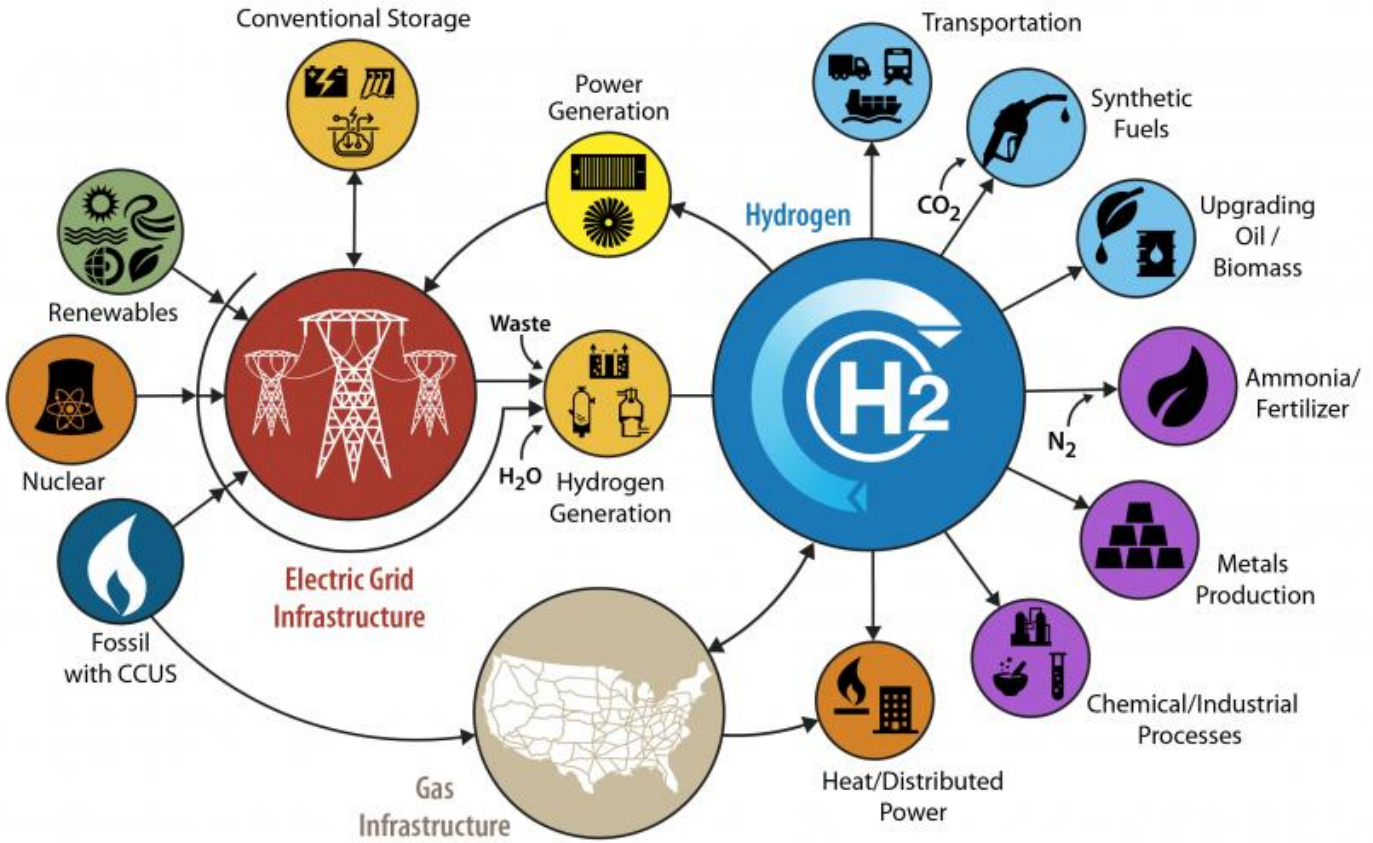
ONE Gas

Hydrogen Distribution

Jason Ketchum | 9/28/2021

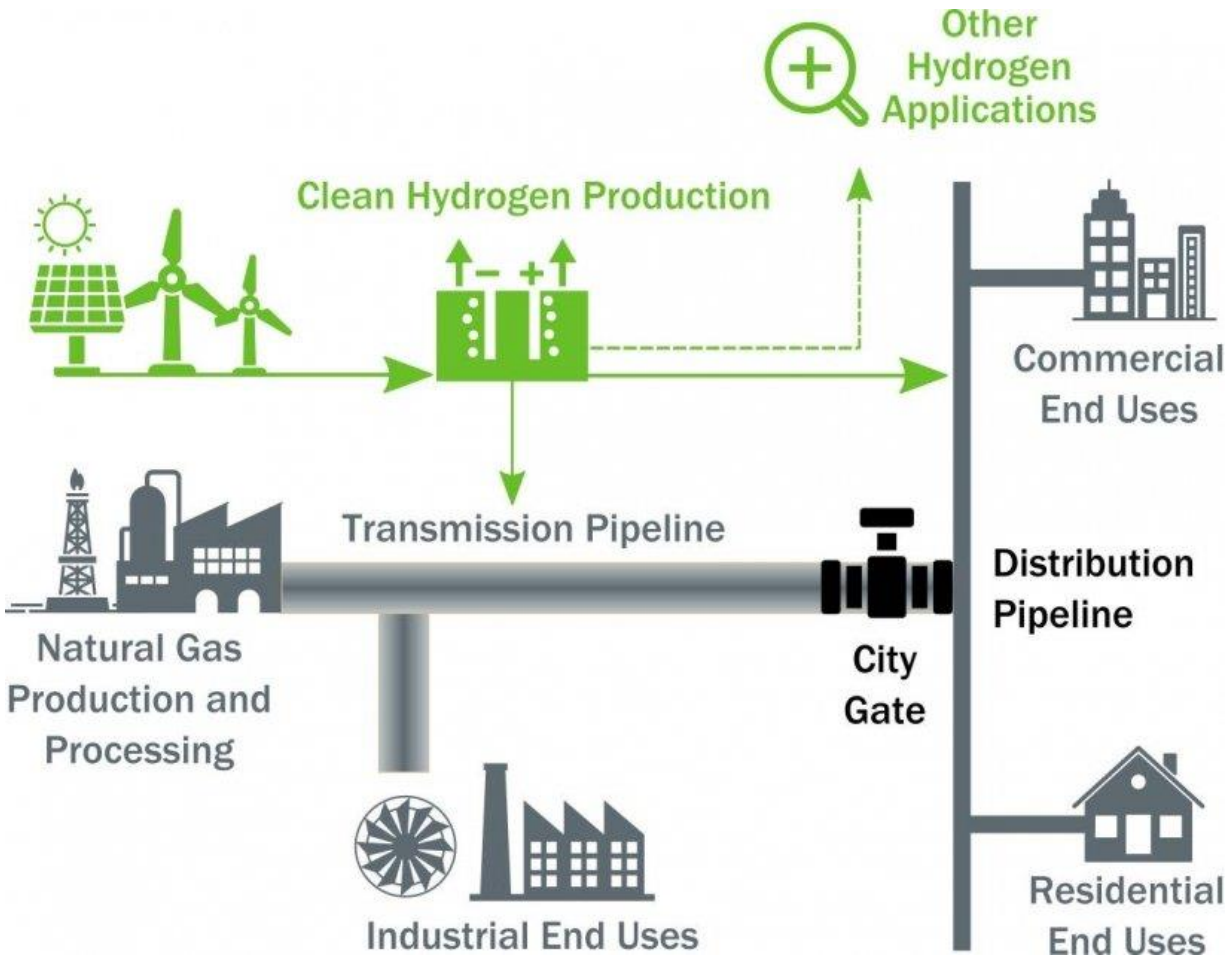
H2@Scale Project



H2@Scale is a U.S. Department of Energy (DOE) initiative that brings together stakeholders to advance affordable hydrogen production, transport, storage, and utilization to enable decarbonization and revenue opportunities across multiple sectors.

https://www.energy.gov/eere/fuelcells/h2scale

HyBlend Project



The HyBlend initiative aims to address technical barriers to blending hydrogen in natural gas pipelines. Key aspects of HyBlend include materials compatibility R&D, techno-economic analysis, and life cycle analysis that will inform the development of publicly accessible tools that characterize the opportunities, costs, and risks of blending.

https://www.energy.gov/eere/fuelcells/hyblend-opportunities-hydrogen-blending-natural-gas-pipelines

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Challenges

- Limited discussions of “all-energy” grid planning across natural gas and power generation
- Limited federal and state policy guidance
- New business models and threat of stranded assets
- System technical upgrades, management and investment requirements
- Fuel costs and adoption curve

It has already been successfully: In the 1970s, Hawaii Gas began producing and using hydrogen to convert naphtha, a by-product from the local oil refineries, for the manufacture of synthetic natural gas (SNG) in the Campbell Industrial Park, Kapolei, on the island of Oahu. To this day, approximately 12% of the gas in our pipeline on Oahu is hydrogen — this is the highest concentration of hydrogen reported by any gas utility in the U.S.