GREEN HYDROGEN COALITION

GREEN HYDROGEN

The Importance of Dedicated Green Hydrogen Pipeline Infrastructure

GREEN HYDROGEN IS THE KEY TO CALIFORNIA'S DECARBONIZATION VISION

Green hydrogen (GH_2) is a carbon-free, safe energy carrier that can be utilized to decarbonize hard-to-electrify sectors such as maritime shipping, aviation, heavy-duty trucking, firm dispatchable power, high-heat industrial processes, and agriculture.

The Green Hydrogen Coalition (GHC) defines "green hydrogen" as hydrogen that is produced from non-fossil fuel feedstocks and has climate integrity. The GHC supports a well-to-gate carbon intensity framework consistent with the U.S. Department of Energy.

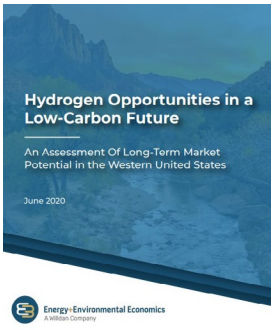
THE IMPORTANCE OF SHARED, SCALED INFRASTRUCTURE

A key obstacle to greater adoption of GH_2 is that it is more expensive than fossil fuels.[1] A significant portion of the at-the-pump cost of hydrogen can be attributed to the cost of delivery of hydrogen to end users. Industry feedback indicates that approximately 50% of the $8-$11 per kilogram cost of delivering and dispensing hydrogen is related to transport and trucking. Today, hydrogen is commonly transported via trucks, which alone is estimated to cost between $4-$5 per kilogram.[2] If moved by a 100% dedicated hydrogen pipeline, GH_2 could be transported for around $0.22 – 0.58 per kilogram.[3]

Pipelines are a cost-effective solution to transport large volumes of GH_2. This is a proven method for transporting hydrogen, with over 1,600 miles of dedicated hydrogen pipeline already deployed in the U.S.[4] California already has a nationally leading vision to get started on GH_2 infrastructure build-out with the proposed Angeles Link project.[5]

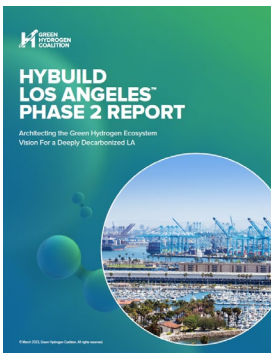
Long-term, California needs a 100% dedicated hydrogen pipeline system.

REPORTS THAT FIND HYDROGEN PIPELINES ARE THE MOST COST-EFFECTIVE METHOD FOR DELIVERY



E3, *Hydrogen Opportunities in a Low-Carbon Future*

Department of Energy, *Pathways to Commercial Liftoff: Clean Hydrogen*



GHC, *HyBuild Los Angeles Phase 2 Report*

BUILDING CALIFORNIA'S PATH TO 100% DEDICATED CLEAN ENERGY INFRASTRUCTURE

It is imperative that California engages in comprehensive long-term gas planning that includes establishing a 100% GH_2-dedicated pipeline system designed to meet the requirements of the state's decarbonization goals.

As the state aims to reduce its fossil fuel usage, California should consider how to leverage its existing infrastructure (i.e., pipeline right of ways) to support the GH_2 economy. This proactive planning approach is key to supporting the growth of reliable and resilient infrastructure aligned with California's commitment to a sustainable and carbon-free future.

Resources:

1 International Renewable Energy Agency. n.d. "Hydrogen." Accessed June 7, 2023. https://www.irena.org/Energy-Transition/Technology/Hydrogen.

2 Department of Energy. 2020. *DOE Hydrogen and Fuel Cells Program Record*. Accessed June 7, 2023. https://www.hydrogen.energy.gov/pdfs/20007-hydrogen-delivery-dispensing-cost.pdf.

3 Green Hydrogen Coalition. 2023. "*HyBuild Los Angeles™ Phase 2 Report.*" Accessed June 7, 2023. https://www.ghcoalition.org/ghc-news/hybuild-la-phase-2-report.

4 Department of Energy Hydrogen and Fuel Cell Technologies Office. n.d. "Hydrogen Pipelines." Accessed June 7, 2023. https://www.energy.gov/eere/fuelcells/hydrogen-pipelines.

5 SoCal Gas. "Angeles Link." Accessed June 7, 2023. https://www.socalgas.com/sustainability/hydrogen/angeles-link.

LEARN MORE ABOUT THE GREEN HYDROGEN COALITION & ACCESS FREE RESOURCES:

THE WORK OF THE GHC IS DRIVEN BY ITS CORE VALUES:

- Impact
- Respect & Collaboration
- Environmental Justice
- Integrity
- Safety
- Technology & Business Model Neutral

GREEN HYDROGEN COALITION

Founded in 2019, the Green Hydrogen Coalition (GHC) is a 501(c)(3) educational nonprofit that is focused on the role of green hydrogen to accelerate a clean and just energy transition. As California works towards carbon neutrality by 2045, GH_2 will be a critical tool to achieve economy-wide decarbonization alongside other clean energy technologies. The GHC works to advance education, policies, and practices to achieve progress for GH_2. For more information, visit **ghcoalition.org**