



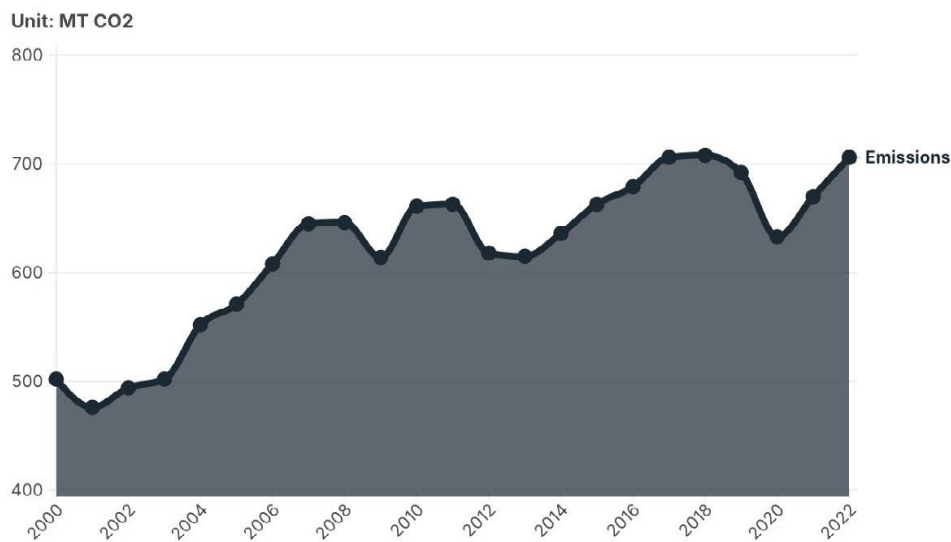
Fact Sheet:

Can maritime hydrogen overcome the headwinds?



Maritime shipping facilitates 80% of trade and enables trillions of dollars in annual economic activity. It is also responsible for a larger carbon footprint, if taken alone, than all but about six of the world’s countries. Alternative energy sources are being considered in getting the maritime shipping industry to net-zero by 2050, particularly hydrogen and its derivatives. However, widespread adoption requires overcoming substantial economic, technological, and operational barriers—and a poorly-planned scaleup of maritime hydrogen could risk undermining net-zero goals in the long run.

Historial Emissions from International Shipping



Source: International Energy Agency

Widespread hydrogen expansion will confront significant hurdles.



High Costs:

The economic feasibility of green hydrogen depends on reducing production costs and increasing infrastructure investments.



Infrastructure Needs:

A green shipping sector requires substantial investment in vessels, fueling systems, and port infrastructure.



Policy and Guidance Gaps:

Robust regulatory frameworks are needed to incentivize adoption, avoid carbon lock-in, and ensure the transition is truly sustainable.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute’s mission is to accelerate the transition to a diverse, sustainable and profitable energy economy.