

We Make Tomorrow conference
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Blue hydrogen: how can workers and the union movement take action?

Simon Pirani

*Author of **Burning Up: A Global History of Fossil Fuel Consumption**
NUJ Life member / UCU retired member*

@SimonPirani1 ■ www.peoplenature.org

Questions

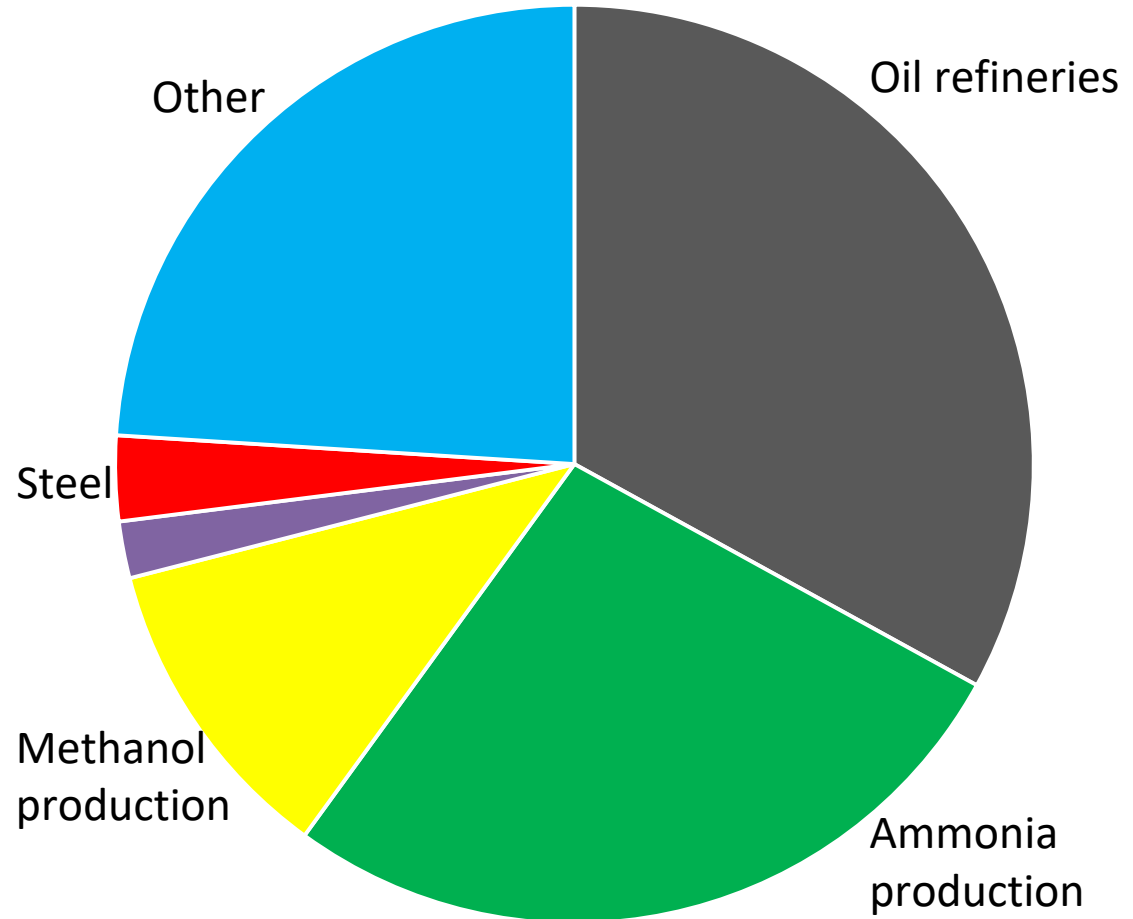
- How can workers and the union movement take action around blue hydrogen?
- What are the barriers?
- What are the benefits?



Residents of Whitby, Merseyside, who fought a successful campaign in 2022-23 against Cadent's plans to use their village to test hydrogen for home heating
See: [@HyNotNW on twitter](#)

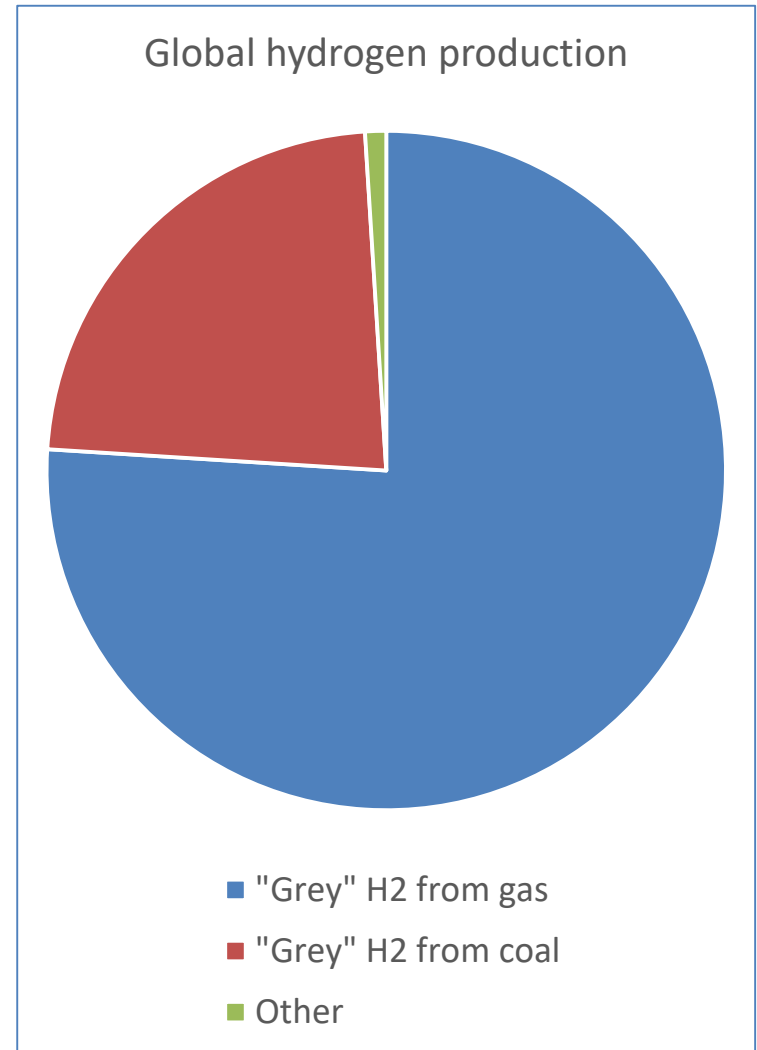
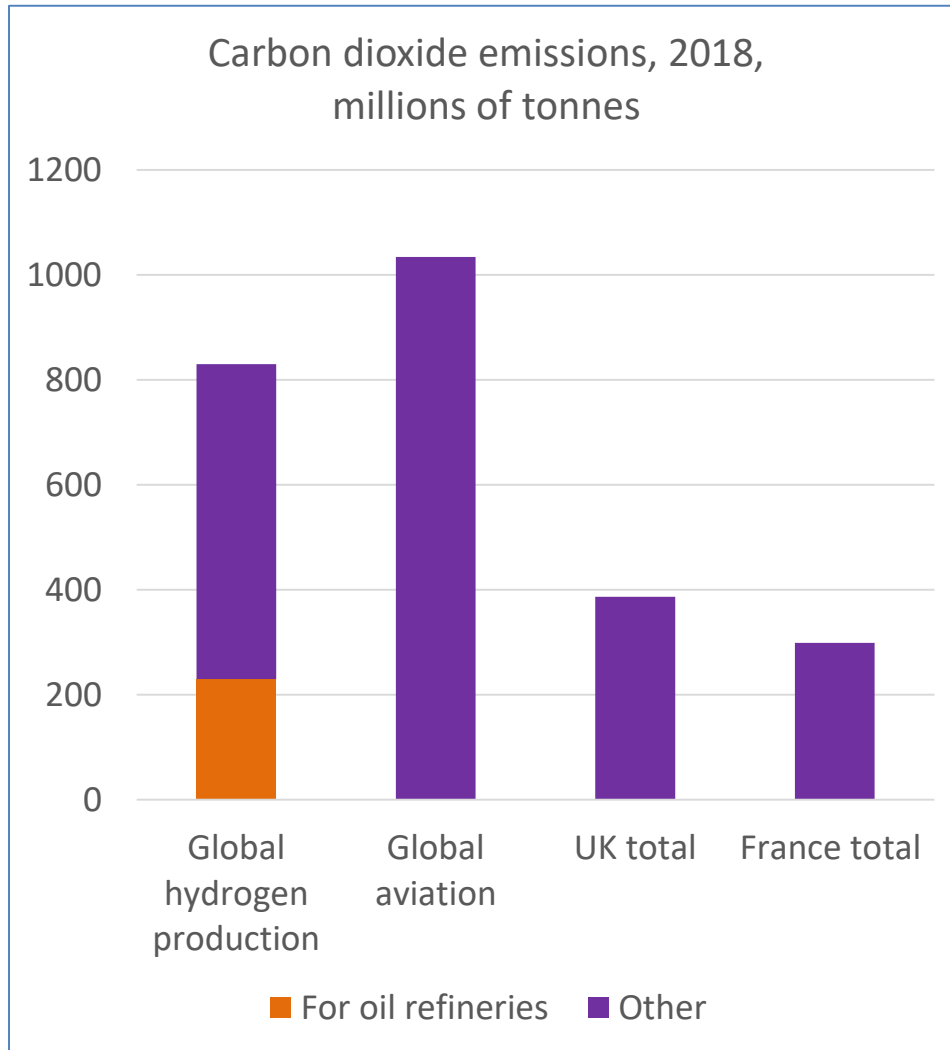
What H2
is actually
used for

Uses of hydrogen



- Oil refineries
- Ammonia production
- Methanol production
- Other chemicals
- Steel production (DRI)
- Other

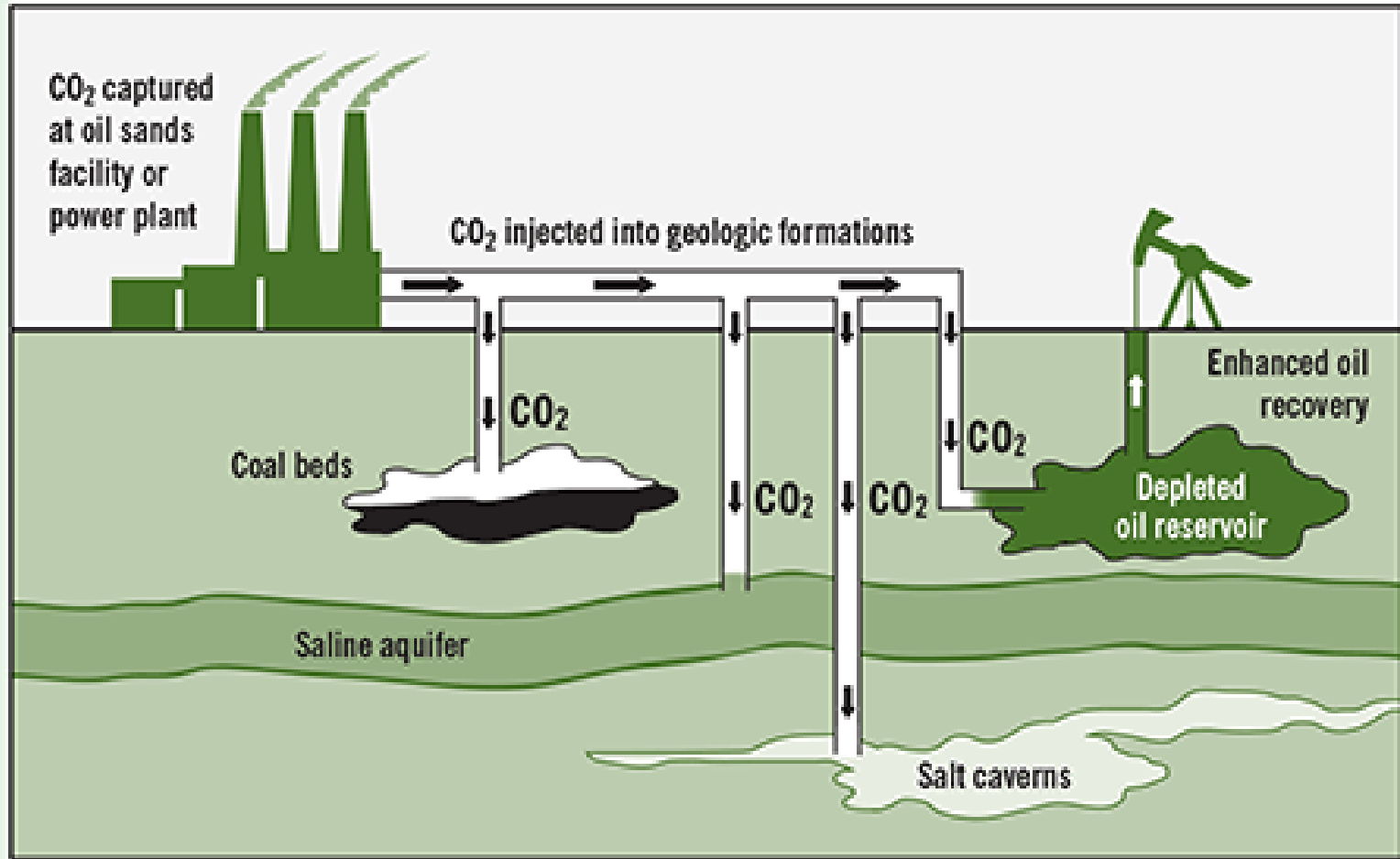
Grey hydrogen (not “clean”!)



■ UK gov't Energy Security Strategy (April 2022) raised target for H₂ output to 10 gigawatts (GW) from 5 GW.

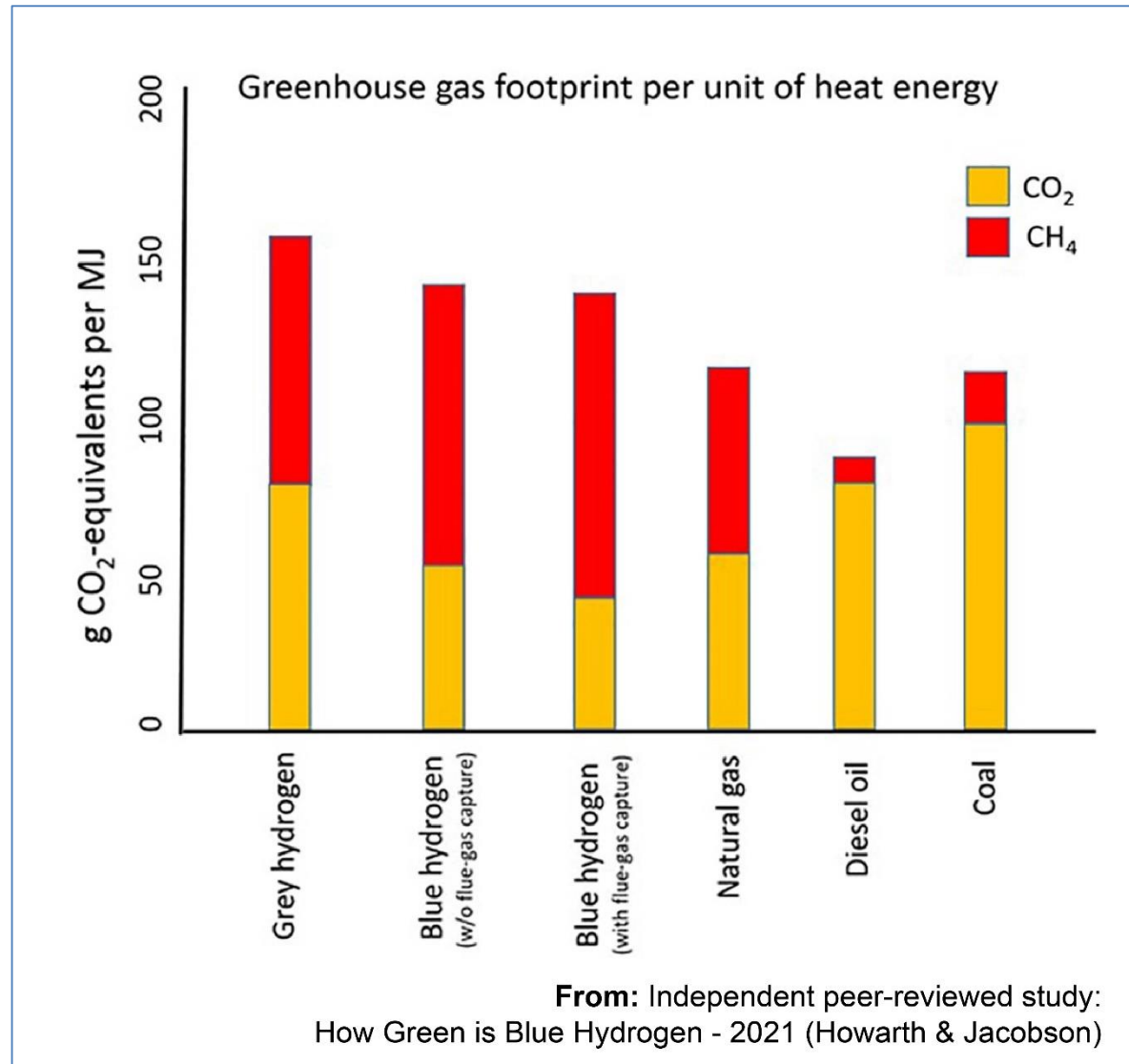
■ Ministers claim half of this hydrogen would be “green” (from renewables) ... so presumably half would be “blue”

Blue hydrogen (relies on expensive, unproven carbon capture technology)



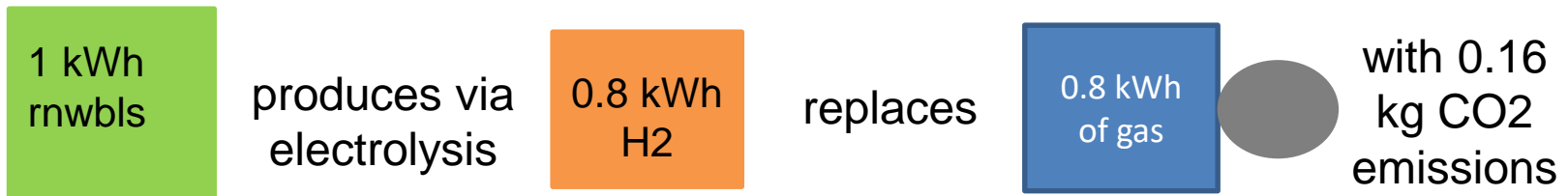
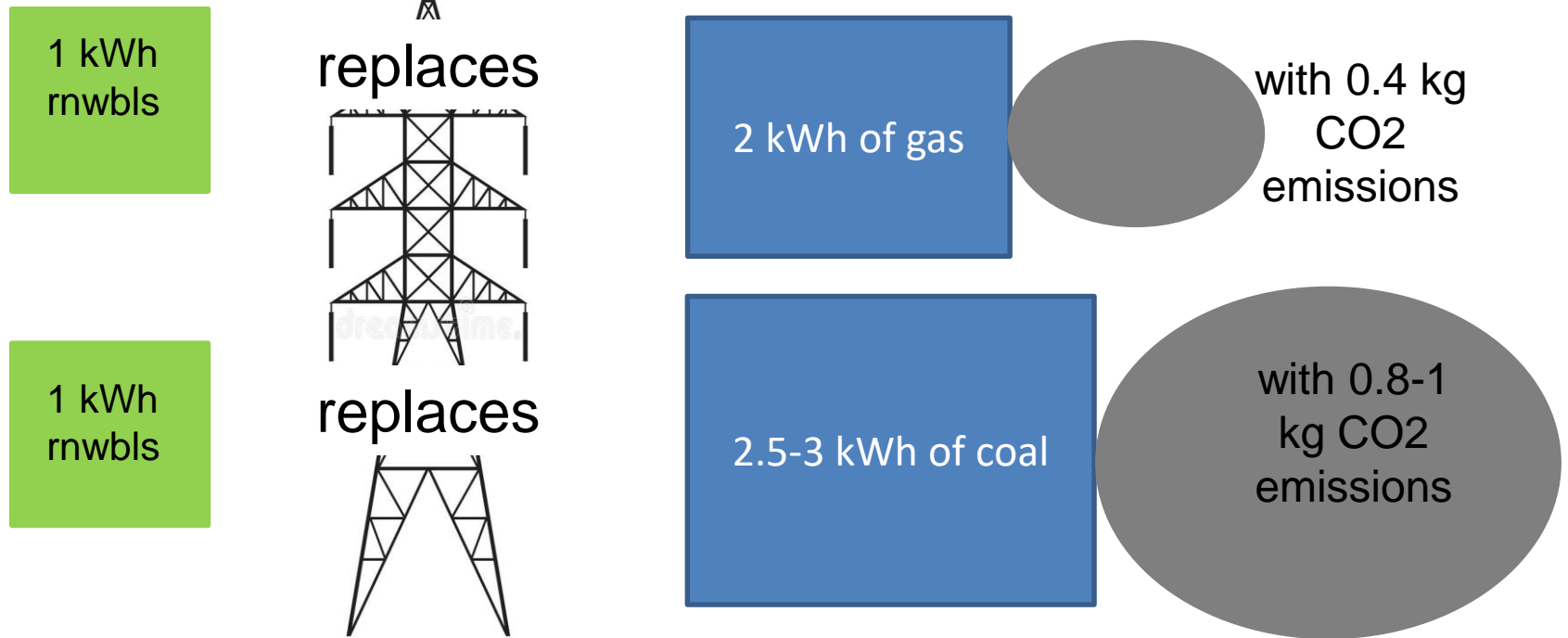
Blue hydrogen (also not “clean”!)

■ The methane leaks in current ‘blue’ hydrogen projects mean that, when used as fuel, hydrogen causes MORE greenhouse gas emissions than gas, coal or oil (according to some methods of working it out)



Green hydrogen (very energy intensive)

It's better to use renewables to get fossil fuels off the grid!



Until all fossil fuels are off the grid, renewables used for H2 have a carbon cost

Northern Gas Networks H21 project

- Aims to convert 15.7m homes from gas to hydrogen by 2050
- To do it with “green” H2 would need more than six times UK current wind capacity
- To do it with “blue” H2 would need 60 carbon capture and storage plants, as big as the current biggest in the world
- Sponsored by Equinor, Cadent and Northern Gas Networks
- Initial reports were funded by the taxpayer (£15.8m in 2017-19). A Front End Engineering & Design study would cost £250m
- State support also announced for Teesside hydrogen “hub”

Workers and the union movement

“The whole project has been engineered to how Cadent and British Gas wanted it to go, so naturally residents only received half the picture, meaning that we had to seek our own information from independent experts. This was not well received by Cadent [...]

If they were truly interested in empowering residents and decarbonising our heating, they

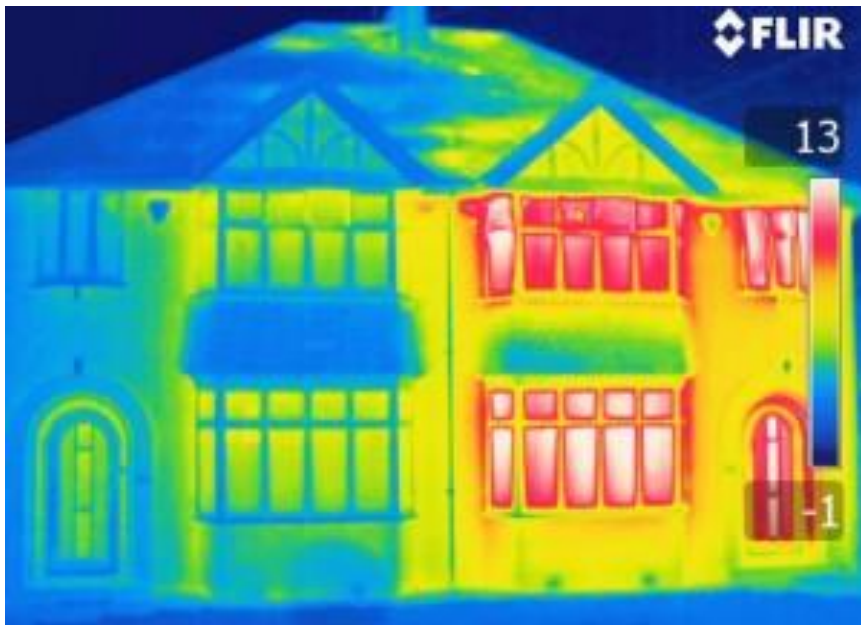


would have provided full information on other options, encouraged open discussions, and asked us for our input from the outset.”

- Kate Grennell, member of HyNot, Whitby residents' action group, on the [Energy Institute web site](#)

Leeds TUC retrofit +heat pumps proposal

[See: “Zero carbon homes can help tackle climate change”](#)



Thermal imaging of heat escaping a house with insulation (left), and without. Insulation is energy efficiency measure #1

- UK government targets for “net zero by 2050” are too little, too late
- Fossil-fuel-based technologies, with or without CCS, can and should be avoided
- Super-insulation and heat pumps are established technologies, and compare well with other pathways
- Deep retrofitting = opportunities for community involvement and democratic governance
- IPPR estimates heat networks, heat pumps and energy efficiency could need 300,000+ jobs in the UK by the mid 2030s
- Training for low-emission construction and retrofit is a key

The politics of technology

- **For the oil and gas companies, hydrogen is part of a survival strategy, at a time when the world needs to move away from their products**
- **For the government, hydrogen is a business-friendly way of pretending to embrace decarbonisation**
- **The government's claim that hydrogen (or oil or gas) is the best way to protect jobs is a myth**
- **The labour movement can and should make its own choices about technologies that can serve communities' needs**

Hydrogen: more to watch and read

- [Whitby hydrogen village: a pipe dream?](#) Energy Institute, April 2023
- [Virtual meeting with residents of Whitby Hydrogen Village](#) – video. Researchers Tom Baxter, Paul Martin and Jan Rosenow discuss impacts of 100% hydrogen in home heating, 9 November 2022
- [Hydrogen Science Coalition](#)
- [Hydrogen: the technofix that undermines climate action](#) – talk by Simon Pirani at a Scot.E3 virtual meeting, December 2022
- [Communities question hydrogen hype](#) – People & Nature, Dec 2022
- For technical explanations, see blog posts by David Cebon, University of Cambridge, on hydrogen for [electricity storage](#), [powering lorries](#) and [heating buildings](#), and one [bringing together](#) the arguments.
- [The hydrogen hoax – People & Nature](#)
- [Global Witness report on hydrogen heating](#), September 2022
- Leigh Collins of Recharge News, the energy business news site, [comments on industry lobbying](#) in the UK parliament, July 2021.