



# Unlocking the decarbonizing potential of gas

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## Introduction

Good morning everyone, it's great to be here.

Thank you Patricia for the introduction.

I'd like to thank the Chinese government for convening this event and bringing the industry together here in Shanghai.

I'd also like to recognize BP's many friends and partners in China, including representatives from CNPC, Sinopec and CNOOC.

BP's relationships in this country go back for over 45 years.

One of our proudest moments came a couple of decades ago when we were selected to help build China's first LNG import terminal.

That facility, in Dapeng, was part of China's strategy to increase the share of lower carbon fuels in its energy mix.

From there, the drive for cleaner gas has led to the opening of 21 LNG terminals across the country and demand for LNG continues to rise here and elsewhere.

That growth in LNG is a really important trend for the world.

The planet is not on a sustainable path right now and growing the LNG trade can help to correct that.

On the current path, energy demand globally is set to rise by about a third over the next two decades.

At the same time, greenhouse gas emissions need to fall dramatically.

Major reductions are needed well before 2050 to be in line with the Paris goals, followed by net zero emissions in the second half of the century.

That's the dual challenge – more energy with fewer emissions.

It's the defining challenge for the industry, and if you see the energy world through the prism of the dual challenge – as I do – then you must see gas as vital to the solution.

I'd like to make three points about that, just very briefly.

## Switching from coal to gas

The first relates to all the positive benefits of gas that all of us here will be very familiar with.

Gas is affordable and abundant.

It's cleaner-burning than coal.

And it's easily transportable to every corner of the world, thanks to LNG.

Global LNG trade is set to more than double over the next 20 years – from 400 to around 900 billion cubic meters.

That's about as much LNG being traded in 2040 as the combined annual gas consumption of the US and Canada today.

And it's contributing to the strong growth of gas overall, which is on a path to increase by nearly 50% by 2040.

All of those factors point to natural gas as a way to reduce greenhouse gas emissions fast and at scale.

We're already seeing what happens when you get more gas into power and partner it with renewables.

In the US, natural gas has replaced coal and helped to bring emissions down to where they were 30 years ago.

The UK has gone back to the 1890's levels of emissions.

Given the scale of energy demand in the East, the potential is even bigger here.

In fact, the biggest single step the world can take to get on a sustainable path is to help Asia replace some other forms of energy with natural gas for electric power.

It can have a remarkable impact on air quality as well.

The leadership here in China has been really bold on air quality, with its battle for blue skies.

Initiatives like switching homes and industries to gas heating have been having a dramatic effect on cleaning the air.

No wonder gas is growing here fast.

China's LNG imports are up over 40% year-on-year.

And yet gas is still a very small source of electric power generation in China – around 3% compared with 20% in Europe.

It's a similar story in hard-to-abate areas like the steel and cement.

So the opportunity for gas is huge.

But it would require significant investment in new infrastructure because China's energy system is still largely built around coal.

It's a lot to ask of a country with abundant domestic resources to become more dependent on imports.

That requires a lot of trust in global trade flows.

## Supporting global trade

That leads me to my second point – support for global trade.

Our Company's economics team did some interesting research on this recently, highlighting the potential impact if trade tensions were to escalate.

That could heighten concerns about energy security, causing countries to import less oil and gas and turn more to domestic resources.

This could have profound implications for countries like China where imported natural gas has supported a massive programme of replacing coal for heating in buildings and industry.

This coal-to-gas switching has been a key part of China's environmental policies, leading to significant improvements in local air quality.

But this type of action is only possible if there is confidence in the security of future gas supplies.

That, to me, is a strong argument for working together to address concerns, thereby alleviating tensions and allowing cleaner energy to flow freely.

And let's remember, the consequences of not doing so are more than economic, they are environmental.

## Decarbonizing gas

That brings me to my third and final point.

As good as gas is in comparison to other fuels, it can be better.

The world needs it to be.

In time, our aim should be for the sustainability of gas to bear comparison with renewables. One way to do that is to minimise methane emissions.

Many of us in the industry are already setting targets to limit those emissions.

A year ago this month we set our BP target of 0.2% and I'm happy to report that we've kept below that level, even as our gas production has grown.

At the time, the head of Princeton University's Carbon Mitigation Initiative said that if the industry as a whole met 0.2%, that would make methane emissions from oil and gas essentially a negligible component of global warming.

But for the world to get to the Paris goal of net zero carbon emissions in the second half of the century, then we need to go beyond minimising emissions and start taking the carbon out of hydrocarbons.

Let me be clear about this.

That doesn't mean taking hydrocarbons out of the fuel mix.

In fact, you can't do that realistically and meet the dual challenge.

What's more, you don't have to.

The International Energy Agency's sustainable scenario has oil and gas combined at nearly 50% of the mix in 2040 – but it's conditional on the deployment of carbon capture use and storage.

Our own BP scenario consistent with Paris has close to a third of that gas being used in conjunction with carbon capture, use and storage or "CCUS" in 2040.

We know CCUS is technologically feasible, but we need to make it commercially viable.

In terms of other solutions, there's likely to be more gas into heavy duty, long-haul transport.

An increasing role for bio- or renewable gas, which is mainly methane from sources like municipal waste or agriculture.

And, as we head towards mid-century and beyond, hydrogen produced from decarbonized gas and from electrolysis, generating zero emissions at the point of use.

## Conclusion: reasons for optimism

Those are my three points.

Switching more from coal to gas, especially in Asia.

Working to ensure the free flow of energy around the globe, especially gas.

And, ultimately, decarbonizing the gas value chain.

If we do that, then gas has a very bright future – not just as a transition fuel, but as a true destination fuel.

I know that's easier said than done...and it will take time...but these are all achievable aims if we work together with the common goal of solving the dual challenge.