



# Low-Carbon and Sustainable Energy Solutions for India

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## Introduction

To the question, 'should India have a domestic price for carbon?' the short answer is 'yes' – every country or market should have a mechanism for putting a price on carbon.

I say that because carbon pricing schemes, if well designed, are one of the most significant steps that can be made to hasten a low carbon future.

Let me give you four reasons for that.

The first is that carbon pricing incentivises lower carbon fuels over higher carbon ones.

That is beneficial for renewables, of course, but not just renewables.

It would favour gas over coal, and substituting gas for coal in power generation is one way of making substantial reductions in emissions at speed and scale. That is because gas emits half the carbon of coal when burned for power and the fuel mix in the power sector in India is currently 57% coal.

The second reason is that carbon pricing incentivises the efficient use of energy.

The greatest gains to meeting Paris are going to come through improving efficiency.

The IEA has said efficiency improvements since 2000 meant the world used 12% less energy in 2016. That's 12% from just using energy more efficiently – that's equivalent to taking a bloc the size of the European Union out of the global energy market.

The third reason is that carbon pricing incentivises innovation in lower carbon technologies of all kinds.

For instance the adoption of digital technology in India and the growth of mobile phones to help optimise the energy system – such as through smart cities and transport management – has the potential to reduce current demand for energy from end users by more than 20% over the long term.

And the fourth reason is that carbon pricing incentivises everyone to make lower carbon choices – not just producers but consumers as well, who account for around 80 to 90 per cent of carbon dioxide emissions from oil and gas products.

A switch from fossil fuel subsidies to carbon pricing could also contribute to sustainable development by directing the revenues saved to areas such as healthcare, education or infrastructure projects.

In the UK, carbon pricing has helped drive down emissions to levels not seen for over a century.

Imagine what they could achieve here in India, which is even more alive to the dual challenge than any other geographical region of the world.

Energy demand here over the next two decades is set to outstrip the global rate not twice, not three times but four times as the country grows and prospers and heat, light and mobility is brought to the third of the population currently denied it.

That will see demand go up by 165% by 2040 - outpacing China, Brazil and Russia.

An analysis by BP indicates that a carbon price in India rising gradually over time to \$80 a tonne of CO<sub>2</sub> emissions by 2050 could reduce emissions by around 30%.

And while it is often stated that climate change is not a problem India created, the Government are providing leadership to meet energy demand sustainably.

In fact, Prime Minister Modi has described it as a 'sacred duty' to be undertaken 'out of commitment, not out of compulsion.'

In BP we are proud to help with that commitment in many ways, with more natural gas, more solar energy, with advanced fuels and lubricants – and with our support for carbon pricing.