

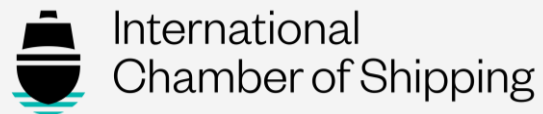


# CLEAN ENERGY MARINE HUBS

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

# Clean Energy Marine Hubs (CEM-Hubs)

The ENERGY-MARITIME high-level global initiative



# Clean Energy Marine Hubs (CEM-Hubs)

De-risking and transforming the Energy-Maritime supply chain

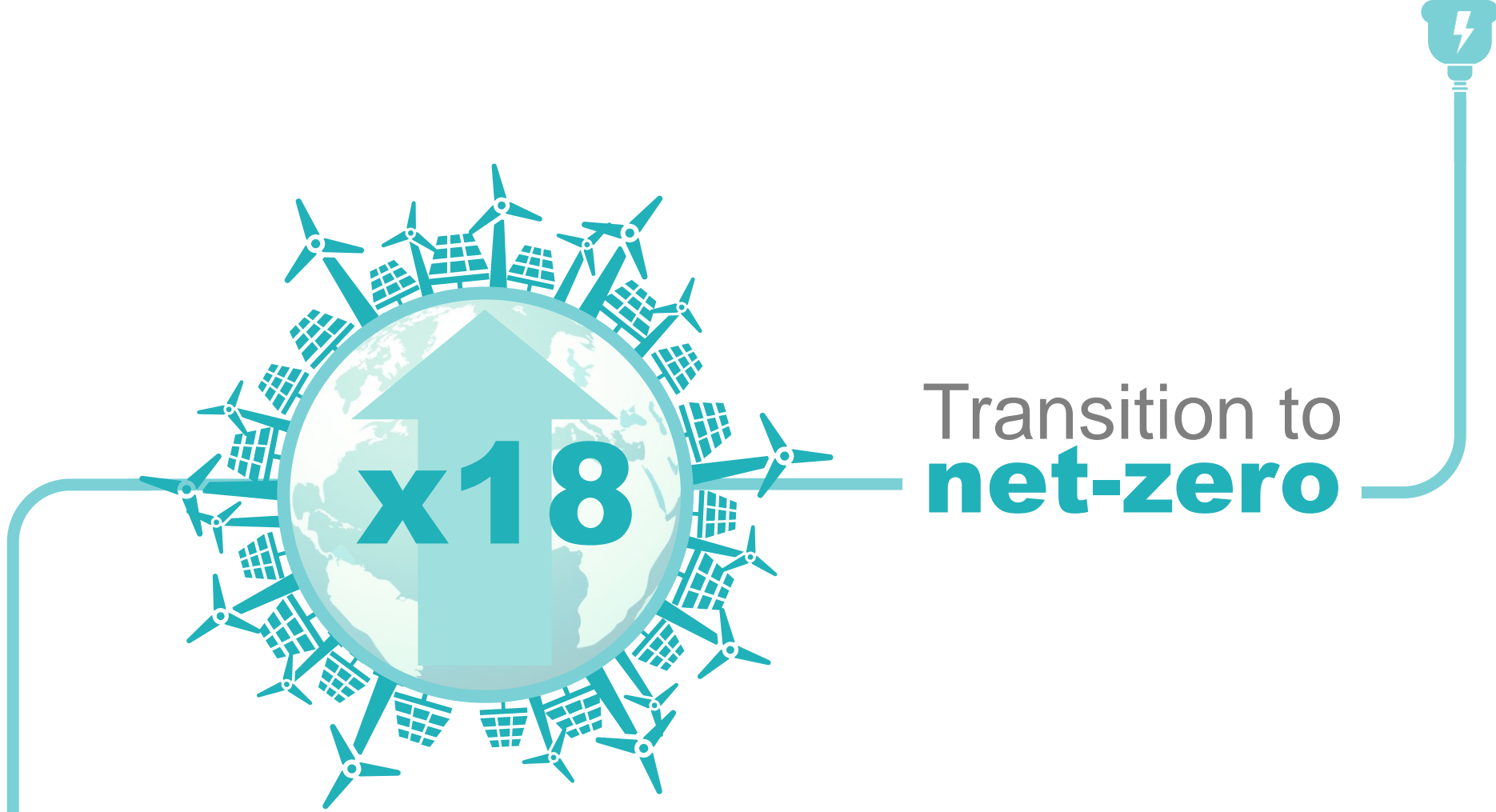
# Clean Energy Marine Hubs (CEM-Hubs)

De-risking and transforming the Energy-Maritime supply chain



To decarbonize the world,  
global electricity demand  
will increase to  
**60,000 TWh**





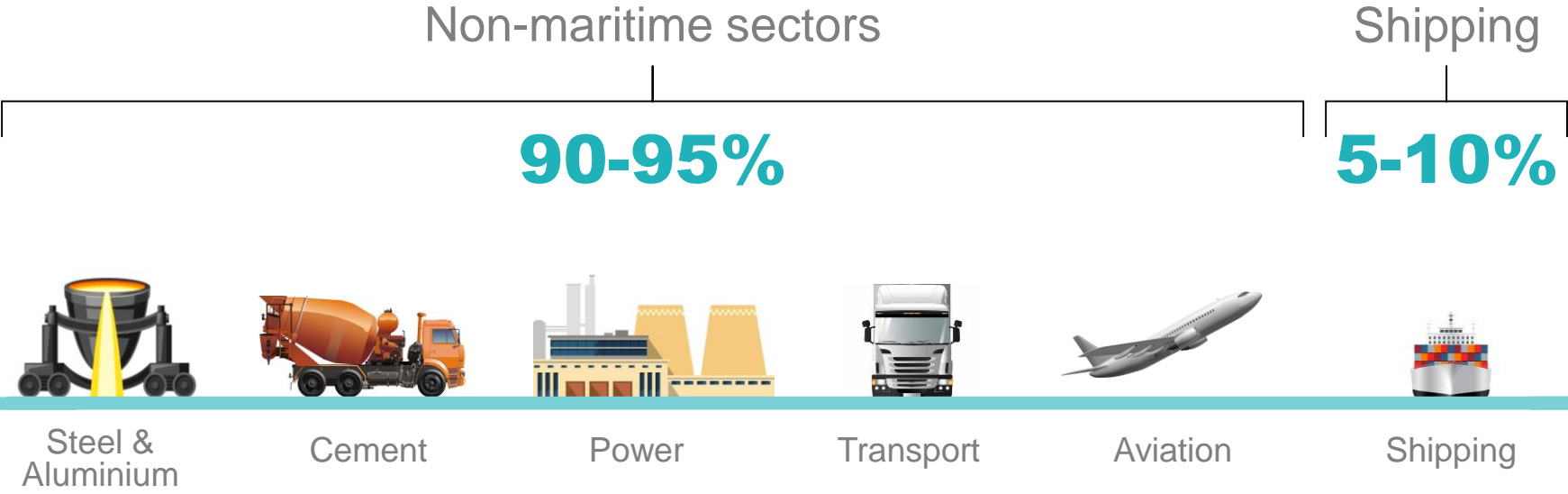
# Transition to **net-zero**



To transition to net-zero and meet the world energy demand, the world will require to increase its renewable energy power by 18 times. Shipping will require access to these fuels to decarbonize but also to support the wider energy transition.

Multiple sectors are looking to **hydrogen** and **sustainable biofuels** to **decarbonize**

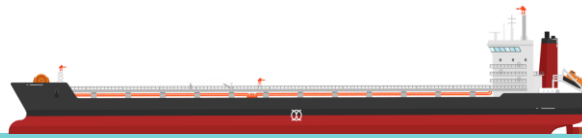
The hydrogen demand alone by 2050



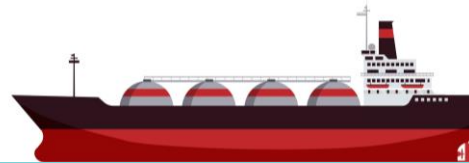
Shipping will be a **MINOR** player in the Hydrogen demand by 2050 but a **KEY ENABLER** to transport these fuels.

# Shipping Transports

**50%**  
of future-fuels  
trade to be shipped



**36%**  
of the worlds  
energy



**80%**  
of global trade



Shipping alone transports **80%** of global trade.

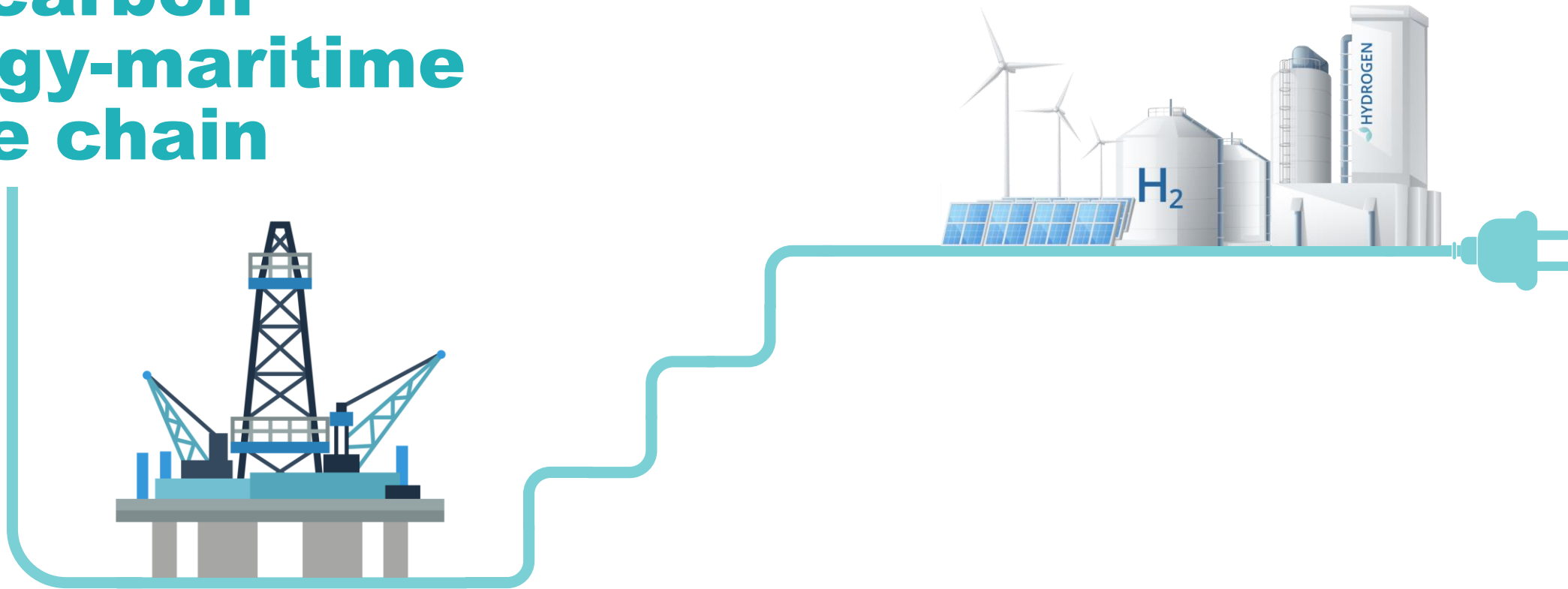


**36%** of the world's current energy is transported by sea from source to consumption.



The International Renewable Energy Agency (IRENA) estimates that over **50%** of the trade of zero carbon fuel will need to be transported by ship from producing to importing countries by 2050.

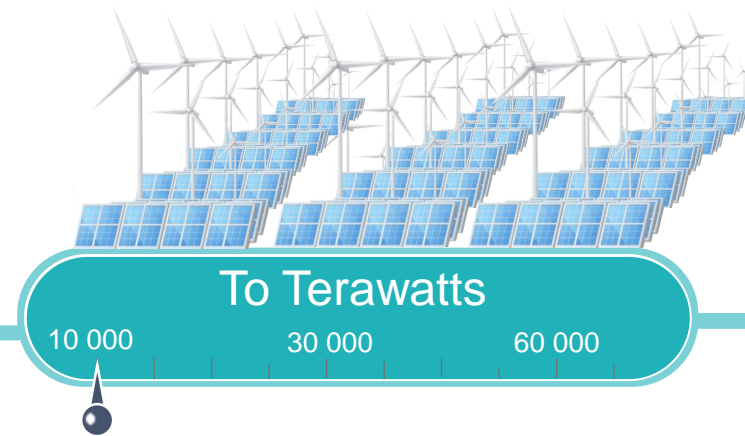
# This means transitioning to a **low-carbon energy-maritime value chain**



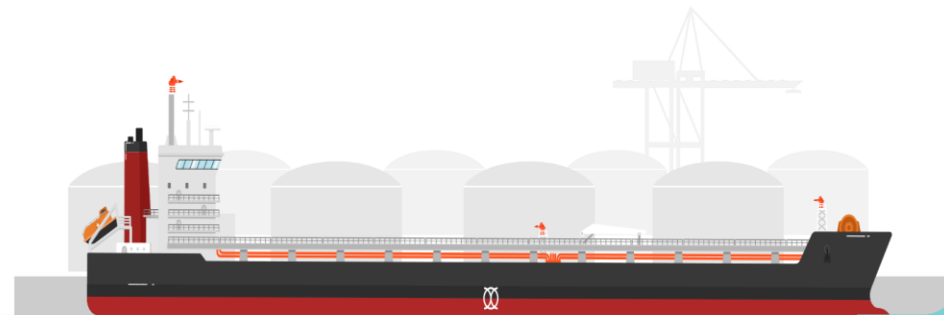
This means transitioning from a mostly fossil-fuel energy-maritime value chain **to a low-carbon energy-maritime value chain**, modifying production, storage, transport and import infrastructure



This requires a **massive increase in renewable energy**



with new capacity & infrastructure **strategically located close to a port**



This aggregated demand of low-carbon fuels will require a **massive increase of renewable energy** to produce e-fuels. And particularly for that **new capacity and infrastructure to be strategically located close to a port** or access to ports.

# Clean Energy Marine Hub (CEM-Hub)

Infrastructure located close to and with access to port facilities

Power & Production

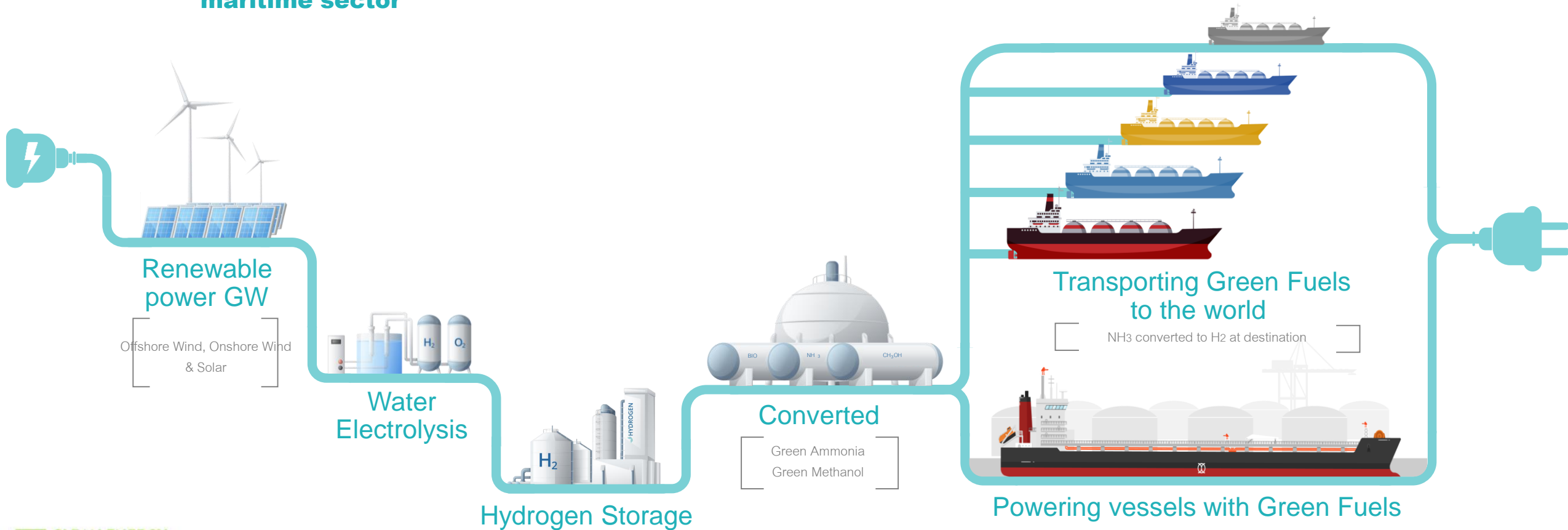
**Strategically located for connection with the maritime sector**

Storage & Conversion

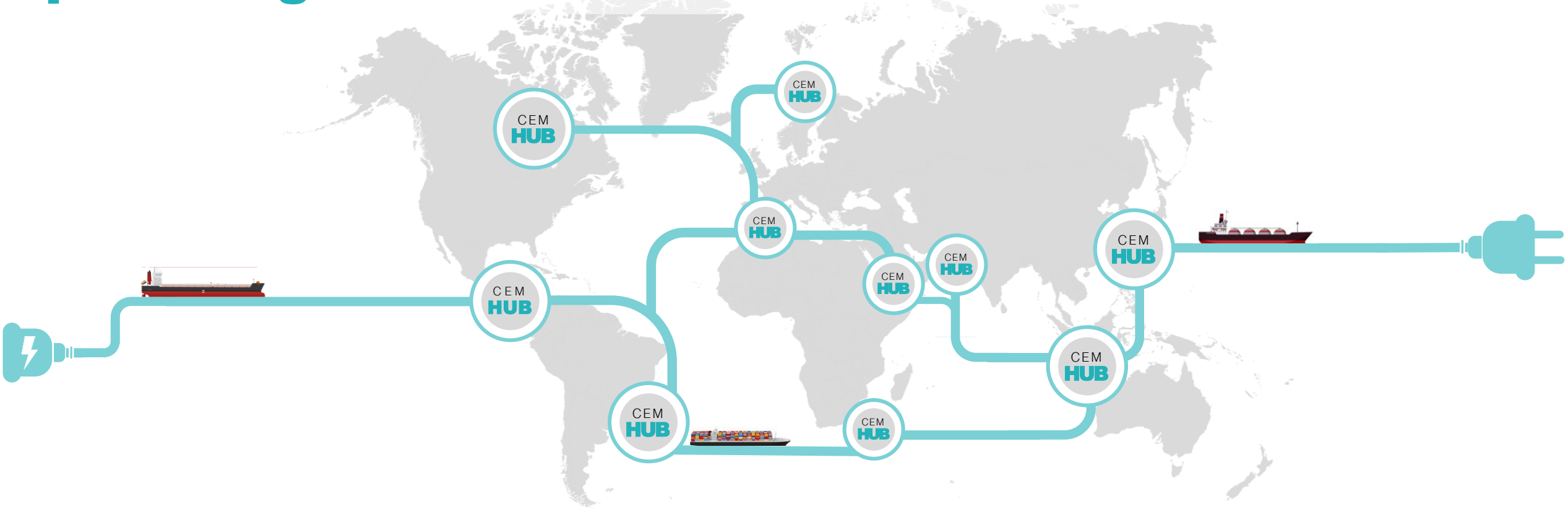
**Built with access to a port**

Transportation and bunkering

**Up to 5 times more low-carbon fuels transported than bunkering**



# **Together** Governments and industry will seek to establish Clean Energy Marine Hubs across the globe, **providing low-carbon fuels for all**



Governments and industry by launching the CEM-Hubs initiative under the Clean Energy Ministerial platform will seek to establish Clean Energy Marine Hubs across the globe, coordinating efforts to advance faster together in de-risking and greening the energy-maritime link and greening the global supply chains, by providing low-carbon fuels for ALL.

Governments and private sector across the value chain will share **best practices** to **de-risk investment** to **accelerate production**



We all need **renewable energy for low-carbon fuels at scale!**

By acting now, and cooperating globally, the benefits are immense locally:

Low-Carbon Energy Security

Net-zero Economic Development

Improved Affordability

Trade Flexibility





Transition to  
**net-zero  
together**



AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

The benefits of working together globally will be felt locally for years to come.



# CLEAN ENERGY MARINE HUBS

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL

Initial supporting governments



Brazil



Canada



Greece



Norway



Panama



UAE



Uruguay



# CLEAN ENERGY MARINE HUBS

AN INITIATIVE OF THE CLEAN ENERGY MINISTERIAL



[www.cleanenergyministerial.org](http://www.cleanenergyministerial.org)