

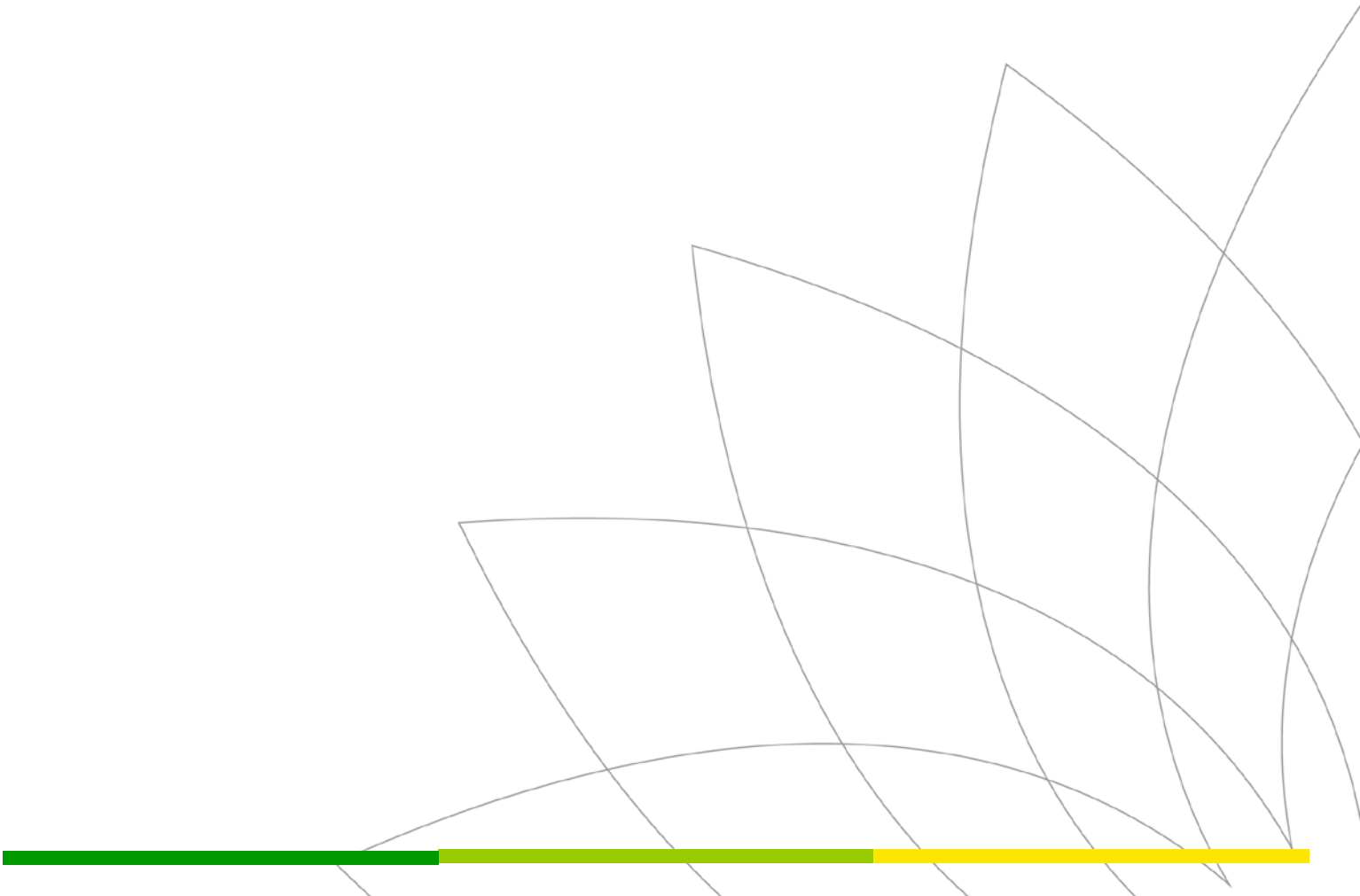


Reinventing gas through hydrogen

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EVP, gas & low carbon energy

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Good morning and thank you.

I'm delighted to be here today at this important debate.

bp is proud to be part of the Stanford Gas Initiative.

We believe hydrogen has the potential to reinvent gas.

And we are really excited about the opportunities it presents.

As a:

Realistic fuel choice in a future energy mix.

Reliable fuel for hard to abate, energy-intensive heavy industries.

And therefore, right for a reinvented bp.

Realistic

When we look at the context for today's discussion, we do so in the knowledge that the world's carbon budget is finite, and it is running out.

And to meet the goals set out in Paris, we also know that the world needs to transition to low carbon energy.

bp is reinventing itself for this world.

We have an ambition to be net zero by 2050 or sooner and help the world get to net zero.

To achieve that will take a diverse mix of fuels.

The International Energy Agency, the IEA - bp's own Energy Outlook – and any scenario you care to look at - shows that to be the case.

And again, pretty much whatever scenario you look at you see hydrogen playing an important role in the energy transition.

The IEA states that hydrogen's use could grow from less than 90 million tonnes per year in 2020 to around 210 million tonnes per year by the end of this decade.

And by 2050 that figure would need to be 530 million tonnes per year in order to meet net zero emissions by that time.

That nearly six-fold increase on 2020 levels would be enough to fuel around 60 million trucks.

bp's own analysis shows that hydrogen could have more than a 15% share in total global energy consumption by 2050.

So whatever way you look at it, hydrogen has a big role to play.

Reliable

Over the course of the next few decades we see an increasing electrification of the energy system.

As this takes place, hydrogen can offer a reliable role by providing energy to activities which are difficult or costly to electrify.

Including high-temperature processes in industry and long-distance transportation, particularly heavy-duty trucks.

Put simply, hydrogen has a key role to play in the decarbonisation of hard to abate, energy-intensive heavy industries.

And unlike the old sailors' adage, we believe blue and green must be seen.

With a role for blue hydrogen, where carbon emissions from its production are not released into the atmosphere.

And green hydrogen, made with renewable power.

Importantly, the production of blue hydrogen helps overall global supplies of hydrogen to grow relatively quickly.

Without relying too heavily on renewable energy, which needs time to gain a significant share of the overall energy mix.

Right

I believe bp is ideally placed to help scale up hydrogen.

And we have a plan to capture 10% of the hydrogen market by 2030, targeting the UK, US, the Netherlands, Germany and Australia.

Hydrogen is the right fuel to complement our existing businesses and capabilities.

Green hydrogen is an adjacency to the growth of renewables. And blue hydrogen is enabled by the scale-up of Carbon Capture Use and Storage, or CCUS.

To give a couple of examples of where we are already in action...

Last year we signed a letter of intent for our partnership with Ørsted to develop green hydrogen at bp's Lingen refinery, powered by offshore wind.

And in March this year, we announced the H2Teesside project to build a 1GW blue hydrogen project in the North East of England.

This is set to be the UK's largest hydrogen project, which aims to deliver 20% of the UK's hydrogen production target by 2030.

H2Teesside would also support the development of the region as the UK's first hydrogen transport hub with green hydrogen.

bp's experience gained from engineering, building, and operating some of the world's most ambitious commercial energy projects also means we are the right fit to scale-up hydrogen.

We also have decades of experience in producing and managing hydrogen at scale across our refineries.

And, besides the big projects, there is a huge role for oil and gas companies to build hydrogen markets.

Many of the uses of clean hydrogen – cleaner road fuels, hydrogen for trucks, sustainable aviation fuels, ammonia for shipping are already areas where we work with customers.

And every customer we can work with to move to cleaner fuel is a step towards bp's net zero goals and also the world's net zero goals.

Thank you.