

Honorable Secretary Jennifer Granholm
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

Director David Crane
Office of Clean Energy Demonstrations
U.S. Department of Energy
1000 Independence Ave SW
Washington, D.C. 20585

June 13th, 2023

Re. Reject Western Interstate Hydrogen Hub application for Department of Energy Regional Clean Hydrogen Hubs (H2Hubs) funding (DE- FOA-0002779) and all H2Hub proposals nationwide.

Dear Secretary Granholm and Director Crane,

We urge you to reject the Western Interstate Hydrogen Hub (WISHH) application submitted to your office by the states of Colorado, New Mexico, Utah and Wyoming. The WISHH would devastate public health, clean air, Indigenous sacred places and the climate, and does not have the support of communities in New Mexico who would be the most impacted by the proposal, particularly poor and people of color who already experience cumulative impacts on their health, environment, social and economic wellbeing.

We implore you to reject the premise of Subtitle B, Section 40311 of the Infrastructure Investment and Jobs Act, which states that hydrogen plays a critical part in the comprehensive energy portfolio of the United States. In fact, hydrogen is a false solution that will further exacerbate the climate crisis and disproportionately harm people of color, low-income communities, and Indigenous peoples. The urgency of the climate crisis is such that the United States must rapidly phase out oil and gas production by 2030¹, yet nearly all hydrogen is produced from fossil gas. All hydrogen uses vast quantities of water to produce, is extremely dangerous to transport via pipeline, and emits harmful nitrogen oxide (NOx) when combusted. Accelerating hydrogen development is irresponsible and poses unacceptable threats to the climate, public health and environmental safety.

For the following reasons, the WISHH should not be funded:

¹ Calverley, D., & Anderson, K. (2022). *Phaseout Pathways for Fossil Fuel Production Within Paris-compliant Carbon Budgets*.

WISHH will lock in existing dirty fossil fuel production.

Over 99% of hydrogen produced today is made with fossil fuels² using primarily methane gas in a process that emits carbon dioxide and health harming pollution.³ At least one of the five WISHH projects proposed to be sited in New Mexico, Tallgrass Energy's conversion of the Escalante Generating Station, will produce hydrogen with gas and capture and sequester the carbon. The true extent of fossil hydrogen planned as part of the WISHH is not publicly known because the proponent states have failed to make this information accessible to the public.⁴

Allowing fossil hydrogen projects to be built in New Mexico will lock in dirty fossil fuel production at a time when the state urgently needs to phase out oil and gas. The latest IPCC report unequivocally finds that existing fossil fuels must be quickly phased out globally in order to have a chance of avoiding the devastating harms of planetary warming in excess of 1.5°C. If world leaders like the U.S. fail to act, existing fossil fuel infrastructure will lead to a future of new weather extremes, rising seas, animal and plant extinctions, and death, especially for the poorest and most vulnerable people.⁵ As the country's second largest oil producer and a leading gas producer, New Mexico is a major contributor to U.S. greenhouse gas emissions. This production disproportionately harms Indigenous peoples, frontline communities, and youth in our state. The WISHH reliance on fossil hydrogen will perpetuate this legacy of environmental injustice rather than help advance the critically important work of a just transition. Instead of promoting dangerous hydrogen development, we urge DOE to invest in community-supported renewables like wind and solar.

The carbon capture and sequestration (CCS) component of some fossil hydrogen projects is deeply concerning. Class VI injection wells are likely to be used for CCS at the Escalante Generating Station and other projects that are part of WISHH. Class VI wells enable polluters to sequester carbon deep underground in an attempt to offset their emissions. In addition to being a false climate solution, this process poses severe risks of contamination to groundwater, soil and air. In addition, Class VI well injection can cause sudden and large releases of carbon dioxide at concentrations harmful to human health and can lead to earthquakes.⁶ In 2023, the New Mexico Legislature appropriated money for the Energy, Minerals and Natural Resources Department (EMNRD) to petition to obtain primary enforcement authority over Class VI wells, which are usually regulated by the U.S. Environmental Protection Agency. U.S. EPA has already expressed doubts about EMNRD's ability to meet regulatory requirements under the

²U.S. Department of Energy. 2020. "Hydrogen Strategy: Enabling a Low Carbon Economy". Office of Fossil Fuel Energy, United States Department of Energy, Washington D.C.

https://www.energy.gov/sites/prod/files/2020/07/f76/USDOE_FE_Hydrogen_Strategy_July2020.pdf

³ Sun, Pingping, Young, Ben, Elgowainy, Amgad, Lu, Zifeng, Wang, Michael, Morelli, Ben, & Hawkins, Troy Robert. *Criteria Air Pollutants and Greenhouse Gas Emissions from Hydrogen Production in U.S. Steam Methane Reforming Facilities*. United States. <https://doi.org/10.1021/acs.est.8b06197>

⁴ The version of the WISHH concept paper that is publicly available has been significantly redacted. Little information is available about each of the eight projects proposed as part of the WISHH, five of which would be sited in New Mexico.

⁵ Lee, Hoesung, et al. "SYNTHESIS REPORT OF THE IPCC SIXTH ASSESSMENT REPORT (AR6): Summary for Policy Makers." Edited by Gregory Flato et al., *IPCC*, 20 Mar. 2023, https://report.ipcc.ch/ar6syr/pdf/IPCC_AR6_SYR_SPM.pdf

⁶ Congressional Research Service. 2022. "Injection and Geologic Sequestration of Carbon Dioxide: Federal Role and Issues for Congress". R46192. <https://sgp.fas.org/crs/misc/R46192.pdf>

federal Safe Drinking Water Act and safely administer a Class VI well program.⁷ EMNRD's Oil Conservation Division has about a 50% staff vacancy and only 9 inspectors for over 66,000 active oil and gas wells, yielding a ratio of 1 inspector per 7,300 wells.⁸ The agency is simply not in a position to safely oversee dangerous Class VI injection wells. The CCS component of WISHH represents a disaster for the climate and would pose an unacceptable risk to communities and the environment.

No hydrogen is clean.

When combusted, hydrogen releases NOx emissions up to six times more than when methane is combusted.⁹ Moreover, hydrogen itself is an indirect greenhouse gas that extends the life of methane in the atmosphere. Hydrogen leakage from WISHH and other production sites could contribute significantly to global warming. All types of hydrogen use vast quantities of water, which is unsustainable especially in drought stricken states like New Mexico.

WISHH poses unacceptable health and safety risks.

Hydrogen is unsafe to transport via gas pipelines. It is undisputed that hydrogen is more likely to explode than gas, burns hotter, and is more corrosive to pipelines than gas.¹⁰

WISHH will lead to stranded assets and cause economic injustice.

New Mexico has been trapped in the boom-and-bust cycles of an extractive economy for decades. While oil and gas companies enjoy record profits, New Mexico remains one of the most impoverished states in the nation.¹¹ Pursuit of false climate solutions that invest our public dollars into another short-term profit venture at the behest of these same fossil fuel companies will once again result in stranded assets, wasted taxpayer dollars and a delayed transition to a diversified, regenerative economy. Hydrogen projects being proposed in New Mexico produce hydrogen through Steam Methane Reforming (SMR) of "natural" methane gas, but energy experts predict that green hydrogen produced by electrolyzing water will become cheaper than fossil fueled hydrogen within the next decade, making fossil fueled hydrogen obsolete.¹²

Even the so-called "clean" hydrogen projects being proposed depend on carbon capture and storage (CCS), a notoriously costly and unreliable technology. Of \$2.66 billion spent by the U.S. Department of Energy (DOE) since 2010 to develop advanced fossil energy technologies, nearly half was dedicated to nine carbon capture and storage demonstration projects. Only

⁷ New Mexico Legislative Finance Committee. 2023. Fiscal Impact Report, House Bill 174. <https://www.nmlegis.gov/Sessions/23%20Regular/firs/HB0174.PDF>

⁸ See *Atencio v. State of New Mexico*

⁹ Ramanan, Abbie. 2023. "The Top Five Fossil Fuel Industry Myths About Hydrogen". Clean Energy Group. <https://www.cleanenergy.org/the-top-five-fossil-fuel-industry-myths-about-hydrogen/>

¹⁰ Accufacts Inc.. 2022. "Report: Safety of Hydrogen Transportation by Gas Pipelines". Prepared for the Pipeline Safety Trust. <https://pstrust.org/wp-content/uploads/2022/11/11-28-22-Final-Accufacts-Hydrogen-Pipeline-Report.pdf>

¹¹ John Creamer, Emily A. Shrider, Kalee Burns, and Frances Chen, U.S. Census Bureau, Current Population Reports, P60-277, Poverty in the United States: 2021, U.S. Government Publishing Office, Washington, DC, September 2022 <https://www.census.gov/content/dam/Census/library/publications/2022/demo/p60-277.pdf>

¹² Mulder, Brandon. 2022. "U.S. green hydrogen costs to reach sub-zero under IRA; longer-term price impacts remain uncertain". *S&P Global*. September 29, 2022. <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/092922-us-green-hydrogen-costs-to-reach-sub-zero-under-ira-longer-term-price-impacts-remain-uncertain>

three major projects remained active at the end of FY17 and cost the DOE a combined \$615 million.¹³ CCS projects abandoned for financial reasons, despite large amounts of public funding, include Petra Nova Carbon Capture Project, USA (\$190 million in public funding), Mississippi Power's Kemper Project (Projected cost was \$2.4 billion but the cost ballooned by 212.5% to \$7.5 billion, \$270 million of which came from the DOE, *without ever actually coming online*), the Antelope Valley Project, (\$400 million in public funding), the Sweeny Gasification Project (\$3 million in public funding) and numerous international projects. Tim Baxter, a senior researcher with the Australian Climate Council, reported that he was not aware of a single large carbon capture and storage project linked to fossil fuels in the world that had delivered on time, on budget, and captured the agreed amount of carbon.¹⁴ We cannot afford saddling our most vulnerable communities with financial risk posed by hydrogen development.

WISHH will perpetuate environmental injustice.

A hydrogen economy will mean more polluting infrastructure and dangerous pipelines in already overburdened areas, which will continue the legacy of sacrifice zones in New Mexico that disproportionately harms people of color, low-income communities and Indigenous peoples. While the WISHH concept paper claims that the project will advance Justice40 and equity initiatives, it will in fact detract from these important goals. In New Mexico, state agencies and WISHH project proponents have completely failed to meaningfully collaborate with and obtain the consent of impacted communities before moving forward with the project proposal. For two years in a row, large grassroots coalitions of Indigenous peoples, youth, people of color, labor, faith and environmental groups have told New Mexico Legislators that we do not support a hydrogen economy in New Mexico. Flying in the face of environmental justice, the State of New Mexico is pursuing WISHH without the support of New Mexicans.

Hydrogen is a false solution. To create jobs and ensure a just and equitable transition to a sustainable economy, we urge DOE to reject WISHH and all hydrogen hubs, and instead invest in true, community-supported, renewables like wind and solar. The climate crisis poses a grave threat to all life on Earth. DOE has the power to help lead a transformation to a more sustainable future. To do so, you must help phase out fossil fuels and reject false solutions like hydrogen.

Sincerely,

New Mexico No False Solutions Coalition

Alejandria Lyons, Coalition Coordinator
New Mexico No False Solutions Coalition

¹³ Patel, Sonal. 2018. "DOE Sank Billions of Fossil Energy R&D Dollars in CCS Projects. Most Failed". *Power*. October 9, 2018. <https://www.powermag.com/doe-sank-billions-of-fossil-energy-rd-dollars-in-ccs-projects-most-failed/>

¹⁴ O'Malley, Nick. 2021. Australia's giant carbon capture project fails to meet key targets. *The Sydney Morning Herald*. July 20, 2021. <https://www.smh.com.au/environment/climate-change/australia-s-giant-carbon-capture-project-fails-to-meet-key-targets-20210719-p58b3i.html>

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