a reduced-complexity climate model that reproduces key Earth-system processes while remaining computationally efficient and freely accessible online (https://live.magicc.org/)."

MAGICC is not designed to be used for determining cumulative climate impacts. MAGICC is designed to rapidly determine the global temperature response to say a global fossil fuel heavy future versus a clean, renewable energy future versus a future in between these (see below for more on these potential futures). These are *collective* global behaviors and not focused on a *single* project in a single state within one nation of the globe. From these global collective actions, MAGICC calculates the global mean temperature response to the radiative forcing that is in response to GHG emissions that are processed through the carbon cycle module.[21] In addition to global mean temperature, MAGICC also calculates hemispheric land temperature, hemispheric ocean temperature, ocean heat content, and global mean sea level.[22] All of these are important

[18] *See Held*, ¶ 44.
[19] *Held*, ¶ 67 ("Obviously, a clean and healthful environment cannot occur unless the State and its agencies can make adequately informed decisions" and MEPA Limitation made it impossible for the state to "consider an entire area of significant environmental consequences").
[20] *Held*, ¶ 68.
[21] https://acp.copernicus.org/articles/11/1417/2011/; https://gmd.copernicus.org/articles/13/3571/2020/
[22] https://acp.copernicus.org/articles/11/1417/2011/; https://gmd.copernicus.org/articles/13/3571/2020/

global climate metrics, but these are not the cumulative climate impacts experienced by people, including Montanans. The impacts of direct human relevance are wildfires and their smoke, droughts, heatwaves, loss of snowpack, extreme rains and floods, glacier disappearance, etc. The increase in these climate harms to Montanans is discussed below. These climate harms need to be determined by fully coupled Earth System Models, which are the appropriate tool to determine cumulative climate impacts. Note that such fully coupled Earth System Models can now directly attribute fractions of a given extreme weather event, like a heatwave, to an individual emitting entity, like an individual fossil fuel company.[23]

How then should the cumulative impacts of a given project in Montana be assessed if MAGICC is not applicable? The Intergovernmental Panel on Climate Change ("IPCC") 6th Assessment Report Longer Synthesis provided a clear directive in stating that "Every ton of CO_2 adds to global warming".[24] That is, every ton of CO_2 emitted will make the climate crisis worse and will cause further harms to Montana children and youth. Montanans are currently being harmed by climate change, as has clearly been documented by the U.S. 5th National Climate Assessment[25], the 2017 Montana Climate Assessment[26], the 2021 Climate Change and Human Health in Montana Report[27], and *Held v. Montana*, then every additional ton of CO_2 that is permitted to be emitted will make these harms worse. It is very simple. (see *supra* I for the analysis that agencies should apply in deciding whether additional GHG emissions are constitutionally permissible).

A key thing that is only partly discussed in the Draft Guidance is that agencies should differentiate between an emission of CO_2 or methane ("CH_4") from a fossil source and a land-use emission of CO_2 or CH_4. In the case of the former, the C atom added to the atmosphere is a new atom that had been stored deep in the earth for at least a minimum of many tens of millions of years. To remove a fossil C atom and mitigate the resultant climate change it causes requires storage in geological reservoirs with a lifespan of at least 1,000 years.[28] This means that the growth of trees, grasslands, crops, and soil preservation, just as examples, cannot be used to mitigate fossil C emissions. This is because these C pools hold onto the C atom for too short a period. Forests burn and re-release the C atom and that fossil C atom is no longer mitigated.

Conversely, the latter land-use emission of a C atom is an atom that was in the atmosphere a few years to decades ago, with the upper limit being an old growth tree or deep soil layer, for instance. Here, a land-use C atom's climate impacts are easily mitigated by planting a new tree, for instance. At the simplest level, we do not consider the CO_2 emissions that result from one mowing their lawn. The dead blades of grass release CO_2 into the atmosphere but those emissions are mitigated by the lawn's continued growth. The same applies to forests, pastures and fields, if the regrowth is planned and completed.

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[23] https://www.nature.com/articles/s41586-025-09450-9
[24] https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf
[25] https://toolkit.climate.gov/NCA5
[26] https://montanaclimate.org/chapter/title-page
[27] https://www.emountainworks.com/docs/2021_C2H2inMT_final.pdf
[28] https://www.nature.com/articles/s43247-024-01808-7; https://www.nature.com/articles/s41586-024-08326-8

Indeed, since 1850, global land-use CO_2 emissions have been balanced by the terrestrial biosphere.[29] This means the C atoms in the atmosphere driving global warming and climate change are the fossil C atoms that mostly come from fossil fuels as well as limestone for cement and the use of coal in steel. Accordingly, fossil C emissions in the form of CO_2 and CH_4 must be considered separately and with more scrutiny than C emissions from land use and associated animal husbandry, farming and other practices like timber harvesting.

b. SSPs Reflect Global Societal Actions and Are an Inappropriate Tool to Assess Individual Project Decisions

In this vein of using MAGICC to determine cumulative climate impacts, the authors of the Draft Guidance make another key error. On page 13 of the Draft Guidance, the following statement fully misunderstands what "emissions scenarios" are. "MAGICC has been used by the IPCC and EPA to analyze emissions scenarios and temperature outcomes. The approach involves (1) running MAGICC with an unmodified global emissions pathway; (2) creating a second simulation in which the project's annual emissions are subtracted from that pathway; and (3) calculating the difference in projected global mean surface temperature between the two runs. The resulting temperature difference offers a physically based estimate of the project's marginal contribution to future global temperature change."

The Shared Socioeconomic Pathways ("SSPs") represent potential *global* socioeconomic futures that result in a range future greenhouse gas emissions.[30] They reflect *global* actions in aggregate. They are not a future pathway from which one individual project can be subtracted. This is just fundamentally wrong. Rather, the different SSPs reflect the collective action of a pattern of approving or denying fossil fuel and clean, renewable energy projects. The collective approval or rejection of projects determines the SSP.

To be clear, SSPs were not developed by the IPCC. Rather they were developed by a group of scientists and economists as a suite of potential futures under different socioeconomic systems and what their resulting GHG emissions would be. These emissions were implemented in the Coupled Model Intercomparison Project ("CMIP") Phase 6 to determine the climate response to the SSPs.[31] The IPCC then assessed these CMIP6 results along with all other climate science to produce the most recent IPCC report.[32] The SSPs or the resultant climate model simulations are not IPCC products.

The five main SSPs used in CMIP6 are shown in the figure below. Here, these five SSPs are delineated on ease or resistance to reducing GHG emissions (mitigation) and ease or resistance to paying for and reducing climate harms (adaptation). Note that SSP5 with low mitigation/high fossil fuel usage combined with high funding of adaptation is not considered a real potential future.[33] This is because the world cannot increase its fossil fuel usage and end clean, renewable energy and all the while help communities to adapt to the high amount of global warming. The

[29] https://essd.copernicus.org/articles/17/965/2025/essd-17-965-2025.html
[30] https://link.springer.com/content/pdf/10.1007/s10584-013-0905-2.pdf
[31] https://wcrp-cmip.org/cmip-phases/cmip6/
[32] https://www.ipcc.ch/assessment-report/ar6/
[33] https://www.nature.com/articles/d41586-020-00177-3

non-GHG pollution alone from the extraction, storage, transport, refinement and combustion of U.S. fossil fuels today kills 91,000 Americans, causes 10,350 preterm births, onsets 216,000 case of childhood asthma, and initiates 1,610 lifetime cancers each year[34]; this pollution would increase with more fossil fuels. Killing Americans, causing early births and cancer, and inflicting asthma on children are giant barriers to adaptation and thus SSP5 is a non-tenable future.

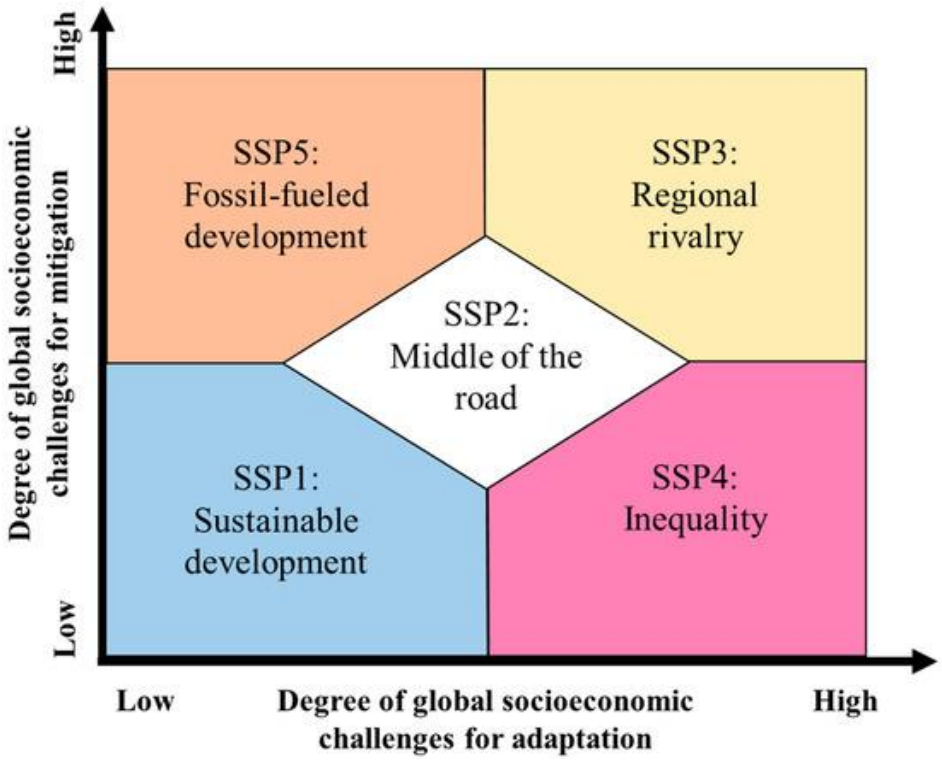

Figure showing the different SSPs as pertains to underlying economic pattern and resistance to addressing climate change impacts (adaptation) and resistance to ending fossil fuels and deploying clean, renewable energy sources (mitigation).[35]

The closest SSP to current global emissions, socioeconomic behavior on climate change and current policies is SSP2: Middle of the road.[36] SSP2 is defined as: "*The world follows a path in which social, economic, and technological trends do not shift markedly from historical patterns. Development and income growth proceeds unevenly, with some countries making relatively good progress while others fall short of expectations. Global and national institutions work toward but make slow progress in achieving sustainable development goals. Environmental systems experience degradation, although there are some improvements and overall the intensity of resource and energy use declines. Global population growth is moderate and levels off in the second half of the century. Income inequality persists or improves only slowly and challenges to reducing vulnerability to societal and environmental changes remain.*"[37] SSP2 can thus be seen as the future emissions that would result from a continuation of global actions where fossil fuels

[34] https://www.science.org/doi/10.1126/sciadv.adu2241
[35] https://www.sciencedirect.com/science/article/abs/pii/S0959378015000060
[36] https://www.nature.com/articles/d41586-020-00177-3;
https://journals.sagepub.com/doi/10.1177/29768659241304854
[37] https://www.sciencedirect.com/science/article/pii/S0959378016300681

persist and compete with clean, renewable energy. In the case of Montana, this would be continued approval of fossil fuel permits and their GHG emissions, with each additional ton of CO_2 emitted causing further climate harms to Montanans.

If Montana rapidly increased their approval of fossil fuel permits all the while working towards eliminating clean, renewable energy and fighting other adaptation measures, with the world following the same path, then SSP3, Regional rivalry, becomes a more likely future. That is, there is a promotion of fossil fuels with minimal effort for mitigation or adaptation. SSP3 is defined as follows. "*A resurgent nationalism, concerns about competitiveness and security, and regional conflicts push countries to increasingly focus on domestic or, at most, regional issues. Policies shift over time to become increasingly oriented toward national and regional security issues. Countries focus on achieving energy and food security goals within their own regions at the expense of broader-based development. Investments in education and technological development decline. Economic development is slow, consumption is material-intensive, and inequalities persist or worsen over time. Population growth is low in industrialized and high in developing countries. A low international priority for addressing environmental concerns leads to strong environmental degradation in some regions.*"[38]

Conversely, if Montana and the globe moved towards denying fossil fuel permits and attendant GHG emissions while increasing clean, renewable energy, then SSP1, Sustainable development, becomes a more likely analogous pathway. This can be seen in the figure below from a recent assessment on global action on climate mitigation by the World Resources Institute.[39] Global action is reducing the use of fossil fuels for energy, but at a rate 7-10 times too slow to achieve SSP1, hence why SSP2 is the closest analogous current path.

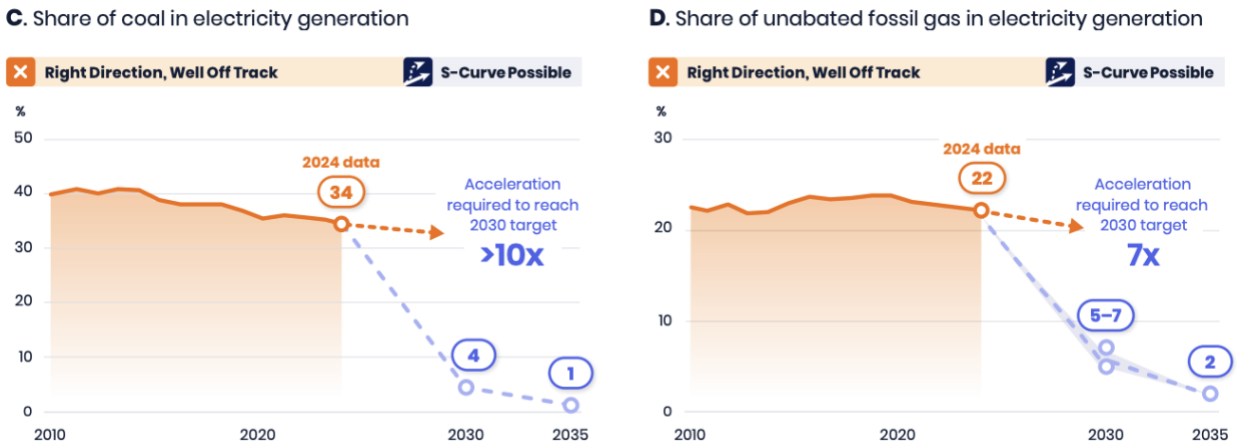

Figure shows the global trajectory of coal and fossil gas in electricity generation.[40] *To achieve SSP1, coal has to be reduced 10 times faster (c) while fossil gas has to be reduced 7 times faster (d) than is occurring. This slow pace means we are in SSP2. Increasing coal and fossil gas beyond current actions without also increasing paying for climate damages (adaptation) would shift the globe towards SSP3.*

[38] https://www.sciencedirect.com/science/article/pii/S0959378016300681
[39] https://www.wri.org/research/state-climate-action-2025
[40] https://www.wri.org/research/state-climate-action-2025

SSP1 is defined as follows. "*The world shifts gradually, but pervasively, toward a more sustainable path, emphasizing more inclusive development that respects perceived environmental boundaries. Management of the global commons slowly improves, educational and health investments accelerate the demographic transition, and the emphasis on economic growth shifts toward a broader emphasis on human well-being. Driven by an increasing commitment to achieving development goals, inequality is reduced both across and within countries. Consumption is oriented toward low material growth and lower resource and energy intensity.*"[41]

Now, what does one permit in Montana have to do with SSPs and why cannot its emissions not just be subtracted from say SSP2 to be employed in MAGICC? Well, first MAGICC is the wrong tool (see above) and every ton of CO_2 emitted makes climate harms worse, including in Montana. Second, an individual permit approval or denial does not happen in an isolated vacuum. One approval begets more approvals. It is a pattern. That pattern for one entity, say Montana, influences nearby entities, say Idaho, Wyoming, Oregon, etc. This is called the spillover effect and is well documented in the case of using carbon pricing[42], but applies just as well to permitting actions. Here, reductions in GHG emissions in one nation led to emission reductions in neighboring nations through policy diffusion. In fact, the emission reductions through diffusion to neighboring nations was larger than the emission reduction in the initiating nation. Basically, countries and states copy each other.

What does that have to do then with this Draft Guidance? At the most basic level, a given permit's GHG emissions cannot be subtracted from an SSP. Rather, the *aggregate pattern* of permitting or denying fossil fuel projects creates the future and determines how much it aligns with a given SSP. This can be seen in the description of mitigation (the focus of Draft Guidance) for each SSP.[43] SSP1 and SSP4 have rapidly established global collaboration on mitigation, which means fossil fuels are reduced. SSP2 has some delays in establishing global action, with transitions to global cooperation on reducing fossil fuels between 2020 and 2040. SSP3 has a fragmented approach, with higher income countries joining a global mitigation plan between 2020 and 2040 while lower income countries delay such actions until 2050, meaning fossil fuel use continues at a higher level than would occur in SSP2. This sort of "choose your own adventure" setting is shown in the figure below. The aggregate choices today determine our future and how much it may align with a given SSP, noting that each SSP is itself only one potential future and almost all potential futures lie in between the SSPs.

[41] https://www.sciencedirect.com/science/article/pii/S0959378016300681
[42] https://www.nature.com/articles/s41558-023-01710-8
[43] https://www.sciencedirect.com/science/article/pii/S0959378016300681?via%3Dihub

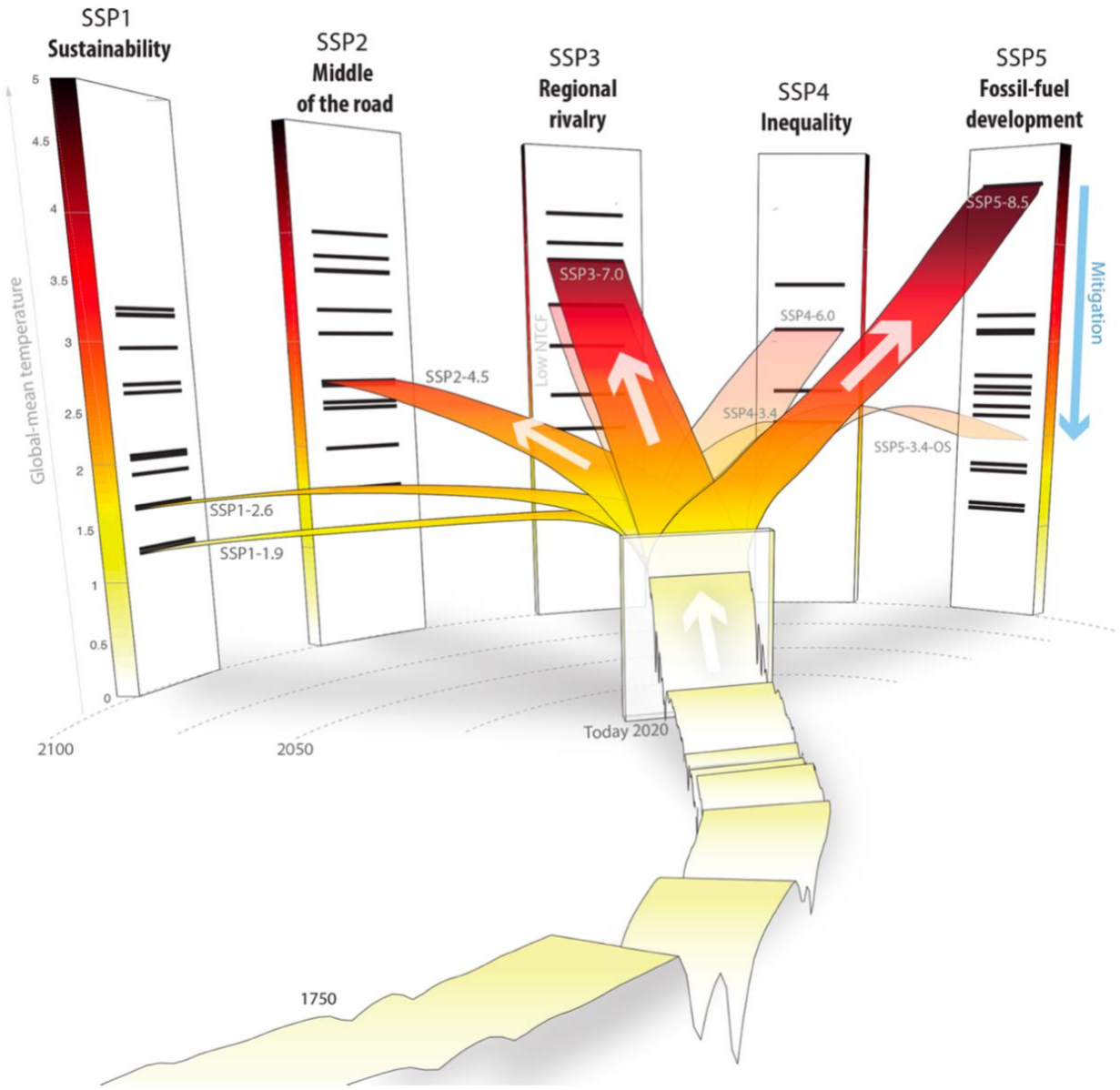

Figure showing how the choices of global society today dictate potential futures like the SSPs.[44] *Note that several other SSPs are shown than discussed in text and the number of futures is a spectrum between these few SSPs. But the clear message of this picture is that what choice is made now creates the SSP. The number after the dash is the radiative forcing of the SSP in 2100.*

Thus, it is very clear that the global actions in aggregate make the SSP because the SSP is defined by how the globe behaves. The proposed Draft Guidance actions have the whole system backwards. Approving permits makes SSP2 more likely, approving a lot of permits makes SSP3 more likely, while denying permits will make SSP1 more likely. You cannot subtract the permitted emissions from a future that is unknown. The permitting decisions themselves define the future.

[44] https://gmd.copernicus.org/articles/13/3571/2020/

As established in *Held v. Montana*, even though Montana cannot control what happens in the rest of the world, Montana still has a constitutional duty to reduce its fossil fuel activities and resulting GHG emissions, which are proven to be harming Montanans and unconstitutionally degrading Montana's life support system. It was also established that Montana's GHG emissions nationally and globally significant. As the District Court found:

> 218. Accounting for overlap among fossil fuels extracted, consumed, processed, and transported in Montana, the total CO_2 emissions due to Montana's fossil fuel-based economy is about 166 million tons CO_2. This is a conservative estimate and does not include all the GHG emissions, including methane, for which Montana is responsible.
>
> 219. The 166 million tons CO_2 due to Montana's fossil fuel-based economy is equivalent to the emissions from Argentia (with forty-seven million residents), the Netherlands (with eighteen million residents), or Pakistan (with 248 million residents).
>
> 222. Montana is a major emitter of GHG emissions in the world in absolute terms, in per person terms, and historically.
>
> 230. Montana's land contains a significant quantity of fossil fuels yet to be extracted.
>
> 231. Montana's GHG emissions have grown significantly since the passage of the 1972 Montana Constitution.
>
> 233. Defendants have authorized fossil fuel extraction, transportation, and combustion resulting in high levels of GHG emissions that contribute to climate change.
>
> 237. What happens in Montana has a real impact on fossil fuel energy systems, CO_2 emissions, and global warming.[45]

And as the Montana Supreme Court cogently summed up: "global GHG emissions do not insulate the State from its affirmative constitutional duties with regards to projects that it permits. The fact that climate change impacts extend beyond Montana's borders, as does selenium pollution and other environmental harms, does not allow the state to disregard its contributions to environmental degradation within Montana."[46] Constrained by their affirmative constitutional obligations, DEQ and other state agencies, thankfully, need not (and legally cannot) follow other states and countries in jumping off the bridge[47] and wantonly permit additional new fossil fuel projects amidst an already degraded climate system.

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[45] *Held District Court Order* at 67-70.
[46] *Held*, ¶ 66 (internal citation omitted).
[47] *See Held*, ¶ 49.

IV. The Draft Guidance Should Employ a Non-Discounted Social Cost of Carbon

Appendix 3 to the Draft Guidance provides a discussion of how GHG emission impacts can be quantified for Montana using a social cost of greenhouse gases (SC-GHG) but ultimately does not recommend having agencies apply SC-GHG. The SC-GHG to Montanans must be considered during MEPA reviews because climate harms are already being felt by Montanans caused by past GHG emissions, including those from Montana and the SC-GHG provides a metric to calculate the harms and evaluate the benefits of the proposed project in light of the harms.[48]

The question is, then, will this project make the climate better or worse for Montana? Will it incrementally make droughts, fires, smoke, heatwaves, low-snow-winters, low-stream-flows, rain-on-snow floods, and so on, increase or decrease? If every ton of CO_2 emitted to the atmosphere adds to global warming and therefore climate harms, then every ton of CO_2 emitted will have a negative economic impact on Montana.

While the potential positive impact of higher CO_2 on plant growth, called fertilization, has garnered recent discussion in policy circles, this one purported benefit is outweighed by all the negative impacts of CO_2, such as droughts, heatwaves, harms to public health, and many more. Below is a figure showing the projected change in wheat growth for the planet under SSP2 emissions, including the influence of CO_2 fertilization.[49] Despite CO_2 fertilization, wheat production in Montana declines of 10-20%. How does a future like SSP2 come about? By continuing to approve fossil fuel permits in Montana at a rate consistent with historical practices. How is this decline in Montana's most important crop avoided? By rejecting fossil fuel permits in Montana, shifting the future towards SSP1. Should the economic impact from reduced wheat production and other economic losses to Montanans be considered in assessing a GHG-emitting permit? Yes.

[48] https://montanaclimate.org/chapter/title-page; https://toolkit.climate.gov/NCA5; https://www.emountainworks.com/docs/2021_C2H2inMT_final.pdf

[49] https://www.nature.com/articles/s41586-025-09085-w

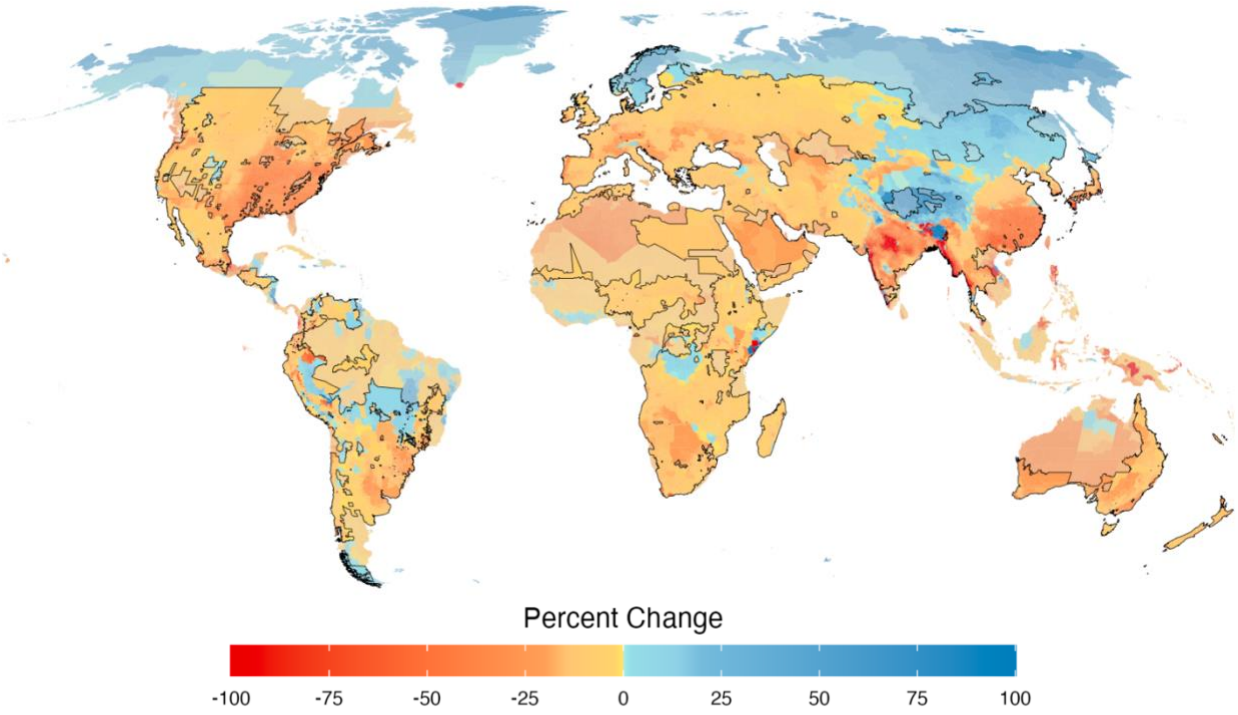

Figure showing the change in wheat production under SSP2.[50]

Appendix 3 shows in Tables 1 and 2 discount rates of 1.5% to 5.0% to be applied to future climate costs for calculating their value today. This is wrong as it then preferentially values older people over younger people.[51] That is, a person born in 1960 who will die in 2040 will experience far less climate harms than a person born in 2020 who will die in 2080. Conversely, the person born in 1960 can advocate today to not reduce GHG emissions while the person born in 2020 cannot advocate today for reducing GHG emissions but will experience much more of the climate harms from those emissions caused by the advocacy of the person born in 1960. There is already intergenerational inequity when it comes to bearing the burden of climate change. Applying a discount rate to future climate damages only increases this inequity, because not only are the climate damages in the future greater than today but also the discount rate makes their value less than if that same damage occurred today. Accordingly, no discount rate can be applied to future climate damages as a person born in 2020 has the exact same rights as a person born in 1960 (some economists even propose applying a negative discount rate).

This intergenerational inequity is shown below in the series of bar graphs. These graphs show how many times more climate harms will be experienced by a person born in 1980, 2000 and 2020 relative to a person born in 1960. The region is the United States (including Montana) and Canada. The harms are wildfire, river floods, droughts and heatwaves, all climate harms that cannot be determined by MAGICC, as a side note. The calculations follow Thiery et al.[52] and are from www.myclimatefuture.info[53] for global warming levels of 1.5°C, 2.4°C, and 3.5°C.

[50] https://www.nature.com/articles/s41586-025-09085-w
[51] https://www.science.org/doi/10.1126/science.abi7339; https://www.nature.com/articles/s41586-025-08907-1
[52] https://www.science.org/doi/10.1126/science.abi7339
[53] https://myclimatefuture.info/

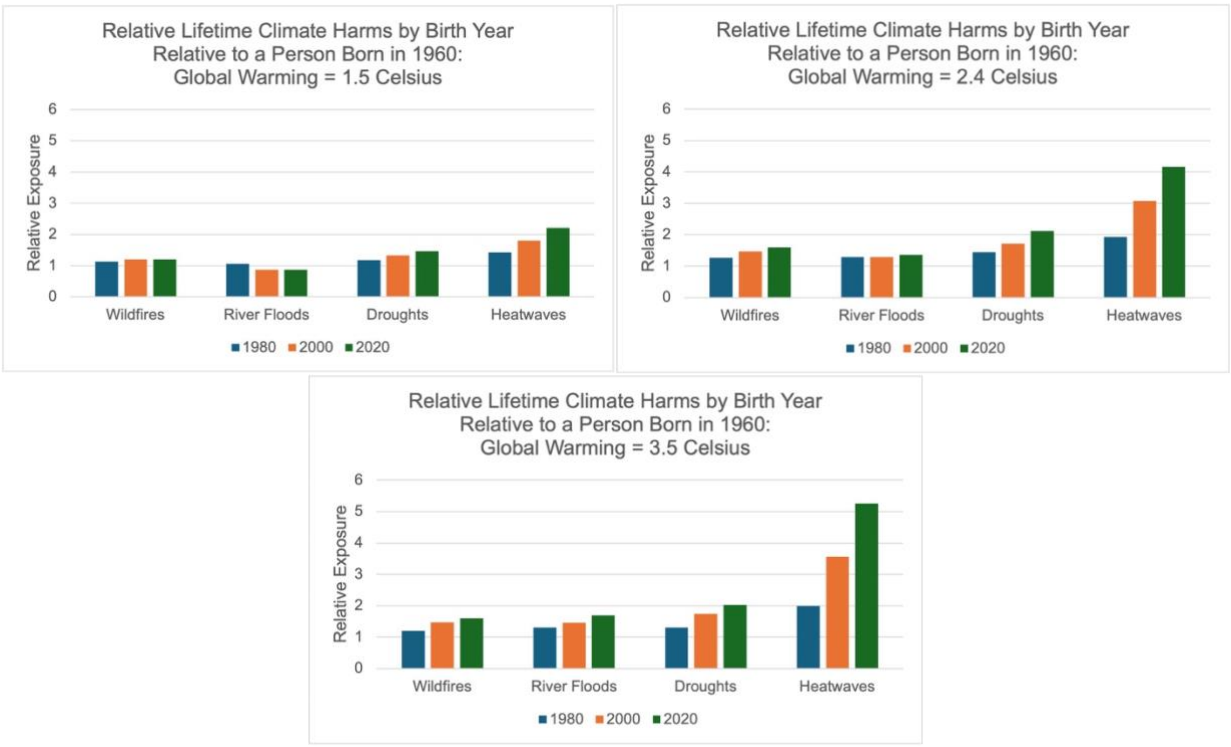

Figure showing three bar graphs of the disproportionate lifetime climate harms by birth year relative to a person born in 1960. [54]

What these results highlight is the fact that the younger one is and warmer the climate becomes, the greater the climate harms that person experiences, particularly relative to a person that is 65 years old today (i.e., born in 1960). How warm the climate becomes depends on the collective action of continuing fossil fuel permitting at current rate and resulting in SSP2 (about 2.4°C of global warming), increasing fossil fuel permitting and resulting in SSP3 (about 3.5°C of global warming), or reducing fossil fuel permitting and resulting in SSP1 (about 1.5°C of global warming). Montana's actions, given its significant fossil fuel reserves, will play a significant role in determining which future comes to pass.

Consequently, the costs of these future, greater climate harms that will result from permitting decisions today must be considered in whether a GHG-emitting project is approved or not. Approval increases these harms, and those harms fall disproportionally on younger Montanans. Furthermore, these future damages cannot be discounted when in determining their current monetary value as that further discriminates against younger Montanans.[55] Indeed, the World Bank also put forward a similar series of reasons why a zero discount rate is the only rate that can be used for calculating the climate damages from projects that emit GHGs.[56] Specifically, a zero discount rate avoids the assumption that economic growth will always continue, it avoids philosophical questions about basic human rights, it properly treats climate change as a global

[54] https://myclimatefuture.info/
[55] https://www.sciencedirect.com/science/article/abs/pii/S0921800914001694
[56] https://blogs.worldbank.org/en/governance/using-zero-discount-rate-could-help-choose-better-projects-and-help-get-net-zero-carbon

threat to a finite planet rather than a marginal threat, it avoids moral conundrums where there is no actual scientific basis for a given discount rate with the rate reflecting a values judgement, and it would lastly create a level playing field for conducting cost-benefit analyses.

In short, Montana agencies should be required to use the SC-GHG emissions as part of its GHG analysis under MEPA.

V. Conclusion

A stable climate system is an integral component of Montanans' right to a clean and healthful environment. DEQ has an affirmative constitutional obligation to refrain from conduct that causes an increase in Montana's GHG emissions and further degradation and diminution to Montana's climate and environmental life support system. Every additional ton of GHG emissions exacerbates the ongoing damage to Montana's environment and constitutional violations the *Held* Plaintiffs and young Montanans are already suffering. For the reasons outlined herein, DEQ should substantively revise the Draft GHG Guidance.

Sincerely,

Nathan Bellinger
Counsel for Plaintiffs in *Held v. State of Montana*

Anders Carlson
Senior Climate Scientist

Our Children's Trust
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Eugene, OR 97405
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Navajo Transitional Energy Company

Via epermit DEQCoal@mt.gov ***January 2, 2026***

Mrs. Emily Lodman, Coal Section Supervisor
Mining Bureau
Montana Department of Environmental Quality
PO Box 200901
Helena, MT 59620-0901

Permit ID: C1979012
Revision Type: Amendment
Permitting Action: Application
Subject: **Permit Amendment 6 (AM6), Draft EA Comments**

Dear Mrs. Lodman:

Navajo Transitional Energy Company, LLC ("NTEC") is submitting the technical comments below for the draft environmental assessment published with the completeness public comment period for the AM6 revision.

1. Page 8, Table 6, suggest adding the acres regraded/reclaimed from Table 1 of the Annual Mining Report to accompany the total acres of disturbance. Also suggest revising the statement of when the proposed additional mining would occur. Plate 5 of the AM6 application shows coal recovery within the additional cuts to occur in 2027 in Pit 2, 2030-2034 in Pit 1, and 2035-2039 in Pit 4.
2. Page 11, the solid waste discussion should remove the Class III waste designation, as this can be misleading. Only items authorized in the mine permit can be disposed of within the mine.
3. Page 13, the estimated recoverable tons from MTM-105485 and MTM-094378 is approximately 177.1 million tons.
4. Page 15, the soil stockpile hatch does not match the legend. The AM6 revision does not add/authorize the additional cut areas shown in Pit 7. Following the coal along the burn line is authorized under the currently approved mine permit coal conservation plan.
5. Page 24, suggested wording for the last paragraph for clarity. *"The mining process removes the geologic layers making up aquitards and aquifers, replacing the once stratified geology with a more uniform mix of spoils."*
6. Page 35, in the cumulative impacts paragraph, please consider adding the following for clarification. *"In 2019, the Greater sage-grouse functional habitat loss anticipated as a result of the TR1 revision was calculated to be approximately 615 acres. This was based on 977 additional acres of disturbance using a functional acre approach to quantify the impacts."*
7. Page 36, in the avian paragraph, the HRRP was developed and required as part of the coal leasing process for Lease by Modification MTM-069782 and Land Use lease MTM-74913.
8. Page 48, dividing the 39.4 million tons add, by a representative annual production rate of 13 million tons would provide a better approximation of the additional mine life added.
9. Page 59, under direct impacts, similar to above, the proposed action would add approximately 3 years to the current mine life. The paragraph shows 15 years.

10. Page 60 and tables 7 - 10. Coal is only leased and mined in order to meet a demand in the energy market. Regardless of the source used to produce the energy demanded, emissions will be generated. Please consider acknowledging this fact when presenting emissions generated from mining and burning the coal.

With kind regards,

Gabe Johnson, PE
Env. Engineer Sr.

Gilbert, Sharona

From: Gabriel L. Johnson <Gabriel.Johnson@NavEnergy.com>
Sent: Friday, January 2, 2026 11:36 AM
To: DEQ AEMD Coal
Cc: Lodman, Emily
Subject: [EXTERNAL] AM6 Draft EA Technical Comments
Attachments: 2026 0102 NTEC Draft EA Comment ltr.pdf

Good Morning,

Please see the attached technical comments for the draft EA for AM6. Please let me know if you have any additional questions.

Thank you,

Gabe Johnson, PE
Environmental Engineer, Sr.

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December 12, 2025

Montana Department of Environmental Quality
Coal Section
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Helena, MT 59620-0901

To Whom it May Concern:

Montana Fish, Wildlife & Parks (FWP) appreciates the ability to comment on the Notice of Application for Amendment AM6 for Coal Surface Mining Permit C1979012 for Navajo Transitional Energy Company, LLC. FWP is responsible for the conservation and management of Montana's wildlife, including sage-grouse, which this Notice of Application has the potential to negatively impact. Loss of habitat and energy development are some of the leading causes to declines in sage grouse numbers and distribution. The proposed application for Amendment from Navajo Transitional Energy Company, LLC, falls within core sage-grouse habitat and is within close proximity to currently active sage grouse leks, which could negatively impact sage-grouse within this area.

Lek locations and sage-grouse occupancy are used to determine habitat designations for management, regulatory frameworks, and to direct conservation measures. The primary concern to sage-grouse is loss and fragmentation of their habitat. In Montana, sage-grouse habitat is categorized into priority habitats of Core, General and Connectivity (as required by Montana Executive Order 21-2015). These categories are used to inform management plans, and to identify lek buffers and other development restrictions surrounding leks. Core habitat contains the highest density of displaying males based on lek locations in areas that support the greatest sage-grouse abundance. Maintaining Core habitat and the leks within it is important for maintaining sage-grouse distribution in Montana and therefore is the highest conservation priority.

Sage-grouse populations are surveyed annually at their leks to help estimate trend and create population estimates. Long-term lek count information is used to categorize

priority habitats and to determine locations of conservation importance to minimize disturbance.

FWP uses the following lek status definitions:

Confirmed Active – Data supports existence of a lek. Supporting data defined as 1 year with 2 or more males lekking on site followed by evidence of lekking (Birds – male, female or unclassified; -OR- Sign – vegetation trampling, feathers, or droppings) within 10 years of that observation.

Confirmed Inactive – A Confirmed Active lek with no evidence of lekking (Birds – male, female or unclassified; OR- Sign – vegetation trampling, feathers, or droppings) for the last 10 years. Requires a minimum of 3 survey years with no evidence of lekking during a 10-year period. Reinstating Confirmed Active status requires meeting the supporting data requirements.

Confirmed Extirpated – Habitat changes have caused birds to permanently abandon a lek (e.g., plowing, urban development, overhead power line) as determined by the biologists monitoring the lek.

Never confirmed active – An Unconfirmed lek that was never confirmed active. Requires 3 or more survey years with no evidence of lekking (Birds – male, female or unclassified; -OR- Sign – vegetation trampling, feathers, or droppings) over any period of time.

Provisionally Active – Preliminary data supports existence of an active lek. This status can only apply during the first year of detection. Supporting data defined as 1 observation with 2 or more males lekking on site AND sign of lekking (vegetation trampling, feather, or droppings) or followed by a 2nd observation of 2 or more males lekking within the same survey year.

Unconfirmed – Possible lek. Grouse activity documented. Data insufficient to classify as Confirmed Active status.

It is important to understand that while lek surveys are a critical tool for the management of sage-grouse, there are biases including variable lek attendance by males (temporally, daily, seasonally and annually), imperfect detection probability, inter-lek movements, variation in observer error, unidentified leks, non-random selection of leks visited each year and variable sex ratios. Counts are conducted by FWP and partners at leks 1-3 times within a season; however, all leks are not monitored in every year. Annual monitoring of leks can be impacted by varying survey conditions, including weather, impassable roads, access, and capacity. In addition to annual count biases, sage-grouse

population numbers oscillate over a period of 8 – 10 years across large scales (Fedy and Doherty 2011). Research has indicated that in Montana weather patterns, mainly precipitation, is the main driver of these oscillations. The past few years of drought are contributing to lower sage-grouse populations being observed in parts of the state. Drought conditions reduce chick survival by affecting forage and cover. Lower population years around the bottom of a sage grouse population cycle can result in leks with little to no attendance, but it is common to see grouse return to these leks in subsequent years as populations increase.

FWP accounts for annual lek survey biases and long-term trend oscillations into lek status definitions by incorporating a minimum number of survey years over a timeframe that is biologically significant. This avoids making management decisions based on estimates from a single or few years without putting them in the context of the longer timeframe in which sage grouse populations cycle.

Under FWP lek status definitions, for a lek that is confirmed active lek to switch to confirmed inactive, it must meet the following criteria: "A Confirmed Active lek with no evidence of lekking (Birds - male, female or unclassified; -OR- Sign - vegetation trampling, feathers, or droppings) for the last 10 years. Requires a minimum of 3 survey years with no evidence of lekking during a 10-year period."

Based on the data and current sage-grouse lek designations FWP feels like this Application for Amendment would have irreversible negative impacts on sage-grouse numbers and distributions in the area and could potentially severe this portion of critical sage grouse habitat.

Sincerely,

Brad Schmitz
FWP Regional Supervisor, Region 7