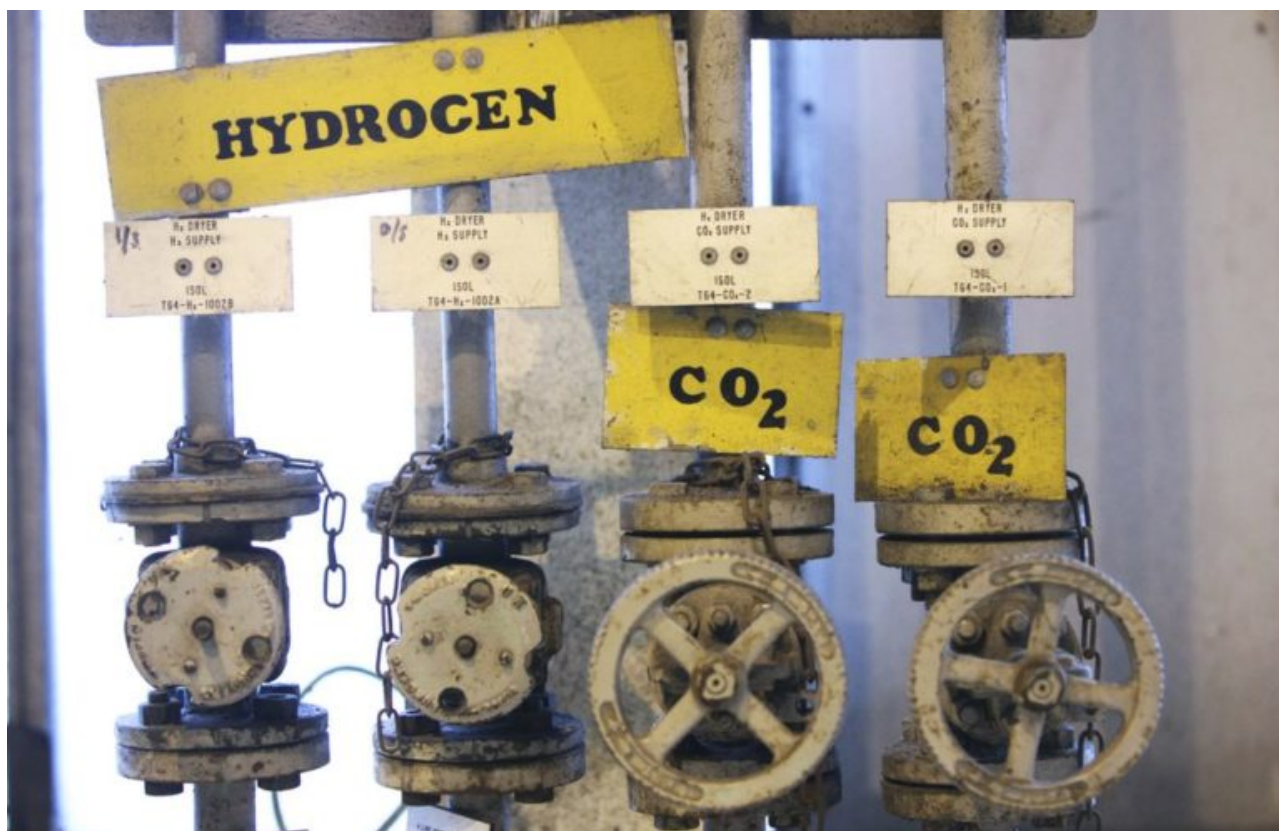


# U.K. Looks to Hydrogen as a Source of Green Energy



An influential panel of lawmakers in Parliament is encouraging the government to develop hydrogen as a way to provide a green form of heat for industry and homes.

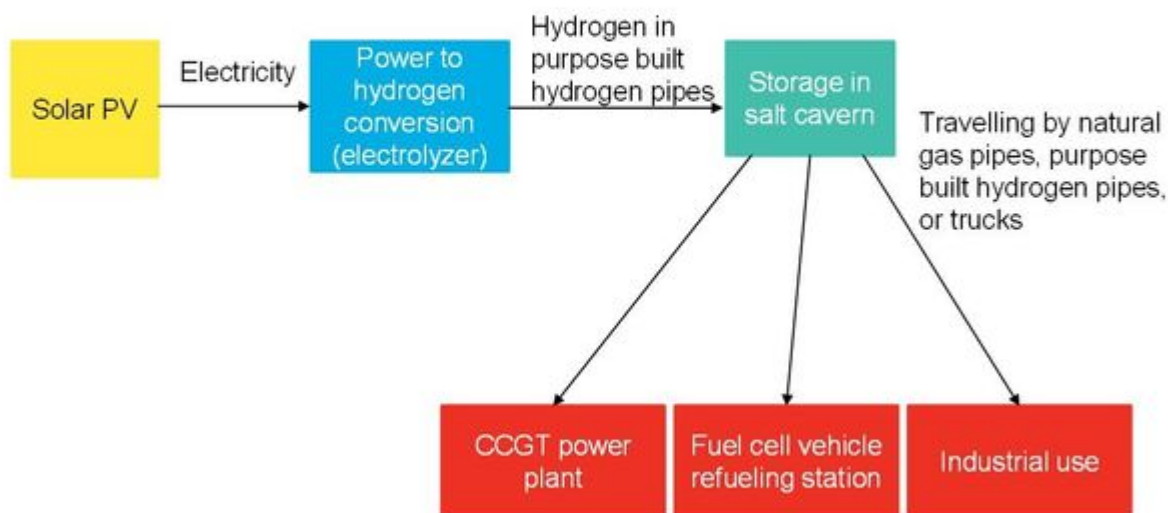
The Committee on Climate Change, which advises the government on energy and environmental policies, said ministers should write a strategy for removing carbon emissions from heat in the next three years, starting with a roll out of hybrid heat pumps.

Heat is seen as one of the most difficult and expensive elements of the energy mix to wean off fossil fuels. It accounts for almost half of the U.K.'s energy use and a third of its carbon emissions, according to a government estimate. While renewables such as wind and solar are spreading rapidly to generate electricity, those energy sources are less adept than oil, natural gas and coal in providing heat.

“Hydrogen has the potential to contribute to near-zero carbon energy emissions if used strategically,” said John Gummer, chairman of the Committee on Climate Change. “The government must now decide whether it wishes to develop a U.K. hydrogen option, taking decisions now that will see the first deployment in the 2020s.”

Heat pumps combine an electric pump with a natural gas boiler. They can reduce a building’s gas use by 80 percent, the committee said in a report published on Thursday. Eventually the gas boiler could burn hydrogen instead, achieving zero carbon heat. So long as the hydrogen is made without emissions, it can be counted as clean energy.

### Illustration of the use of solar PV electricity to produce renewable hydrogen



Source: Bloomberg New Energy Finance

Hydrogen is emerging as a solution to difficult questions in the energy transition, such as how to plug the gaps between wind and solar generation without fossil fuels. Burning the lightest element doesn’t produce any carbon emissions, so it could potentially displace gas and other fossil fuels both in power generation and transport.

The U.K.’s Committee on Climate Change expects that by 2050,

hydrogen could provide 25 percent of heat for buildings with the remainder covered by electric pumps.

The U.K. is aiming to meet 15 percent of its overall energy needs with renewables by 2020 with 30 percent of electricity, 12 percent of heating and 10 percent of transport powered by clean energy. The country is on track to meet its electricity target, but unlikely to succeed on heat and transport unless major changes are enacted, a Parliament committee said in 2016.

The committee is also recommending that hydrogen be used in trucks and heavy industry.

“It’s particularly useful for sectors of economy that’s not possible to electrify or emissions are difficult to reduce,” said Chris Stark, CEO of the committee, by phone.