



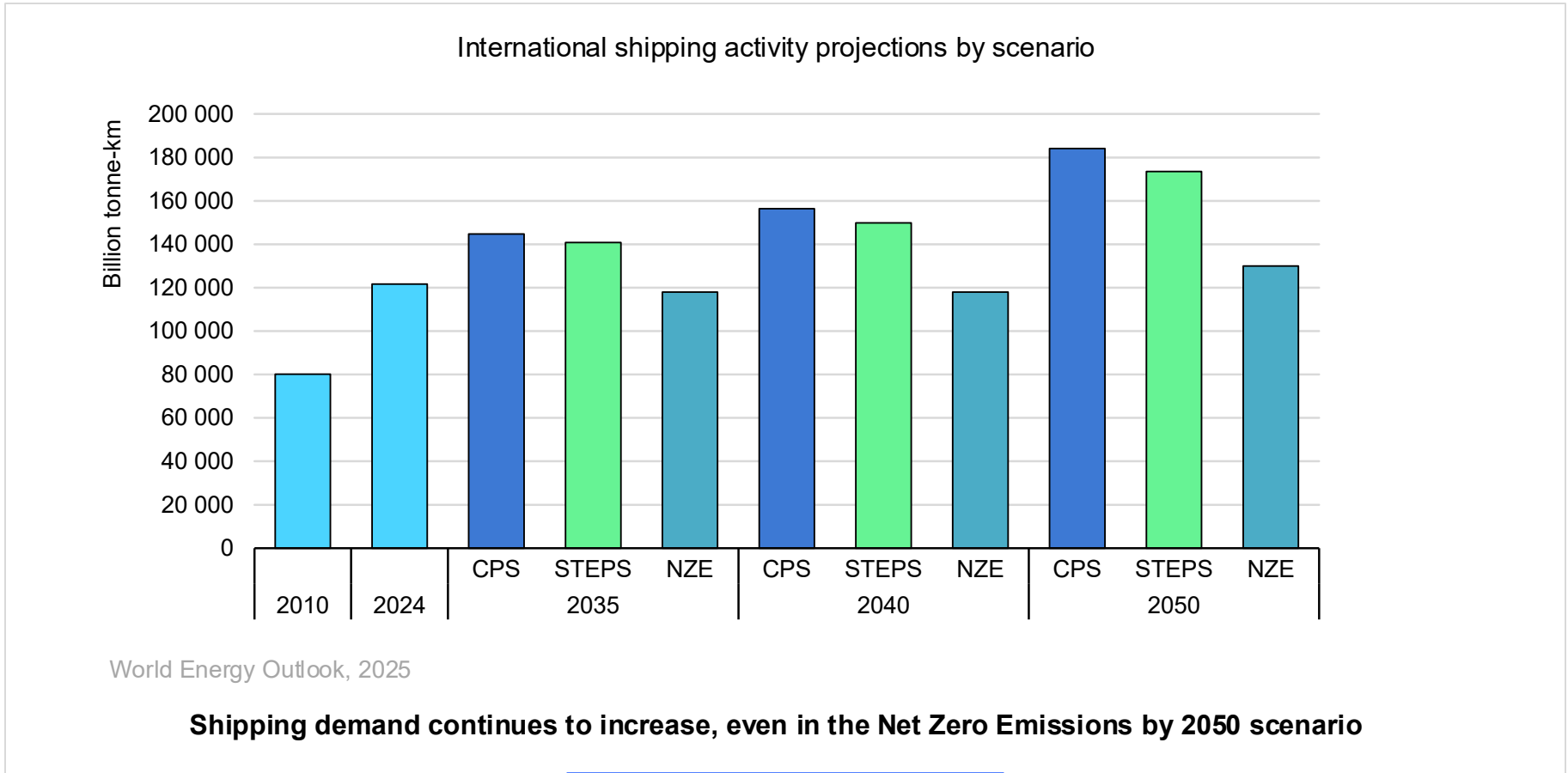
# Shipping in the World Energy Outlook 2025

Bioenergy TCP ExCo workshop – Zero Emission Shipping

Andrew Klain, Laurence Cret

November 19, 2025

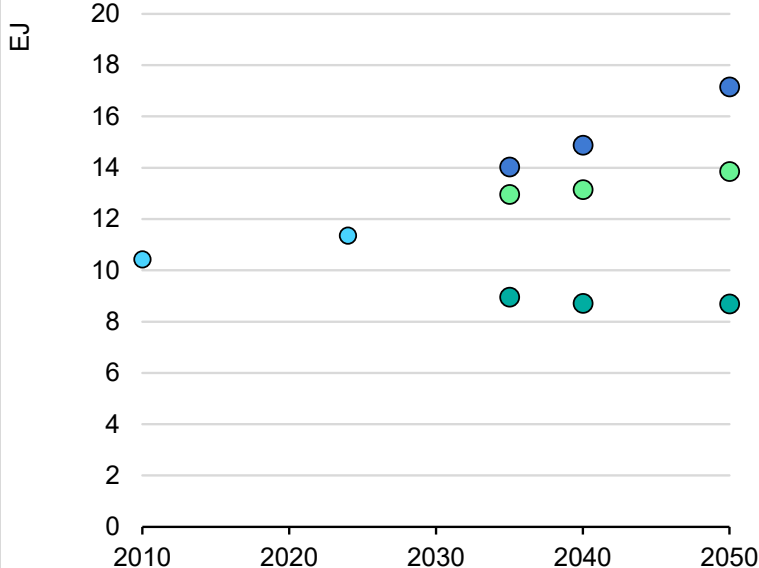
# Economic growth and trade drive the need for shipping



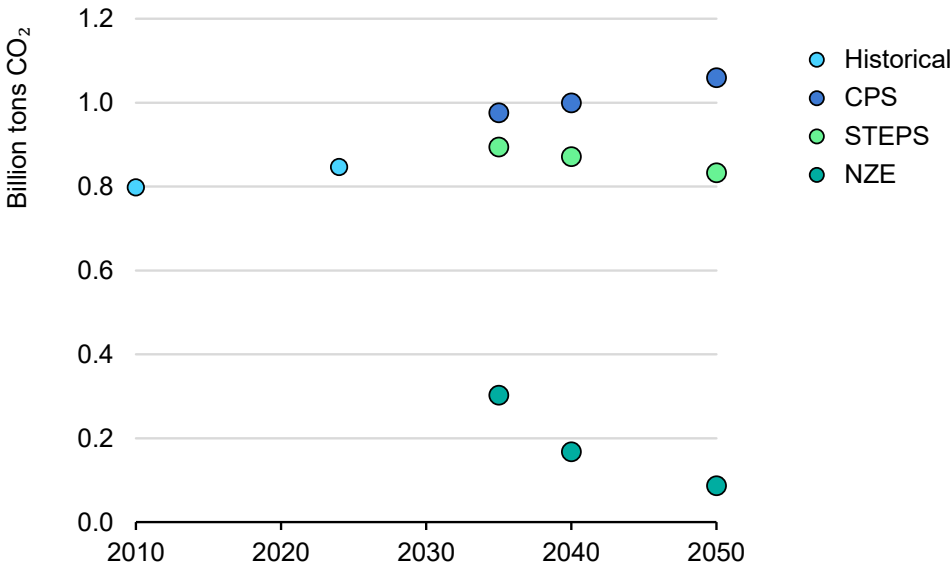
# Energy demand and emissions are driven by policies

## International and domestic shipping

### Energy demand by scenario



### CO<sub>2</sub> emissions by scenario

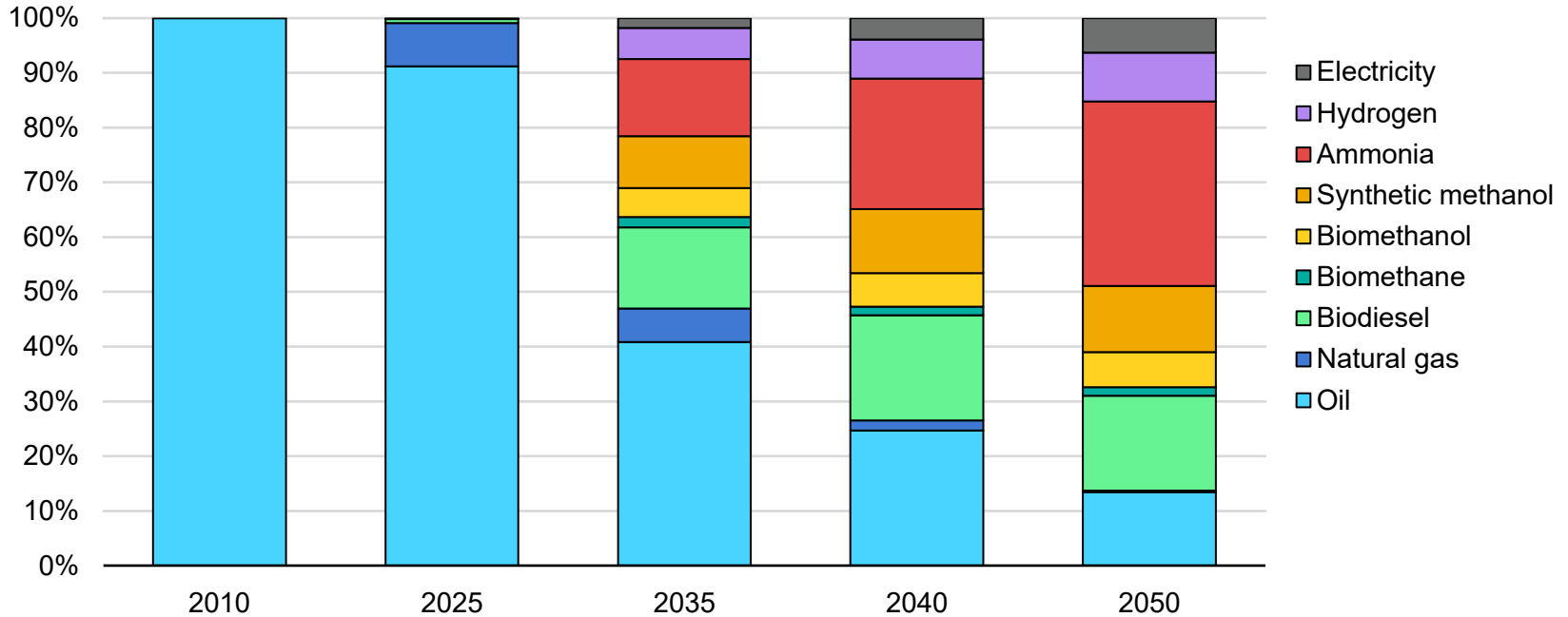


World Energy Outlook, 2025

**Energy demand is moderated by improved energy efficiency; emissions are reduced by switching to alternative fuels**

# A mix of different types of alternative fuels is necessary for Net Zero

International and domestic shipping energy demand in the Net Zero Emissions by 2050 scenario

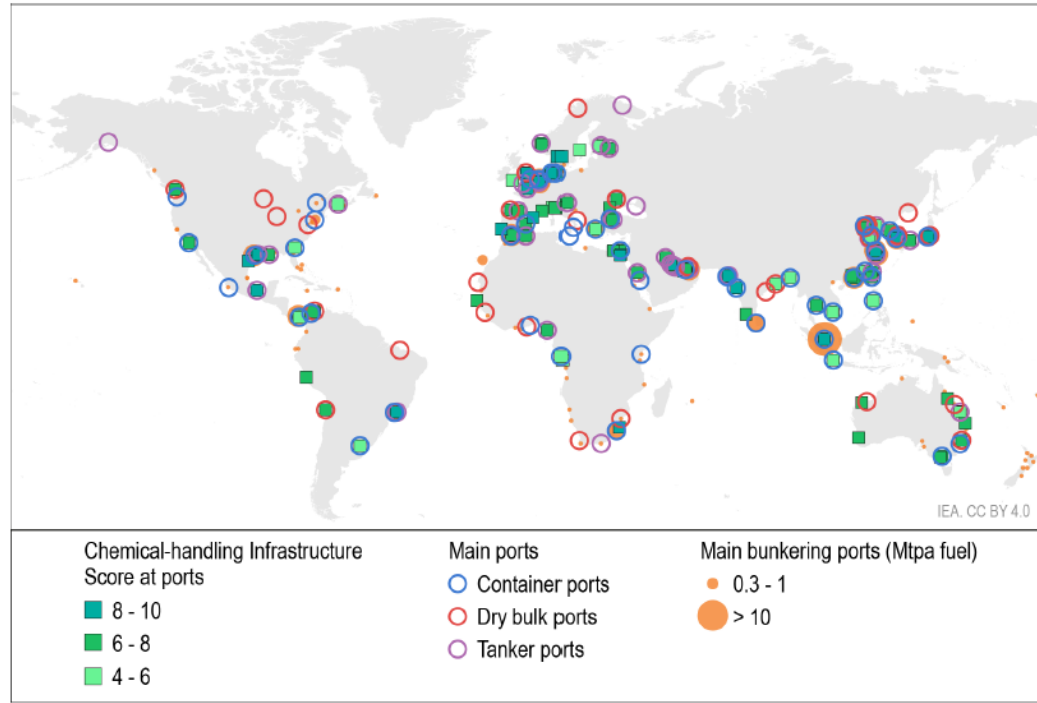


World Energy Outlook, 2025

**By 2050, synthetic fuels account for 60% of the total energy mix, followed by biofuels at 25%.**

# Alternative fuel bunkering infrastructure needs to be further developed

Chemical-handling Infrastructure Score at main ports, 2024



Note: The Chemical-handling Infrastructure Score ranges from 0, i.e. no storage infrastructure at all, to 10, i.e. storage infrastructure in place for ammonia, liquefied petroleum gas (LPG), methanol and liquefied natural gas (LNG).

Global Hydrogen Review, 2025

**Nearly 80 ports already handle ammonia, LPG, methanol or LNG; 60% of these are also main bunkering ports.**

**iea**