

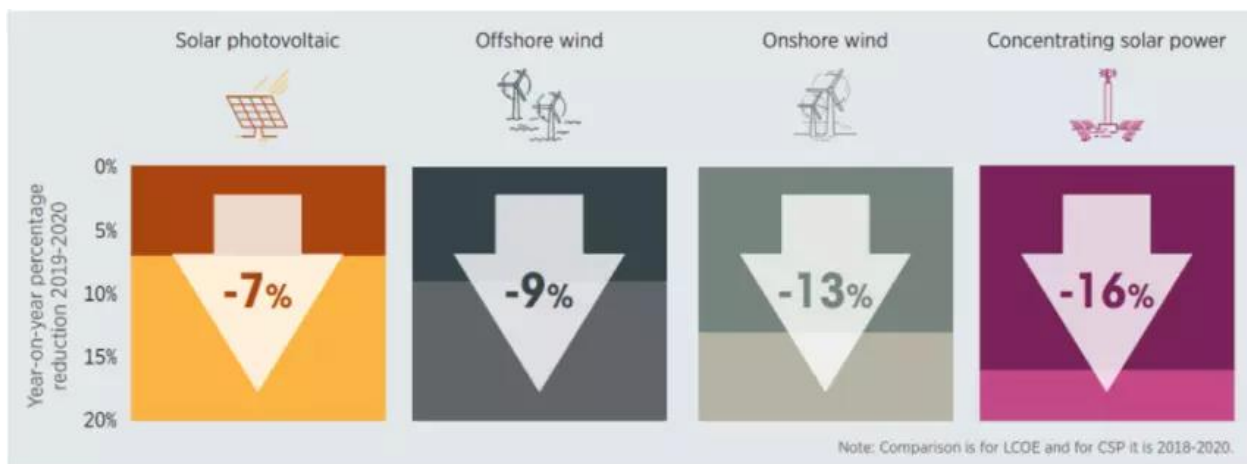
## Oil Majors Spend More on Spin, Less on Green Hydrogen

New day, same tune. The world agrees that we are in a climate crisis and fossil fuels are one of the main contributors. Oil and gas must be phased out and replaced by sustainable alternatives, like green hydrogen, to secure the survival of our planet.

You know it, we know it, oil majors know it, but still there is reluctance to embrace the green transition. Many large companies tout the importance of environmental sustainability, but often they don't have the policies to back it up – particularly if the change is not financially lucrative.

### Declining LCOE for Renewable Energy

However, the [LCOE of renewable energies](#) continues to fall. In 2020, the cost to produce energy from onshore wind fell 13%, concentrating solar power dropped 16%, offshore wind came down 9%, and utility-scale photovoltaics decreased 7%. Another interesting trend is the [LCOE of hydrogen](#). While it is not yet on the same level as solar or wind, it is now lower than natural gas.



Source: IRENA Renewable Cost Database

Source: [World Economic Forum](#)

Using, producing, and selling renewable energy is more feasible and profitable than ever before. New innovation continues to streamline renewable energy production and government policies continue to incentivize it.

### How are Companies Responding to Calls to End Fossil Fuel Use?

Asian companies are increasingly pledging to reach net-zero targets by 2050. This is great news but pledging to reach targets and setting concrete steps to achieve them are two different things. And amongst insiders, it appears some [commitments might be greenwashing](#).

Roughly half of the companies in Asia that have stated commitments to reducing emissions have not set [science-based targets](#). Companies with science-based targets, and steps to achieve them, are typically more committed. The other companies may well just be jumping on the target setting bandwagon.

## **PetroChina Claims to Be Moving Towards Net Zero**

For example, [PetroChina announced its commitment](#) to reach net-zero emissions by 2050. This is the first time that an Asian national oil company has a publicly stated net-zero goal. For 2020-2025, PetroChina is targeting to spend \$0.4-0.7 billion per year on renewable energy investments.

Looking a bit closer at the numbers we can see that this investment represents 1-2% of their total capital expenditures. When compared to some of the announced European goals, this is a slightly underwhelming commitment, albeit positive that they are acknowledging the transition to renewables. In Europe, Eni will spend over 20% of its budget on renewables, and BP will follow suit with 33%.

PetroChina's plan to reach net-zero, like many companies, is unsurprisingly vague. PetroChina has a low-carbon strategy that focuses on increasing natural gas production. While natural gas is a less carbon-intensive energy production method than crude oil, it is hardly a clean energy source. The development of science-based targets would help bolster their claim to reach net-zero.

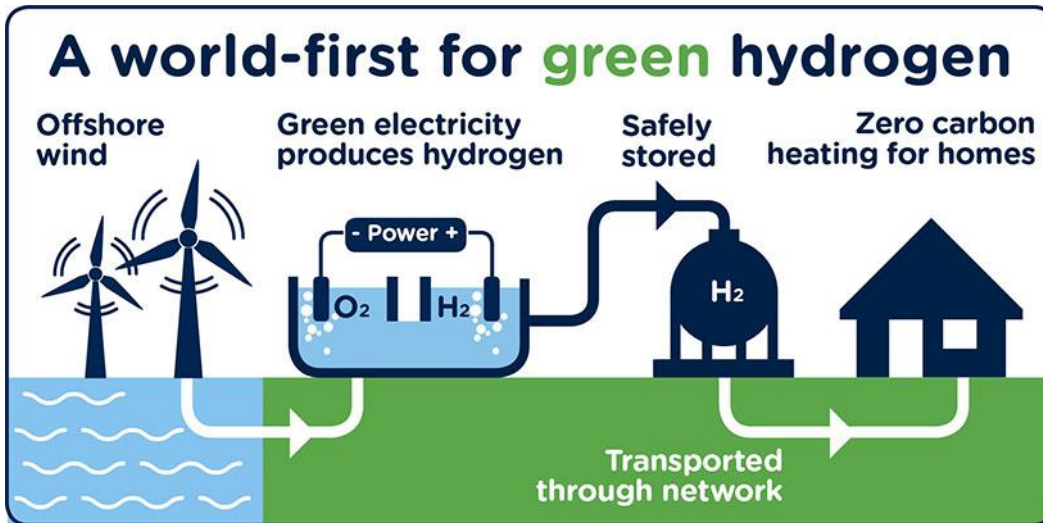
## **What are Companies Saying About Hydrogen?**

Many oil and gas companies are [pushing hydrogen](#) as an alternative energy source.

However, there are a few ways to produce hydrogen and they are not all environmentally friendly. Two of the most well-known methods are [green hydrogen and blue hydrogen](#).

Green hydrogen uses renewable energy electrolysis to separate water into hydrogen and oxygen. Blue hydrogen is made by separating natural gas into hydrogen and carbon dioxide.

Blue hydrogen is reliant on fossil fuels and green hydrogen is reliant on renewable energy.

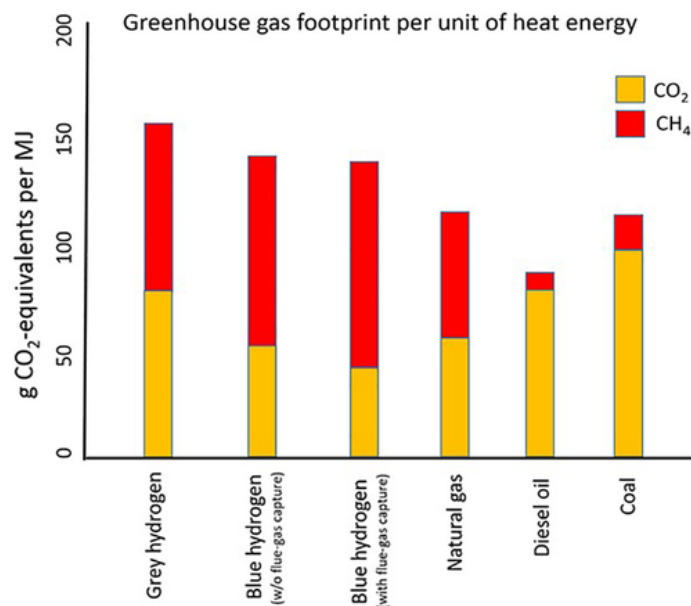


Source: [Fuel Cells Works](#)

### Most Hydrogen Currently Produced is Not Green

In reality, [less than 1% of current global hydrogen](#) production is attributed to green hydrogen. Under the guise of clean energy, companies are able to tout their investments in hydrogen energy, when in reality it's just another form of fossil fuel energy production.

It's important to recognize and acknowledge the difference between blue hydrogen and green hydrogen. While green hydrogen is a zero-carbon energy source, studies suggest that blue hydrogen could be [worse for the environment than coal](#).



Source: [Energy Science & Engineering](#)

## Why Should Companies Embrace the Renewable Energy Shift?

Aside from the obvious environmental benefits of a renewable energy transition, public opinion is shifting, and government legislation is increasing, creating more incentives for oil and gas companies to embrace the energy shift.

Green hydrogen presents an incredible opportunity for companies to capitalize. Forecasts suggest that [green hydrogen production will grow](#) by a compound annual growth rate of 57% between 2019-2030. While the production of green hydrogen is still currently an expensive venture, costs are continuing to decline, and government policies will likely continue to make its production more affordable through incentives and subsidies.

## Challenges For the Oil and Gas Industry

The transition to renewable energy does not come without its obstacles for oil and gas companies. Chief among them is the question of profitability. Is it still profitable to turn off the tap on fossil fuels and open the door to renewable energies?

The future of oil and gas companies includes [lower commodity prices and higher carbon taxes](#). Returns on oil investments are trending continually downward, whereas the opposite can be said for [renewable energy projects](#). The long-term outlook suggests that renewable energy is set to take off, and the sooner that companies jump on board, the more they stand to gain.