

November 14, 2022

U.S. Department of Energy
Hydrogen and Fuel Cell Technologies Office
Submitted electronically to Cleanh2standard@ee.doe.gov by: Lauren Piette, Earthjustice (on behalf of the Illinois Clean Jobs Coalition)

Re: Comments from the Illinois Clean Jobs Coalition on DOE's Clean Hydrogen Production Standard Draft Guidance

The Illinois Clean Jobs Coalition (“ICJC”) appreciates this opportunity to provide comments on the Department of Energy’s (“DOE”) draft guidance on the Clean Hydrogen Production Standard (“CHPS”).

ICJC is made up of hundreds of environmental advocacy organizations, businesses, community leaders, consumer advocates, environmental justice groups, and faith-based and student organizations working together to improve public health and the environment, protect consumers, and create equitable, clean jobs across Illinois. After more than three years of community organizing and policy leadership, in 2021, ICJC was instrumental in helping pass the nation-leading Climate and Equitable Jobs Act in Illinois.

ICJC’s comments are in response to stakeholder feedback prompt 4.a: “Please provide any other information that DOE should consider related to this BIL provision if not already covered above.”

The CHPS is an important tool for ensuring that federal investments and taxpayer dollars do not entrench our country’s dependence on fossil fuels or harm communities. Therefore, DOE should establish a CHPS of lifecycle emissions no greater than 1 kgCO_{2e}/kgH₂ (kilogram of carbon dioxide equivalent emissions per kilogram of hydrogen).

ICJC agrees with and echoes the following comments on the CHPS draft guidance submitted by 350 New Mexico, California Environmental Justice Alliance, Center for Biological Diversity, Communities for a Better Environment, Earthjustice, Greenlining Institute, New York City Environmental Justice Alliance, San Juan Citizens Alliance, Sierra Club, and Western Environmental Law Center:

Zero-emission hydrogen production technology is commercially available and ready to scale. This technology relies entirely on new, dedicated renewable resources to power electrolysis. DOE should not squander scarce public resources on technologies with no role in a feasible long-term strategy for limiting warming to 1.5°C. A stringent CHPS and rigorous carbon accounting in CHPS implementation are necessary to direct funding to projects that will most likely contribute to this deep decarbonization target.

The discretion to fund projects that “demonstrably aid achievement” of the CHPS should motivate DOE to adopt an ambitious standard that will push industry to

improve the environmental performance of the cleanest hydrogen production technologies. To that end, DOE should adopt a CHPS of lifecycle emissions no greater than 1 kgCO₂e/kgH₂. Even when lifecycle emissions are factored in, most green hydrogen can meet this threshold. The trade association, Hydrogen Council, for instance, estimates that in 2030, emissions intensity will be approximately 1.0 kgCO₂e/kgH₂ for large solar, 0.5 kgCO₂e/kgH₂ for onshore wind, and 0.3 kgCO₂e/kgH₂ for run-of-river hydropower. If DOE intends to use the CHPS as an aspirational standard, it would not be reasonable to set a weak standard that scalable commercial technologies can already exceed.

Although DOE proposed a standard of 4 kgCO₂e/kgH₂ because the Inflation Reduction Act (“IRA”) provides tax credits for such hydrogen, these tax credits do not dictate the appropriate stringency of the CHPS. Indeed, the legislative decision to subsidize hydrogen with a carbon intensity of 4 kgCO₂e/kgH₂ means that this emissions-intensive hydrogen will continue to receive federal support even if DOE adopts an ambitious CHPS. Further, DOE will use the CHPS to direct hydrogen hub funding that serves a different purpose than the IRA’s tax subsidies. While tax subsidies are a blunt tool for encouraging certain activities, the hydrogen hubs are part of a technology demonstration program that depends on expertise to select the technologies that are the most appropriate beneficiaries of public funds. In this role, it would be responsible for DOE to support demonstration of technologies that can feasibly scale in pathways that are consistent with achieving the Biden Administration’s goal of achieving net-zero carbon emissions no later than 2050.

In addition, carbon standards alone are insufficient to ensure that hydrogen production is truly “clean.” The final CHPS should include strict emissions limits on criteria pollution and hazardous air pollution. These limits are essential to prevent hydrogen production facilities from harming public health in neighboring communities.

In addition to the above comments specific to DOE’s CHPS, ICJC offers the following comments that apply to all hydrogen-related guidance, projects, and investments:

1. ICJC strongly opposes all fossil hydrogen—production or use. No support or subsidies should be provided for fossil hydrogen production or use, including mixing of hydrogen (green or otherwise) with natural gas.
2. In most sectors, hydrogen is not necessary and should not be used. Sectors in which hydrogen should **not** be used include: most road transportation (all passenger vehicles as well as buses and trucks that are well-suited for electrification); buildings (e.g. residential and commercial heating and cooking); and power generation that involves combustion. Sectors in which it might be appropriate to use **non-fossil** hydrogen are: sectors that currently use fossil hydrogen as a feedstock, like chemical fertilizer production; and certain hard-to-electrify sectors, like steel production, long-haul marine shipping, and long-haul aviation.

3. Green hydrogen should be prioritized above other forms of hydrogen and its share of hydrogen use should be maximized, ideally to 100%. ICJC defines green hydrogen as hydrogen that is produced entirely from electrolysis, where the electrolysis is powered entirely by new and additional or curtailed renewable energy sources that produce zero GHG emissions and prioritize water and energy efficiency.
4. All hydrogen projects should be required to meet a lifecycle carbon intensity standard—inclusive of emissions upstream of the point of production—of no more than 1 kg CO₂e/kg H₂, with lower being preferable. All hydrogen projects should also be assessed for their lifecycle emissions profile, including all water pollution and air emissions, with particular emphasis on monitoring and minimizing NO_x emissions and fugitive emissions from leaked hydrogen. Lifecycle emissions should not include credits for avoided methane pollution from manure or any other source. Hydrogen projects should be encouraged to make use of recycled materials.
5. Environmental justice communities must be protected from further overburdening. Therefore, any hydrogen projects should be carefully evaluated for their environmental justice impacts, should not add to harms in environmental justice communities, and should include communities' substantive involvement in decisions about whether and where the hydrogen project will be sited.
6. ICJC believes that whether a hydrogen production facility should be co-located with hydrogen end-users must be evaluated on a site-by-site basis.
7. All hydrogen projects must be evaluated for, and address, safety concerns at all stages of the process—production, transportation, and end-use. Safety concerns include flammability, pipeline embrittlement, and leakage.

Respectfully submitted by ICJC.