

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

August 22, 2023

Re: Don't believe the "Hydrogen Hype" - Reject all applications for Department of Energy Regional Clean Hydrogen Hubs (H2Hubs) funding (DE- FOA-0002779)

Dear Secretary Granholm and Director Crane,

We urge you to reject all hydrogen hub applications, as has been repeatedly requested by environmental and environmental justice organizations [nationwide](#).ⁱ Here, we write in solidarity with [the 2023 letter from the New Mexico No False Solutions Coalition](#) (NMNFS)ⁱⁱ, building on the points they have raised and the fights ongoing in communities from the Southwest to the Northeast. A large-scale buildout of hydrogen infrastructure will further exacerbate the climate crisis and disproportionately harm people of color, low-income communities, and Indigenous peoples. To address the climate emergency, the United States [must phase out](#) oil and gas production by 2030,--yet nearly all hydrogen production is from fossil gas.ⁱⁱⁱ As the NMNFS states, all hydrogen production [uses vast quantities of water](#)^{iv}, is extremely [dangerous to transport](#) via pipelines^v, and emits harmful nitrogen oxides (NOx) when combusted. Nitrogen Oxides (NOx) are health harming toxic air pollutants and contribute to PM2.5 and Ozone pollution. Accelerating hydrogen development is irresponsible and poses unacceptable threats to the climate, public health and environmental safety. Environmental justice organizers have been fighting these hubs since they were announced, and it's time for the DOE to listen. Our future generations will ask us what we did in this moment of crisis, and every leader and employee at the DOE must be able to unequivocally state that they did what was right and rejected these hubs.

DOE has also heard from many environmental justice communities and organizers who are mobilizing against these Hubs, and up to this point has ignored their pleas to deny the Hubs funding. From New Mexico to Pennsylvania, communities of color, low-income communities, and Indigenous communities have risen up and demanded that the DOE reject these hubs. To fund these Hubs is to continue business as usual, sacrificing the same communities over and over again, in the name of corporate greed and technological experimentation. Our neighborhoods and our futures are not an experiment. We don't get a

second chance. We recognize that the Bipartisan Infrastructure Investment and Jobs Act directs DOE to fund these Hubs, but we ask DOE to find a different path and reject this false solution. It's time for DOE to do the right thing.

For the following reasons, the hydrogen hubs should not be funded:

1. No matter the power source or end use, Hydrogen hubs harm our communities.

- a. Hydrogen hubs will require a massive buildout of pipelines to transport hydrogen from hub to end use. Hydrogen burns hotter than gas, and is more [combustible and corrosive](#).^{vi} This means the slightest rupture can [cause explosions](#).^{vii} Even before the pipelines are transporting hydrogen, their construction will disrupt ecosystems, contaminate soil and water, and increase violence for surrounding communities. Specifically, studies on pipeline construction have demonstrated a corresponding [70% increase in violence](#) particularly targeting indigenous women.^{viii} Low income, communities of color and indigenous communities are [already overburdened](#)^{ix} by oil and gas [pipelines](#), and hydrogen pipelines will increase this burden.^x
- b. Hydrogen leaks can also [extend the life of greenhouse gasses](#) in the atmosphere, worsening global warming.^{xi} A CICERO study published in June put hydrogen's [GWP at 11.6](#).^{xii}
- c. Studies indicate that combustion of hydrogen will produce more Nitrogen Oxide (NOx) than burning methane alone.^{xiii} NOx causes severe respiratory illness, which will again disproportionately harm already overburdened communities.

2. Hydrogen hubs will lock in dirty fossil fuels.

Over 95% of hydrogen produced today is made from and with [fossil fuels](#)^{xiv}, using primarily methane gas in a process that emits carbon dioxide and other [pollution](#).^{xv} Hydrogen [lifecycle emissions](#) which use carbon capture and storage are 20% greater than directly burning natural gas or coal, and 60% greater than burning diesel oil, because of the increased fossil fuels required to power it.^{xvi} The process of producing gray and blue hydrogen is a major source of fugitive methane emissions from flaring, transportation, and other upstream processes – releasing even more potent greenhouse gasses and exacerbating atmospheric warming over the next two decades.

Funding hydrogen hubs will lock in dirty fossil fuel production at a time when the U.S. 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 [continue to cause](#) new weather extremes, rising seas, animal and plant extinctions, and death, especially for the poorest and most vulnerable people.^{xvii} Across the U.S. oil and gas extraction disproportionately harms Indigenous people, people of color, youth, and low-income communities. The building of hydrogen hubs 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.

3. Hydrogen hubs powered by nuclear and renewables are also detrimental to communities and the environment.

Hydrogen hub projects also encourage extending the lifetime of existing nuclear facilities [past safe use](#)^{xxviii}, and entrenching this expensive and harmful technology [at the expense](#) of true renewable investment.^{xxix} Nuclear is much more dangerous and much more expensive than solar and wind, and creates [higher greenhouse gas emissions](#) while creating fewer jobs than those industries. Investing in nuclear-paired-hydrogen will cause [deadly delays](#) in the proliferation of true renewables, as momentum and resources are drained.^{xx} Once again the harms—storage of [radioactive waste](#)^{xxi}, [toxic leaks](#),^{xxii} and uranium mining—disproportionately impact the same overburdened communities. In particular, 15,000 abandoned uranium mines primarily reside on Indigenous land, where they continue to [cause cancer and other health problems](#).^{xxiii}

Even so called “green” hydrogen is a distraction from real solutions.

All types of hydrogen production use vast quantities of water (2.3 gallons per 1 kg, or [5,000 liters of water per megawatt-hour, compared to 20 liters for solar and 1 for wind](#)), which is unsustainable especially in drought stricken states.^{xxiv} [Reuters reported](#) last month that “nine of the 33 projects on the Department of Energy shortlist for the hydrogen hubs are in highly water-stressed regions,” according to data from Rystad Energy, a consulting firm.^{xxv}

Between [20-40%](#) of the energy generated for “green” hydrogen is lost in the process, so it will almost always be more expensive, delayed, and inefficient than using renewables directly.^{xxvi} According to the Boston Consulting Group, if all H2 production were replaced with green hydrogen, the amount of renewable power required would be equivalent to the total amount of power currently generated in the European Union annually. At a time when we do not even have a fraction of the renewables buildout we need to power our communities, it is completely backwards to experiment with “green” hydrogen before we have built out a renewable grid.

4. Hydrogen hubs are a corporate bailout that lead to stranded assets

Pursuit of false climate solutions that invest our public dollars into another short-term profit venture at the behest of fossil fuel companies will result in stranded assets, wasted taxpayer dollars and a delayed transition to a diversified, regenerative economy. 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 three major projects [remained active](#) at the end of FY17 and cost the DOE a combined \$615 million.^{xxvii}

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.^{xxviii} We cannot afford saddling our most vulnerable communities with financial risk posed by hydrogen development.

5. For the vast majority of end uses, hydrogen is unnecessary at best and extremely destructive at worst.

The legislation funding these hubs requires the exploration of different end-uses, and many of those are extremely dangerous and ill-advised. Specifically, [32 independent studies have shown^{xxix}](#) that hydrogen for home power is less efficient, much [more expensive^{xxx}](#), and more dangerous than using heat pumps, solar, and wind.^{xxxi} Hydrogen and hydrogen blends in the home will lead to [four times as many domestic explosions](#), and will be extremely expensive to adapt existing infrastructure to allow.^{xxxii} Whether that burden is on individual consumers, or whether it is passed on to consumers indirectly, it will surely increase costs disproportionately impact the lowest income ratepayers.

Hydrogen and hydrogen blends are also incredibly inefficient and dangerous for the vast majority of vehicles. [3x more wind turbines](#) would need to be powered to run a fleet of hydrogen vehicles compared to a fleet of EVs.^{xxxiii} When we expand public transit, we further reduce the power and resources needed. While there are some niche applications for hydrogen in transportation, it is absurd to experiment with them at such a massive scale when we haven't even implemented less harmful solutions.

Finally, for many industrial applications, reducing consumption or making the industry more efficient are preferable ways to reduce emissions compared to the expensive and hazardous buildout of hydrogen.

6. Hydrogen hubs 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 that disproportionately harm people of color, low-income communities and Indigenous peoples.

Throughout the hydrogen hub application process, DOE and project proponents have withheld critical information about the proposed projects. Impacted communities have had no or very little access to information about the environmental impacts of the proposed hubs, project locations, fuel sources and end-uses, associated infrastructure, and other details. Communities cannot meaningfully engage in determining their energy futures when critical information about these proposals are withheld.

To create jobs and ensure a just and equitable transition to a sustainable economy, we urge DOE to reject all hydrogen hubs, and instead invest in true, community-supported, renewables like wind and solar. We should be building towards a truly just and equitable transition, that invests in community ownership of truly renewable, regenerative economies, that reduces consumption and exploitation, and protects the rights of communities globally from North to South. In doing so, DOE must secure the Free, Prior, and Informed Consent of Indigenous peoples, end the violence of extraction-based economies, and support efforts to give Land Back. 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,

National and International Organizations

350.org

Animals Are Sentient Beings, Inc.

Between the Waters

Bold Alliance

Center for Biological Diversity

Center for International Environmental Law

Clean Energy Group

Climate Hawks Vote

Climate Justice Alliance

Earthworks

Food and Water Watch

FrackTracker Alliance

Global Alliance for Incinerator Alternatives (GAIA)

Grassroots Global Justice Alliance

Green Amendments For The Generations

Honor the Earth

Indigenous Environmental Network

Micronesia Climate Change Alliance

Native Organizers Alliance

Nuclear Information and Resource Service

Oil Change International

One Earth Sangha

Plastic Pollution Coalition

Plastic Solutions Fund

Property Rights and Pipeline Center

Science Community Action Network

Society of Native Nations

Stand.earth

System Change Not Climate Change

Tackling the A-Z Impacts of Plastics & Petrochemicals

Taproot Earth

The Last Plastic Straw

The People's Justice Council

Tishman Environment and Design Center at The New School

Unitarian Universalists for Social Justice

Indigenous Nations

Carrizo/Comecrudo Nation of Texas
Tonawanda Seneca Nation

Regional/Multi-State Organizations

Delaware Riverkeeper Network
Mid-Ohio Valley Climate Action
Midwest Building Decarbonization Coalition
No Fracked Gas in Mass
The Alliance for Appalachia
Tó Nizhóní Ání
WildEarth Guardians

Alabama

Alabama Interfaith Power and Light

Alaska

Native Movement

Arizona

Fitzgerald Foundation

California

350 Bay Area Action
350 Conejo / San Fernando Valley
Activist San Diego
Communities for a Better Environment
Fossil Free California
Occidental Arts and Ecology Center
Sacramento Area Move to Amend Affiliate
San Francisco Bay Physicians for Social Responsibility
Sunflower Alliance
Social Eco Education

Colorado

350 Colorado
Colorado Renewable Energy Society
Community for Sustainable Energy
Empower Our Future
I-70 Citizens Advisory Group
Indivisible Ambassadors
Larimer Alliance for Health, Safety, and Environment
Littleton Business Alliance
Mayfair Park Neighborhood Association Board
Mental Health & Inclusion Ministries

Montbello Neighborhood Improvement Association
Natural Capitalism Solutions
Physicians for Social Responsibility Colorado
Save EPA
Small Business Alliance, CO
Southwest Organization for Sustainability
Spirit of the Sun, Inc.
The Green House Connection Center
The Mind's Eye
Unite North Metro Denver
Wall of Women
Western Slope Businesses for a Livable Climate
Working for RacialEquity

Delaware

Delaware Chapter of the Sierra Club
XR Delaware

Florida

Physicians for Social Responsibility Florida Chapter

Hawaii

350Hawaii

Illinois

Eco-Justice Collaborative
Fox Valley Citizens for Peace and Justice
Save our Illinois Land

Indiana

Just Transition Northwest Indiana

Iowa

Science and Environmental Health Network

Louisiana

A Community Voice
Alliance for Affordable Energy
Baton Roots Community Farm
Coalition Against Death Alley
Concerned Citizens of St. John
Deep South Center for Environmental Justice
Earthworks Louisiana
Greater New Orleans Interfaith Climate Coalition

HousingLOUISIANA
Imagine Water Works
Inclusive Louisiana
Louisiana Against False Solutions
Louisiana Bucket Brigade
Louisiana League of Conscious Voters
Sunrise New Orleans
Earthworks Louisiana
M-W & Assoc. Environmental Policy Consultants
The Descendants Project
Vessel Project of Louisiana

Maine

Southern Maine Workers' Center

Maryland

Howard County (MD) Climate Action

Massachusetts

350 Mass

350ma-Berkshires

Berkshire Environmental Action Team

Michigan

Community Collaboration on Climate Change

Flint Rising

Michigan Environmental Justice Coalition

Southwest Detroit 48217

Missouri

CleanAirNow_EJ

New Mexico

Citizens Caring for the Future

Counselor Health Impact Assessment - K'é Bee Hózhqogo Iná Silá Committee

Do Good LLC

Dooda (NO) Desert Rock Organization

Dooda (NO) Helium Extraction Organization

Dooda (NO) Hydrogen Hub & Pipeline

Earth Ethics Inc.

Indigenous Lifeways

Los Jardines Institute

New Energy Economy

New Mexico Climate Justice

New Mexico Environmental Law Center
NM No False Solutions Coalition
ProgressNow New Mexico
Pueblo Action Alliance
Rio Arriba Concerned Citizens
Southwest Organizing Project
Youth United for Climate Crisis Action

New Jersey

Cronheim Consulting LLC
Don't Gas the Meadowlands Coalition
Ironbound Community Corporation
New Jersey Environmental Justice Alliance
Waterspirit

New York

New York Climate Action Group
New York Lawyers for the Public Interest
North American Climate, Conservation and Environment (NACCE)
Putnam Progressives
Sane Energy Project
Sisters of St. Dominic of Blauvelt, New York
Sullivan Alliance for Sustainable Development

North Carolina

350 Triangle
Clean Water for North Carolina
Climate Action NC

Ohio

Ohio Valley Allies
Freshwater Accountability Project

Pennsylvania

Better Path Coalition
Berks Gas Truth
Physicians for Social Responsibility Pennsylvania
Climate Reality Project: Susquehanna Valley PA Chapter
Concerned Health Professionals of Pennsylvania
Damascus Citizens for Sustainability
Hundredfold Farm Cohousing Community
Greenfire Coalition Writers' Forum
Lebanon Pipeline Awareness
Responsible Decarbonization Alliance

Move Past Plastic
North Braddock Residents For Our Future

Texas

Air Alliance Houston
Better Brazoria: Clean Air & Water
IOBCWA
PACAN
For climate change poverty homelessness
NSC Inc.
Texas Campaign for the Environment
Turtle Island Restoration Network

Virginia

Friends of Buckingham
Protect Our Commonwealth
Virginia Community Rights Network

West Virginia

Rise Up West Virginia

Washington

350 Seattle
Cascadia Climate Action Now
Familias Unidas por la Justicia
South Seattle Climate Action Network

Wisconsin

Our Wisconsin Revolution

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