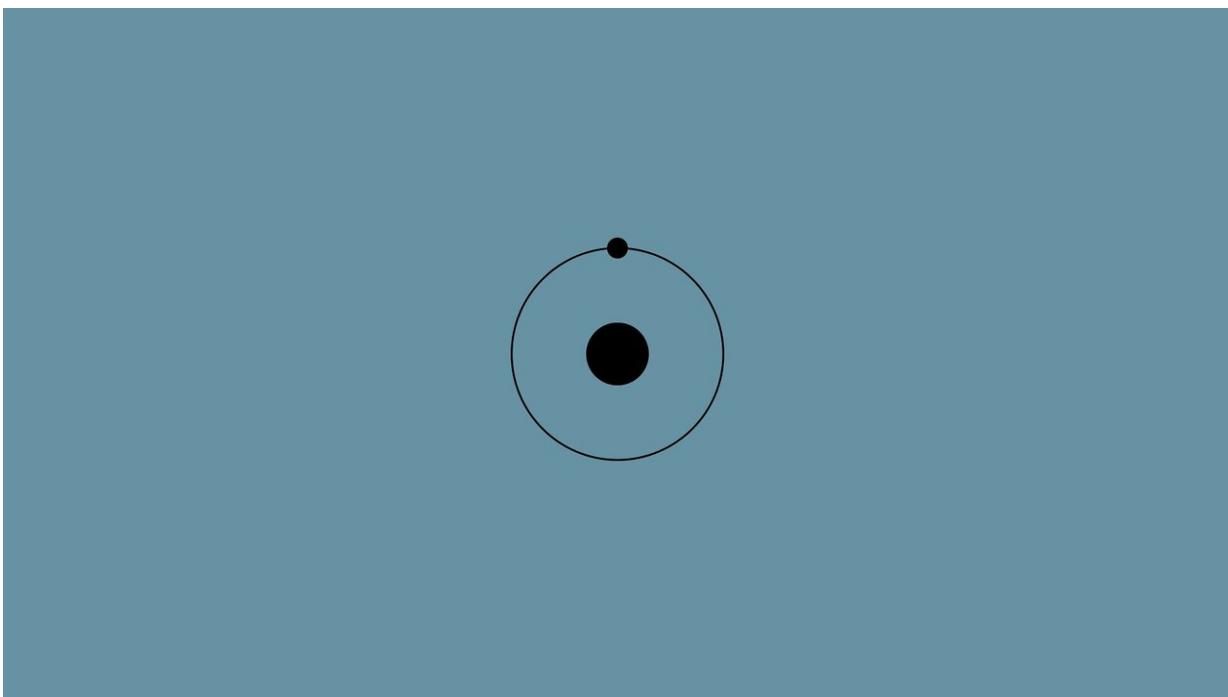


UK trial of hydrogen blended gas regarded a success

September 14 2021, by Bob Yirka



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Members of the consortium running the U.K.'s first hydrogen blended gas project [are hailing](#) it as a success. The project, known as [HyDeploy](#), has been running at Keele University, where both university buildings and homes have been heated using hydrogen blended with natural gas.

The HyDeploy project led by Cadent came together with partners

Progressive Energy Ltd, Northern Gas Networks, HSE and Keele University to address the British government's stated goal of reducing the amount of greenhouse gasses emitted into the atmosphere by entities in the U.K. Discussions soon focused on mixing [hydrogen](#) with [natural gas](#) as a way to reduce carbon emissions from home and office heating. Soon thereafter, teams were set up at Keele University to [test](#) the feasibility of adding hydrogen to natural gas and then using it as a replacement for just natural gas to heat homes (and to use it for cooking) and offices.

The testing teams focused on two main objectives: feasibility and safety. They began by making sure that adding hydrogen to natural gas would work with existing natural gas networks and equipment, including those run by end-users. They also had to make sure that adding hydrogen would not harm the equipment. Testing also involved finding the right mixture ratio—the researchers settled on 20% hydrogen.

The next step, making sure that adding hydrogen to gas would be safe, was far more involved. The researchers started by testing their blend with user appliances such as stoves and heaters. After finding no [safety issues](#), they looked at the characteristics of the gas mixture itself to better understand how it would perform when used in a wide variety of environments. They found that its dispersion characteristics were no worse than for natural gas. And while its flammability and combustion characteristics were somewhat different (hydrogen burns faster), they found no indication that it would lead to the introduction of safety hazards.

They also found that differences in flow would not lead to more leaks. The testing [teams](#) concluded that adding hydrogen to natural gas was a feasible and safe way to reduce carbon emissions. The team then began testing the mix in a real-world environment. They switched campus housing and other buildings to using the mix for both heating and

cooking. And now, after 18 months without incident, the consortium is declaring the first phase of the HyDeploy [project](#), a success. The group has since initiated a [test project](#) at another site in the U.K. involving heating homes, businesses and schools. It is scheduled to run for 10 months. If successful, the team plans to continue adding sites to the program with the goal of eventually switching the whole of Britain to the new mix.

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