

HYDROGEN

- Has been proposed as a "cleaner" substitute for methane (fracked gas)
- Can be formed from different production processes, some of which are much cleaner than others
- Can be created from the process of electrolysis, but the electricity source used determines its cleanliness
- Used as an energy source for hard-todecarbonize, heavy industries

GREEN HYDROGEN:

Hydrogen produced using renewable, carbon-free electricity.

BLUE HYDROGEN

Hydrogen produced from fracked gas and assumedly supported by carbon capture and storage (CCS) technology.

GRAY HYDROGEN

Hydrogen produced from fracked gas and other fossil fuels.



48-77%

SUCCESS RATE OF CARBON CAPTURE

- Carbon capture remains too
 expensive at the necessary scale for
 blue hydrogen production.
- Blue hydrogen production will continue subsidizing polluting fossil fuels. Fracked gas will never be a "clean" energy source.
- Markets for hydrogen use are also problematic and polluting- such as petrochemical processing and fertilizer manufacturing.

\$8 BILLION

IN FUNDING FROM THE BIDEN
ADMINISTRATION'S 2021
BIPARTISAN INFRASTRUCTURE
LAW FOR AT LEAST FOUR
REGIONAL "HYDROGEN HUBS"

PA is in the process of applying for funding to site one of these hubs in our state.

There are other hydrogen facilities proposed across the Commonwealth.



WHAT THE OPPOSITION SAYS

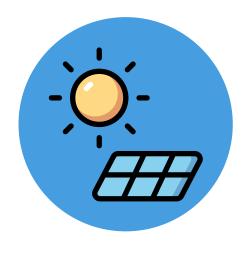
Hydrogen hubs are allow proponents of fossil fuels to keep their industry dragging along.

The hubs are touted as producing "clean" energy, creating jobs, and decarbonizing heavy industry.

However, these hubs diminish progress toward true renewable energy development and investment.

Hydrogen storage and transport is dangerous and involves a high probability of leaks.

RECOMMENDATIONS



PA must develop true renewable energy policies and grid modernization efforts.



PA should remove fossil fuel subsidies, including fracked gas used for blue hydrogen.



PA must prioritize environmental and energy justice in its investments and projects.

REFERENCES

https://www.pennfuture.org/Files/Admin/PennFuture-Hydrogen-Position-Paper-Final-%28June-2022%29.pdf https://www.energy.gov/bil/regional-clean-hydrogen-hubs https://dced.pa.gov/newsroom/gov-wolf-announces-aggressive-push-tosecure-clean-hydrogen-hub-in-pennsylvania/ https://www.bloomberg.com/news/articles/2022-04-08/biden-s-hydrogenhub-plan-sparks-8-billion-race-among-u-s-states https://stateimpact.npr.org/pennsylvania/2021/04/02/pennsylvanias-firstgreen-hydrogen-plant-planned-for-lancaster-county/ https://www.post-gazette.com/business/powersource/2021/08/15/Alaboratory-at-scale-a-hydrogen-carbon-storage-shale-drilling-and-ureaproject-has-hit-the-industry-zeitgeist-at-just-the-righttime/stories/202108080048 https://www.cnbc.com/2021/01/31/carbon-capture-technology.html https://ieefa.org/wp-content/uploads/2022/02/Blue-Hydrogen-Presentation_February-2022.pdf https://www.energy.gov/oced/regional-clean-hydrogen-hubs