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# IEA warns of carbon capture pitfall

*Oil and gas industry warned carbon capture and storage is not a way to retain the status quo*

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Inconceivable volumes of carbon capture and storage would be needed to align with 1.5°C policy targets, IEA argues



SHIPBUILDING COMPANIES ARE LOOKING INTO ONBOARD CARBON CAPTURE TO REDUCE SHIPS' DIRECT EMISSIONS.

Source: Ashley Cooper pics / Alamy Stock Photo

THE oil and gas industry should not rely on carbon capture to retain the status quo in the energy transition, the International Energy Agency has warned in a report.

The IEA said carbon capture would be needed for some industries such as cement and petrochemicals.

But it said the world would require an “inconceivable” 32bn tonnes of carbon captured for utilisation or storage by 2050 if oil and natural gas consumption were to evolve as expected under today’s policy settings, including 23bn tonnes captured directly from the air, to limit global warming to 1.5°C.

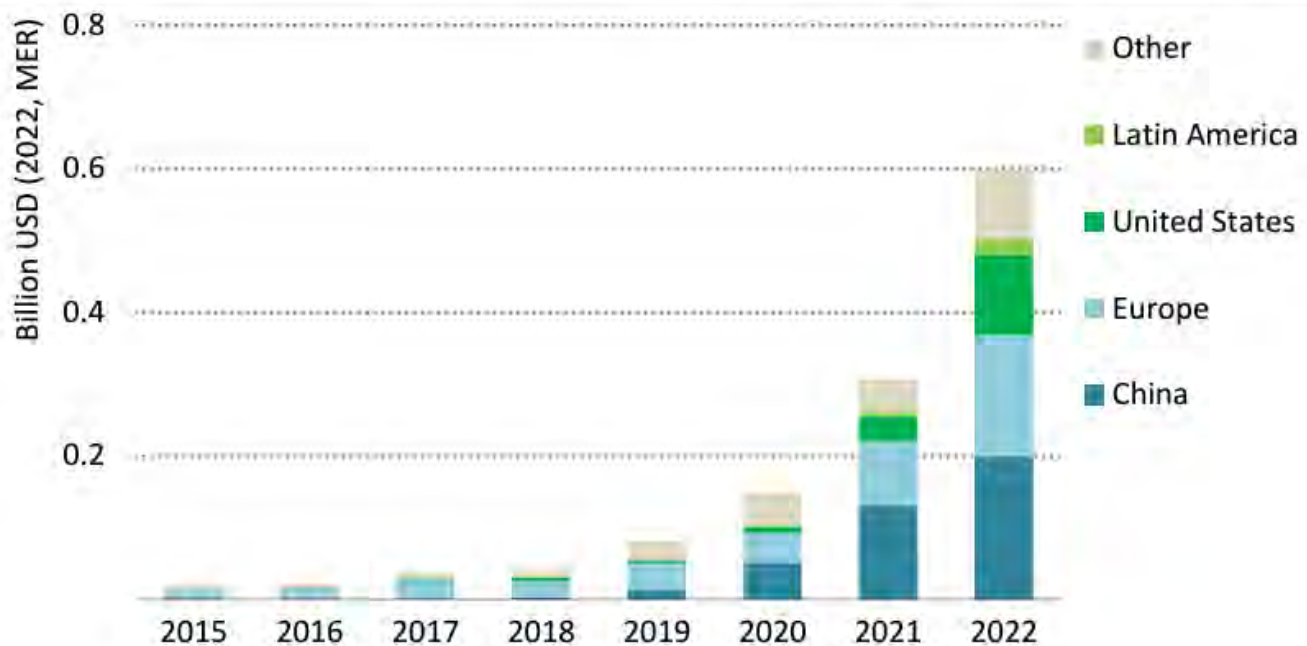
“The necessary carbon capture technologies would require 26,000 terawatt hours of electricity generation to operate in 2050, which is more than global electricity demand in 2022,” it said.

“And it would require over \$3.5trn in annual investments all the way from today through to mid-century, which is an amount equal to the entire industry’s annual average revenue in recent years.”

Several shipping companies, including MSC and Wah Kwong, have projects to utilise onboard CCS solution for vessels. The International Maritime Organization decided not to publish CCS guidelines for shipping at its latest Marine Environment Protection Committee, as the technology's commercial use is likely five to seven years away and the UN body will incorporate CCS guidelines in its lifecycle analysis of greenhouse gas intensity of fuels that is under way.

## Investment in electrolysis projects for hydrogen

**Figure 2.24** ▶ Investment in electrolysis projects for hydrogen, 2015-2022



Source: IEA

Lloyd's List 

Shipping companies are looking to build CO<sub>2</sub> carriers to serve the nascent CCUS industry. Companies are also looking into onboard carbon capture to reduce ships' direct emissions, although the extra drain on engine power is seen as limitation of the technology, particularly at higher capture rates.

Some of the main alternative fuel candidates for shipping such as green methanol production require carbon capture, potentially putting it at a disadvantage against other fuels such as green ammonia, which does not require or emit CO<sub>2</sub>.

The IEA said investment in low-emission hydrogen projects rose in recent years, with spending on electrolyser installations doubling year on year to reach \$600m in 2022.

“Oil and gas firms are partners in one-third of low-emissions hydrogen production involving CCUS and around 20% of electrolysis operational and planned projects.”

MARITIME SURVEY

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