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The importance of the Treasury and the IRS’s implementation of the 45V hydrogen tax credit cannot be overstated. We, as representatives of climate, environmental justice, and impacted communities, call on the Treasury and the Internal Revenue Service (IRS) to ensure that this credit does not devolve into a massive giveaway to dirty energy production. If there is to be a role for clean hydrogen in our climate response, we cannot allow it to become a greenwashing tactic to repackage fossil fuels, methane gas from factory farms or landfills, or nuclear power. Any allowance of loopholes for dirty energy or deviations from the best available science will create a significant risk of serious harm to public health, safety, and our climate. We urge the Treasury and IRS to ensure that the final rule maintains the rigor of this draft rule, while also addressing the loopholes and risks highlighted below.

*Real Clean Hydrogen from Electricity:*

We support the crucial steps that Treasury and the IRS have taken in the draft rule to ensure that hydrogen production from electricity will adhere to the three pillars of additionality, deliverability, and hourly time-matching. Treasury and the IRS have rightfully identified that without these principles, hydrogen production from electricity would far exceed the carbon emissions requirements of the 45V tax credit. Treasury and IRS must ensure that the final rule maintains these three pillars and addresses the potential loopholes in the time-matching and additionality requirements.

The proposed rule delays the implementation of hourly time-matching until 2028, which is concerning and unnecessary. Six of the seven existing tracking systems that responded to Treasury and IRS’s survey could administer hourly time matching by the end of the first year of the tax credit, 2026. The remaining seventh stated they could achieve it by the second year of implementation, 2027, with strong state and federal buy-in.<sup>1</sup> There does not appear to be any technical or scientific justification to delay implementation until 2028. We implore you to enforce hourly matching without delay, as failing to do so will allow hydrogen from dirty energy to qualify as clean and divert public subsidies to polluting interests that would otherwise be ineligible for these benefits.<sup>2</sup> Furthermore, allowing such a loophole will only serve to undermine any potential benefit that could come from hydrogen production, while exacerbating harm to frontline communities and our climate from dirty energy production.

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<sup>1</sup> Section 45V Credit for Production of Clean Hydrogen; Section 48(a)(15) Election To Treat Clean Hydrogen Production Facilities as Energy Property (REG-117631-23), pg 89233

<sup>2</sup> Wilson Ricks et al 2023 Environmental Research Letters <https://iopscience.iop.org/article/10.1088/1748-9326/acacb5#artAbst>

Additionally, the Treasury and IRS must not bend the crucial three pillars of hydrogen by exempting nuclear power plants from the additionality requirement. This will serve as nothing but a bailout for the toxic nuclear fleet. The nuclear industry has received billions in taxpayer-funded subsidies for decades, which have been enriched even more in recent years. Another handout will do little more than continue propping up these wasteful, dangerous, and outdated nuclear power plants, which is not the intention of the hydrogen tax credits.

*No Hydrogen from Fossil Fuels:*

It is concerning that the proposed rule would allow for fracked gas to be repackaged as clean hydrogen, despite the harms that fossil fuel extraction causes to the climate, drinking water, and public health. While the draft rule does require producers to account for upstream fossil fuel emissions, the default assumption is set far too low, at one-third of the actual leakage rate established in peer-reviewed literature<sup>3</sup>. This grossly inaccurate default assumption would allow fossil hydrogen to qualify for tax credits, despite demonstrably higher emissions than the statutory requirement. Research clearly demonstrates that producing hydrogen from fossil gas is worse for the climate than just using the fossil gas directly, even when paired with carbon capture technology.<sup>4</sup> The draft rule would further embed this pollution in communities already overburdened from fossil extraction and infrastructure.

*No Emissions Shell Games with Methane Biogas:*

The final rule must include strong guardrails to prevent producers from obscuring their true emissions with methane biogas “offsets”. Allowing fossil hydrogen producers to claim credits or offsets for methane biogas will enable the industry to co-opt 45V while encouraging polluting factory farm and landfill practices that are poisoning our air and water. Specious offsets from methane biogas would be an unacceptable loophole in the emissions requirement of 45V, which could allow fossil hydrogen with or without CCS to qualify for the highest tier of the credit.<sup>5</sup> This would be a devastating blow to the Biden Administration’s commitments to environmental justice and climate. Treasury and IRS must ensure that 45V does not become another perverse incentive embedding pollution in communities already overburdened with pollution from factory farms and landfills.

The Treasury and IRS are correct to worry about incentivizing the intentional production of methane through these 45V benefits. Increasing incentives for factory farm gas over the past several years have already created a “manure gold rush,” where the largest, most polluting factory farms are lavishly rewarded while continuing to pollute local environments and threaten public health.<sup>6</sup> Likewise, subsidizing methane biogas at landfills creates a perverse incentive to abandon best landfilling practices and is inherently at odds with important state and local efforts to divert

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<sup>3</sup> Robert Howarth, 2022, “Methane Emissions from the Production and Use of Natural Gas”, EM Magazine [https://www.research.howarthlab.org/documents/Howarth2022\\_EM\\_Magazine\\_methane.pdf](https://www.research.howarthlab.org/documents/Howarth2022_EM_Magazine_methane.pdf)

<sup>4</sup> Robert Howarth and Mark Z. Jacobson, 2021, “How green is blue hydrogen?”, Energy science and Engineering <https://doi.org/10.1002/ese3.956>

<sup>5</sup> Friends of the Earth <https://foe.org/wp-content/uploads/2023/02/Hydrogen-Polluter-Wishlist-FINAL.pdf>

<sup>6</sup> N. Domingo et al., 2021, “Air Quality-Related Health Damages of Food”, PNAS <https://doi.org/10.1073/pnas.2013637118>

organics from landfills.<sup>7</sup> Intentionally produced methane will always be climate intensive and the final rule must avoid creating incentives that result in more pollution.

### *No Hydrogen from Woody Biomass*

We are concerned that the proposed rule allows for hydrogen made from woody biomass feedstocks. The cutting, transport, and gasification of woody biomass to make hydrogen is a carbon-intensive process that releases large amounts of planet-heating CO<sub>2</sub> and toxic air pollutants, worsening the climate emergency and harming public health.<sup>8</sup> DOE's GREET model incorrectly treats forest residues as carbon neutral, when scientific research instead shows that combustion or gasification of forest wastes leads to a net increase of carbon emissions in the atmosphere for decades.<sup>9</sup> Incentivizing hydrogen production from forests risks increasing logging and thinning, which degrade wildlife habitat and result in a net loss of forest carbon storage and sequestration, at a time when we must be protecting forest carbon stores.<sup>10</sup>

The draft rule would also subsidize biomass-powered electricity used for hydrogen production, despite this production being more carbon intensive than the statutory requirement. Biomass power plants are more carbon-polluting at the smokestack than coal per unit of electricity produced<sup>11</sup> and often concentrate pollution in communities of color and low-income communities, worsening environmental injustice. Adding CCS to biomass gasification or combustion, as proposed, would result in significant climate and air pollution and threaten community health and safety, given CCS has consistently proven to be ineffective, dangerous, and energy-intensive.<sup>12</sup> We urge Treasury and IRS not to incentivize these dirty hydrogen production methods. The final rule must align with the best available science by counting the actual emissions impact of using woody biomass to produce hydrogen on a climate relevant timeframe.

### *Hydrogen Oversight*

The Treasury and IRS have an opportunity to lead the way in bringing oversight and accountability to clean energy tax credits by ensuring that their implementation of 45V allows for public oversight of the emissions claims made by producers. Unfortunately, credits for carbon capture have

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<sup>7</sup> Sierra Club <https://www.sierraclub.org/sites/www.sierraclub.org/files/landfill-gas-report.pdf>

<sup>8</sup> Booth, Mary S., *Burning Money: Biomass Gasification and the DOE Loan Program* (2013), <https://www.pfpi.net/wp-content/uploads/2013/05/PFPI-Gasification-and-DOE-loan-guarantees.pdf>

<sup>9</sup> Booth, Mary S., *Not carbon neutral: Assessing the net emissions impact of residues burned for bioenergy*, 13 *Env't Rsch. Letters* 035001 (2018), <https://doi.org/10.1088/1748-9326/aaac88>; Laganriere, Jerome et al., *Range and uncertainties in estimating delays in greenhouse gas mitigation potential of forest bioenergy sourced from Canadian forests*, 9 *GCB Bioenergy* 358 (2017), <https://doi.org/10.1111/gcbb.12327>

<sup>10</sup> Moomaw, William R. et al., *Intact Forests in the United States: Proforestation mitigates climate change and serves the greatest good*, 2 *Frontiers in Forests and Global Change* (2019), <https://doi.org/10.3389/ffgc.2019.00027>

<sup>11</sup> Sterman, John et al., *Does replacing coal with wood lower CO<sub>2</sub> emissions? Dynamic lifecycle analysis of wood bioenergy*, 13 *Env't Rsch. Letters* 015007 (2018); Sterman, John et al., *Does wood bioenergy help or harm the climate?*, 78 *Bulletin of the Atomic Scientists* 128 (2022)

<sup>12</sup> Center for Biological Diversity, *Carbon Capture and Storage is a False Solution for the Climate and Our Communities* (2022), <https://biologicaldiversity.org/campaigns/carbon-capture-and-storage/pdfs/CCS-explainer.pdf>

allowed those claiming the credit to hide their claims and underlying analysis from the public. New rules should not mimic the practice of shielding information about the credits from the public, but instead make sure there is open and transparent information about the tax credit amounts, who is claiming them, and the complete underlying justification for the claim. Billions of taxpayer subsidies are being directed to clean hydrogen development, but impacted communities and the public have little-to-no information about the projects being proposed in their communities, nor their actual efficacy.

The Treasury and the IRS have the opportunity to make important steps in ensuring that the implementation of 45V upholds the statutory emissions requirements. These determinations should continue to be accessible by the public - including tangible information about the emissions rate and underlying documentation that hydrogen producers are claiming. We look forward to the opportunity to support the efforts of the administration to address the climate crisis with meaningful actions.

### *Conclusion*

We appreciate the opportunity to comment on the 45V hydrogen tax credit. This tax credit has the potential to be one of the most impactful provisions in the Inflation Reduction Act – if not implemented carefully, this credit could increase emissions and embed polluting practices in environmental justice communities. We need you to ensure that the final rule maintains the three pillars of hydrogen and addresses the guardrails outlined above. Loopholes for polluters will undermine the program’s potential benefit and turn this credit into a counterproductive subsidy to Big Oil.

Respectfully,

1000 Grandmothers for Future Generations  
350 Bay Area Action  
350 Colorado  
350 Humboldt  
350 Mass

350 Seattle  
350Hawaii  
Animals Are Sentient Beings, Inc.  
Bayou City Waterkeeper  
Better Path Coalition

Between the Waters  
Center for Biological Diversity  
Central California Environmental Justice  
Network  
Clean Energy Group  
Clean Energy Now Texas

Climate Equity Policy Center  
Climate Reality Massachusetts Southcoast  
CURE  
D&G Sustainable Living Consulting  
Damascus Citizens for Sustainability

DEERFIELD ENERGY COMMITTEE (MA)  
Delaware Riverkeeper Network  
Dogwood Alliance  
Don't Waste Arizona  
Earth Action, Inc.

Earth Path Sanctuary LLC  
Earthworks  
Eco-Justice Collaborative  
Environmental Justice Ministry Cedar Lane  
Unitarian Universalist Church  
Extinction Rebellion Vermont

Extinction Rebellion Western  
Massachusetts  
FCCPR Climate Crisis Task Force  
Fenceline Watch  
Food & Water Watch  
Fox Valley Citizens for Peace & Justice

Fridays for Future USA  
Friends of the Earth US  
GreenLatinos  
Hyper-local Resource Dependence Action  
Ingleside on the Bay Coastal Watch  
Association

Institute for Agriculture and Trade Policy  
International Marine Mammal Project of  
Earth Island Institute  
John Muir Project  
Long Island Progressive Coalition  
M-W & Associates

No False Solutions PA  
North American Climate, Conservation and  
Environment(NACCE)  
Northeast Action collective  
Nuclear Energy Information Service (NEIS)  
Occupy Bergen County

Oil Change International  
Partnership for Policy Integrity  
Physicians for Social Responsibility  
Port Arthur Community Action  
Network(PACAN)  
Protect PT

Rachel Carson Council  
Resist the Pipeline  
Responsible Decarbonization Alliance  
RESTORE: The North Woods  
Rise Up WV

San Francisco Bay Physicians for Social  
Responsibility  
Santa Cruz Climate Action Network  
Save Our Illinois Land (SOIL)  
SEE (Social Eco Education)  
Solar Wind Works

South Seattle Climate Action Network  
Stand.earth  
Standing Trees  
Sunrise New Orleans  
Texas Campaign for the Environment

The Climate Reality Project, Western New  
York Chapter  
The Enviro Show  
The Revolving Door Project  
Turtle Island Restoration Network  
Unitarian Universalists for a Just Economic  
Community

UU Geneva's Green Sanctuary Team  
Waterspirit