

Decarbonising Marine Transport: What, How, and When?



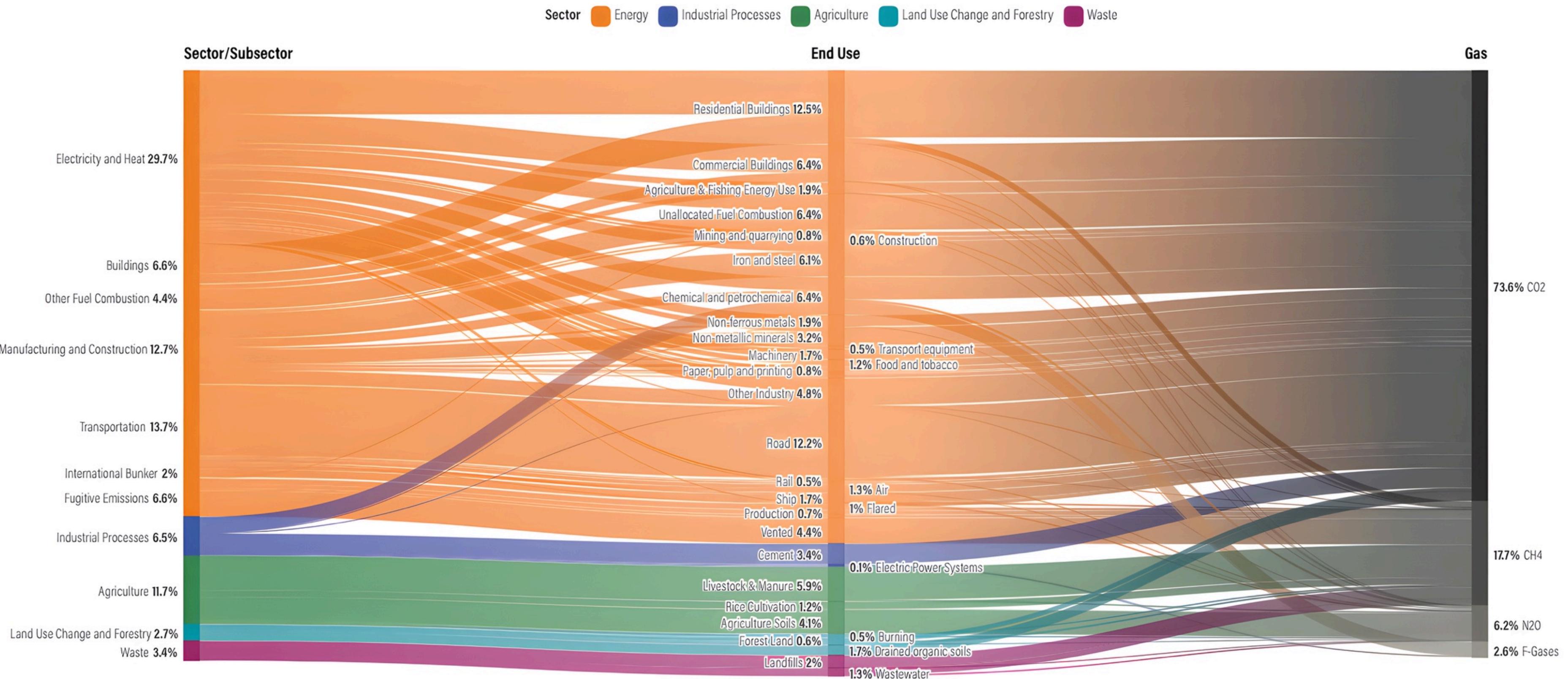
Sandith Thandasherry
Founder & CEO, Navalt

 **Navalt**





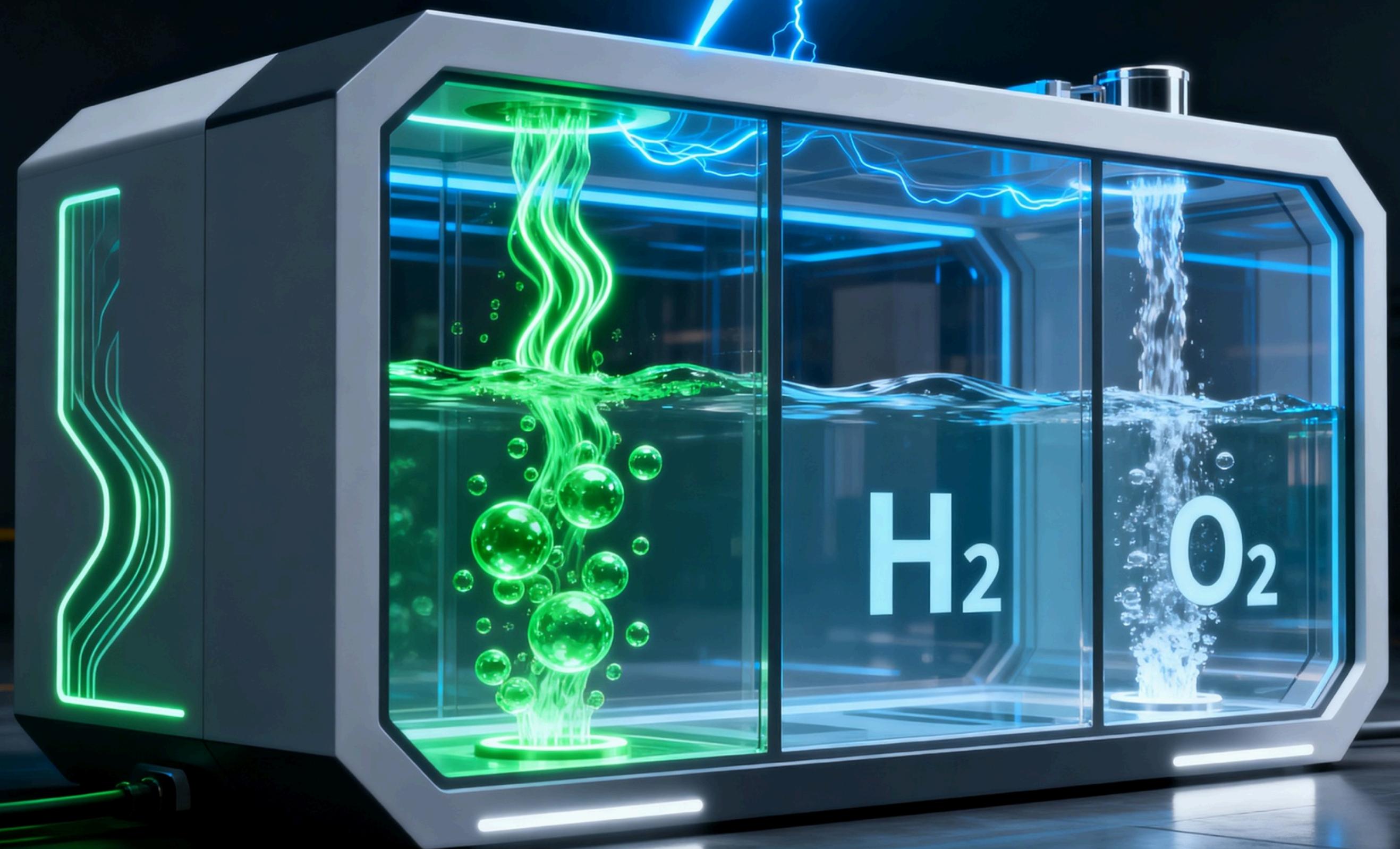
Flow of global greenhouse gas emissions in 2021

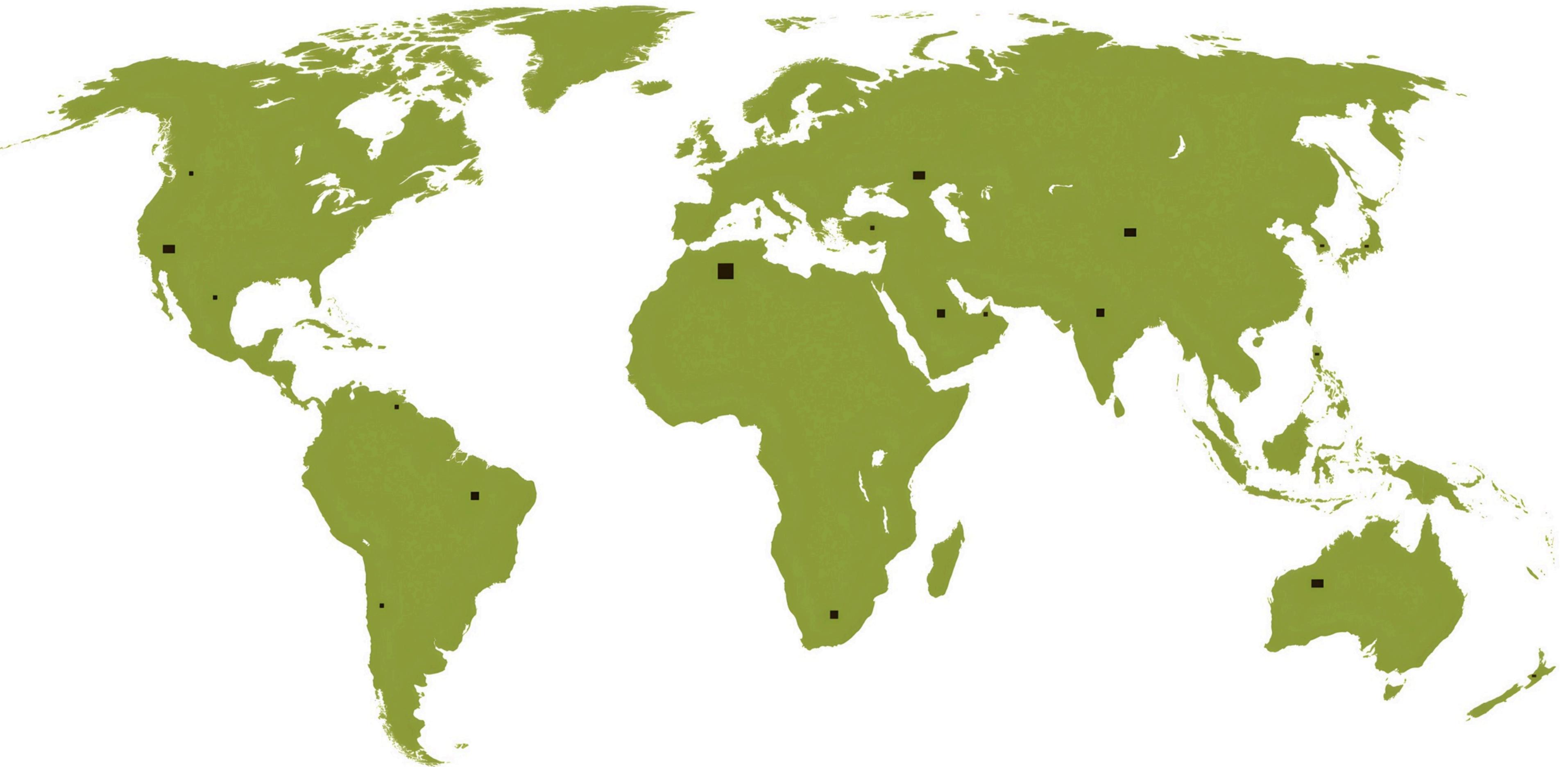


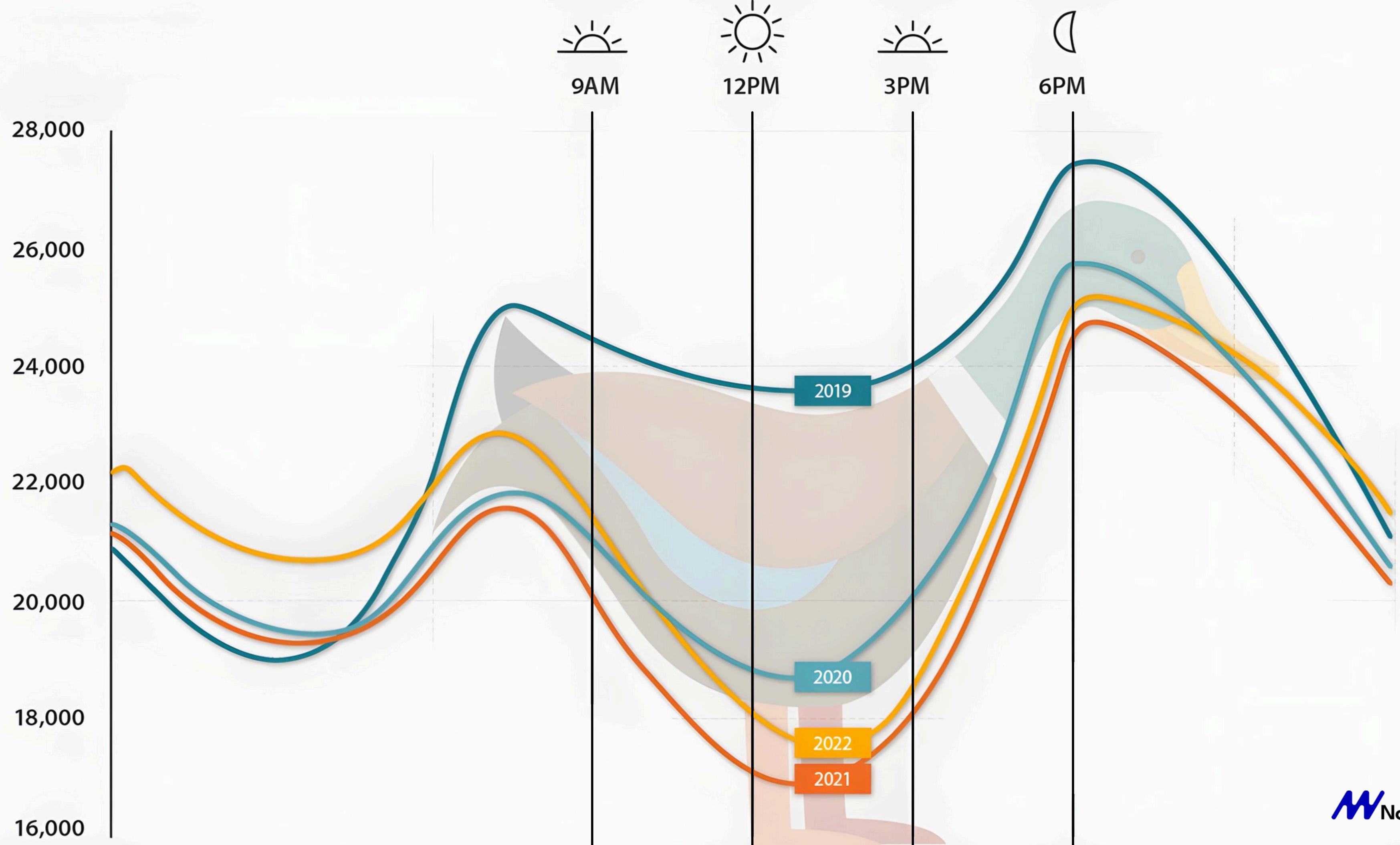




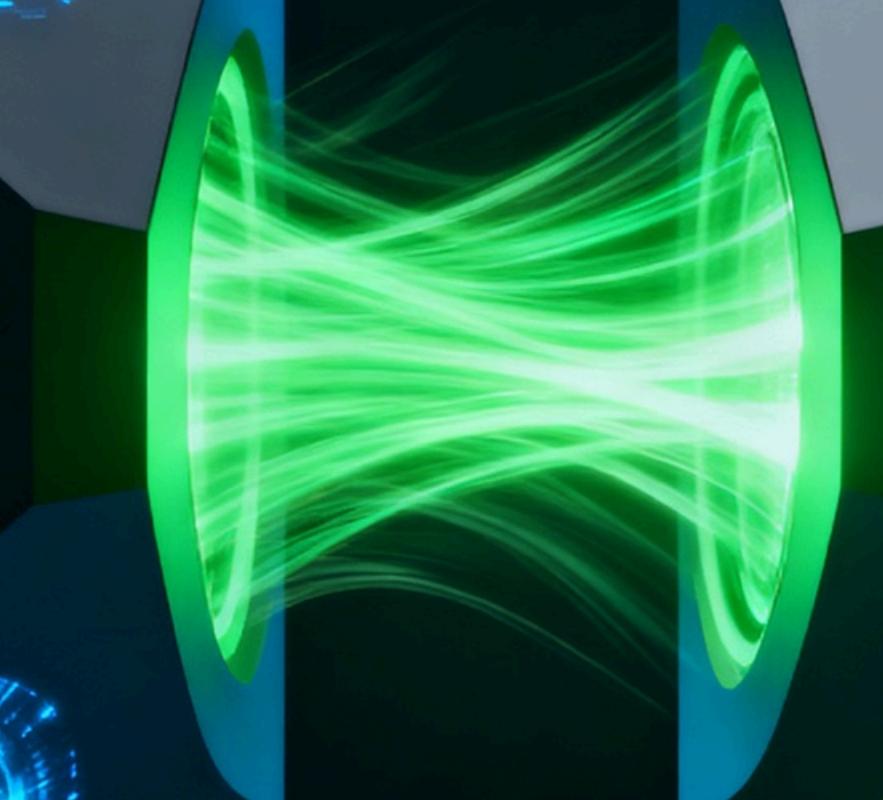
power grid







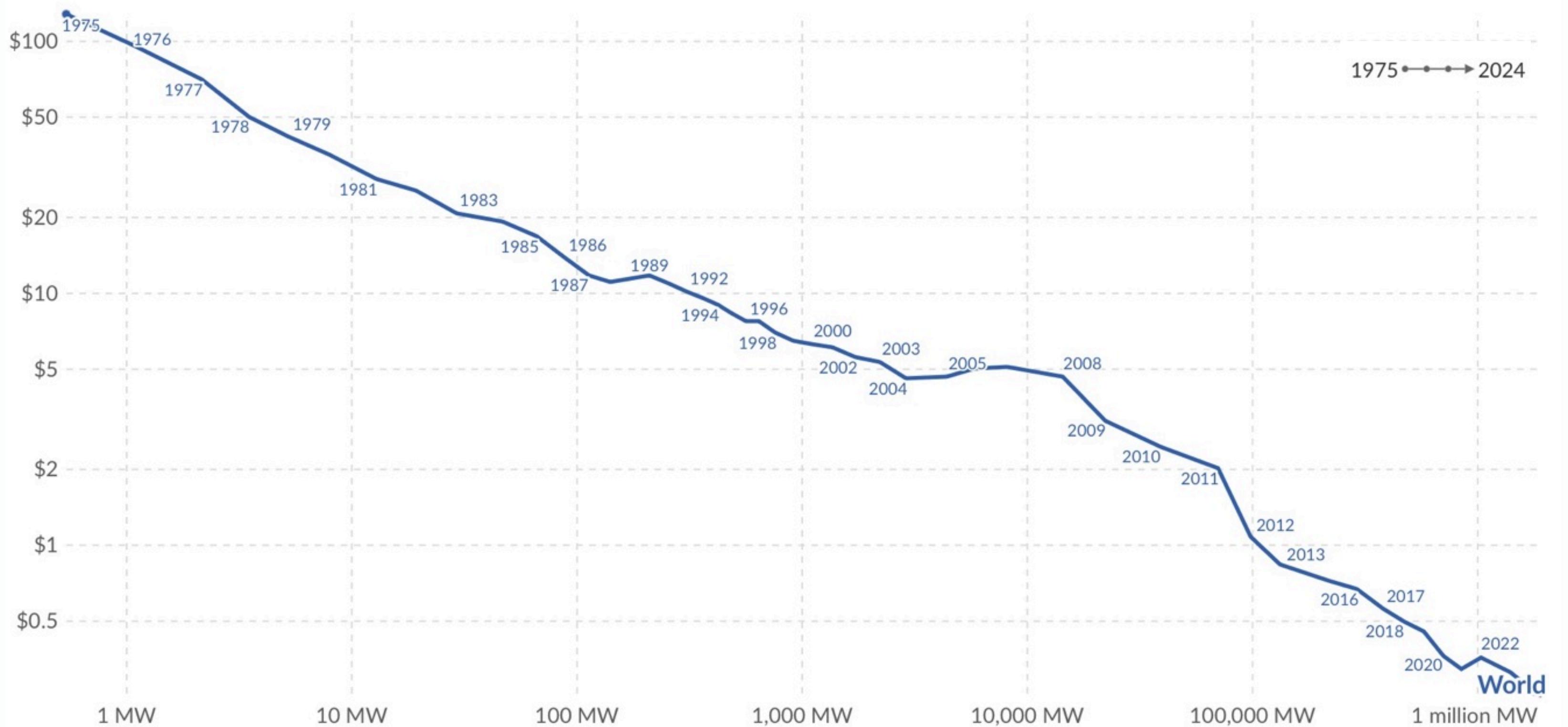




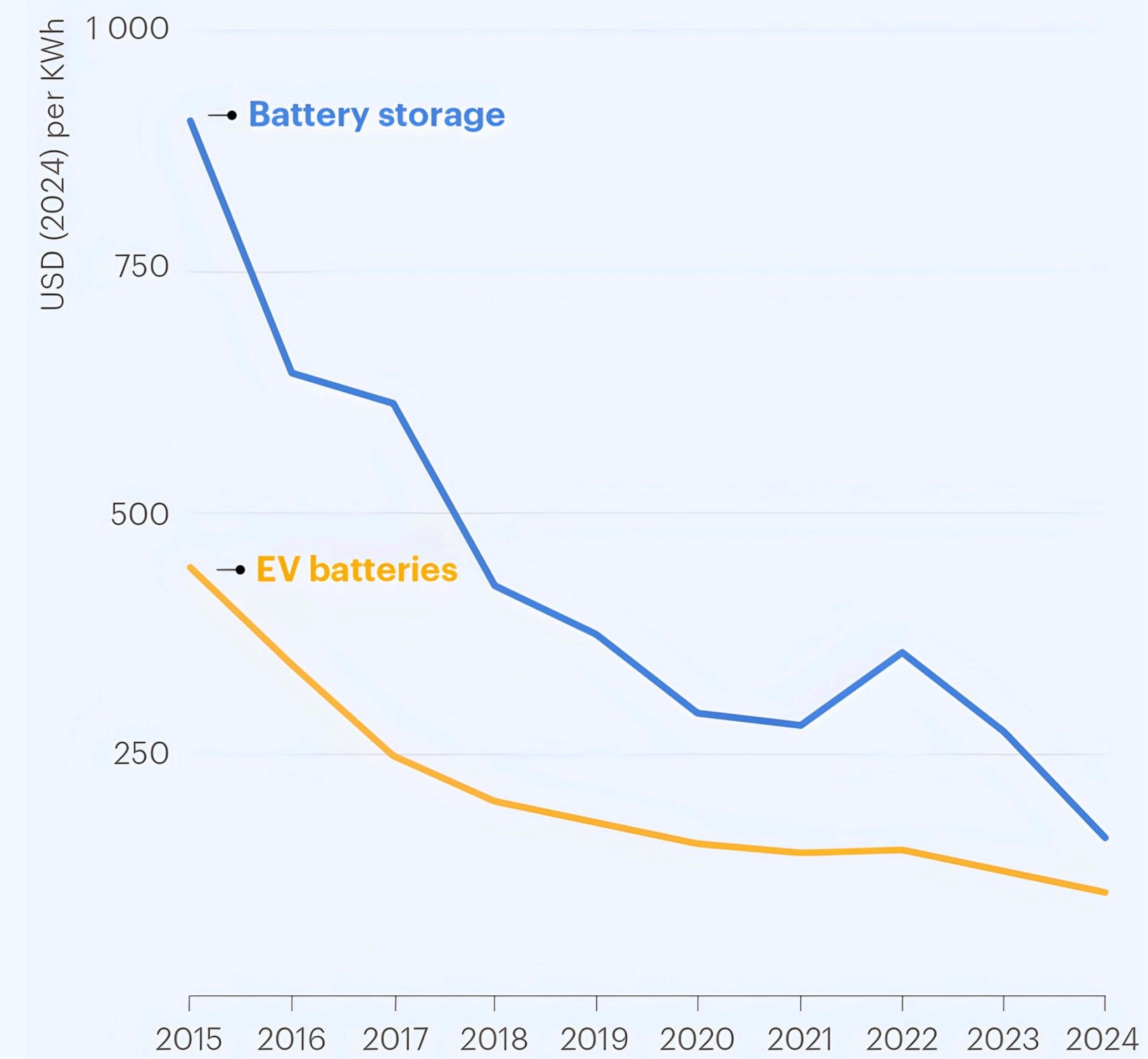
TECHNOLOGY

ECONOMICS

Solar (photovoltaic) panel prices vs. cumulative capacity



Global Average Battery Pack Prices



Types Of Energy



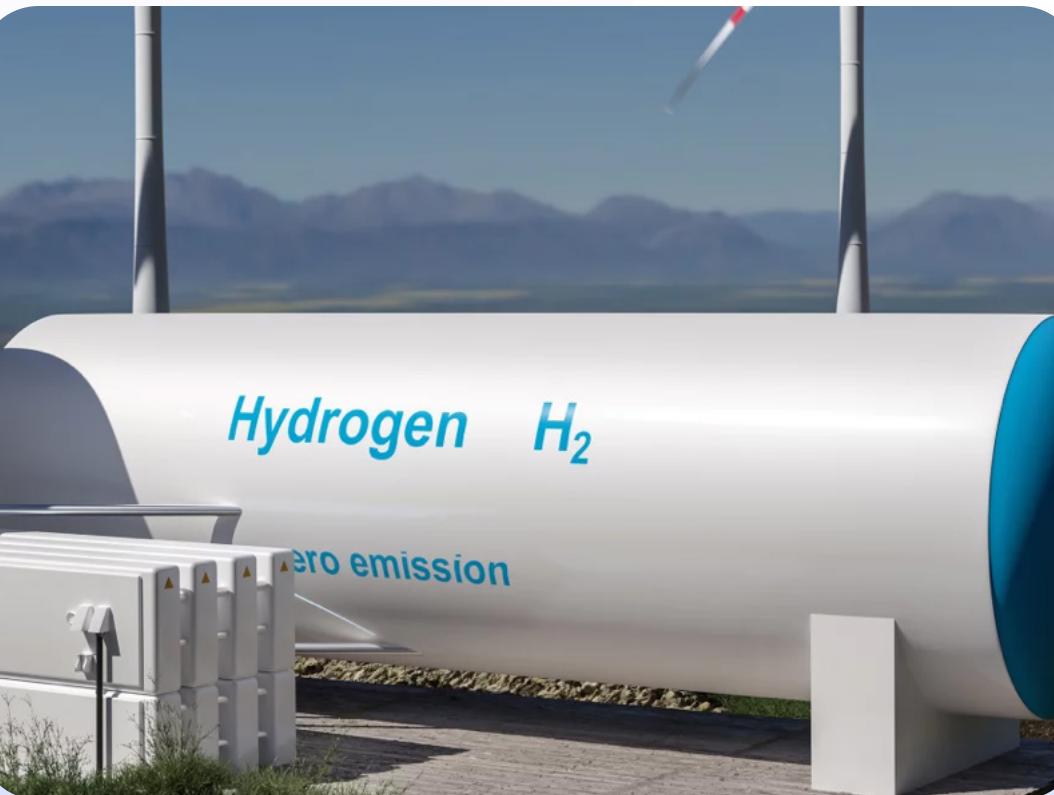
Grid + Battery



Solar



Wind



H2 fuel + Fuel cell



Diesel Fuel + Engine

Combination

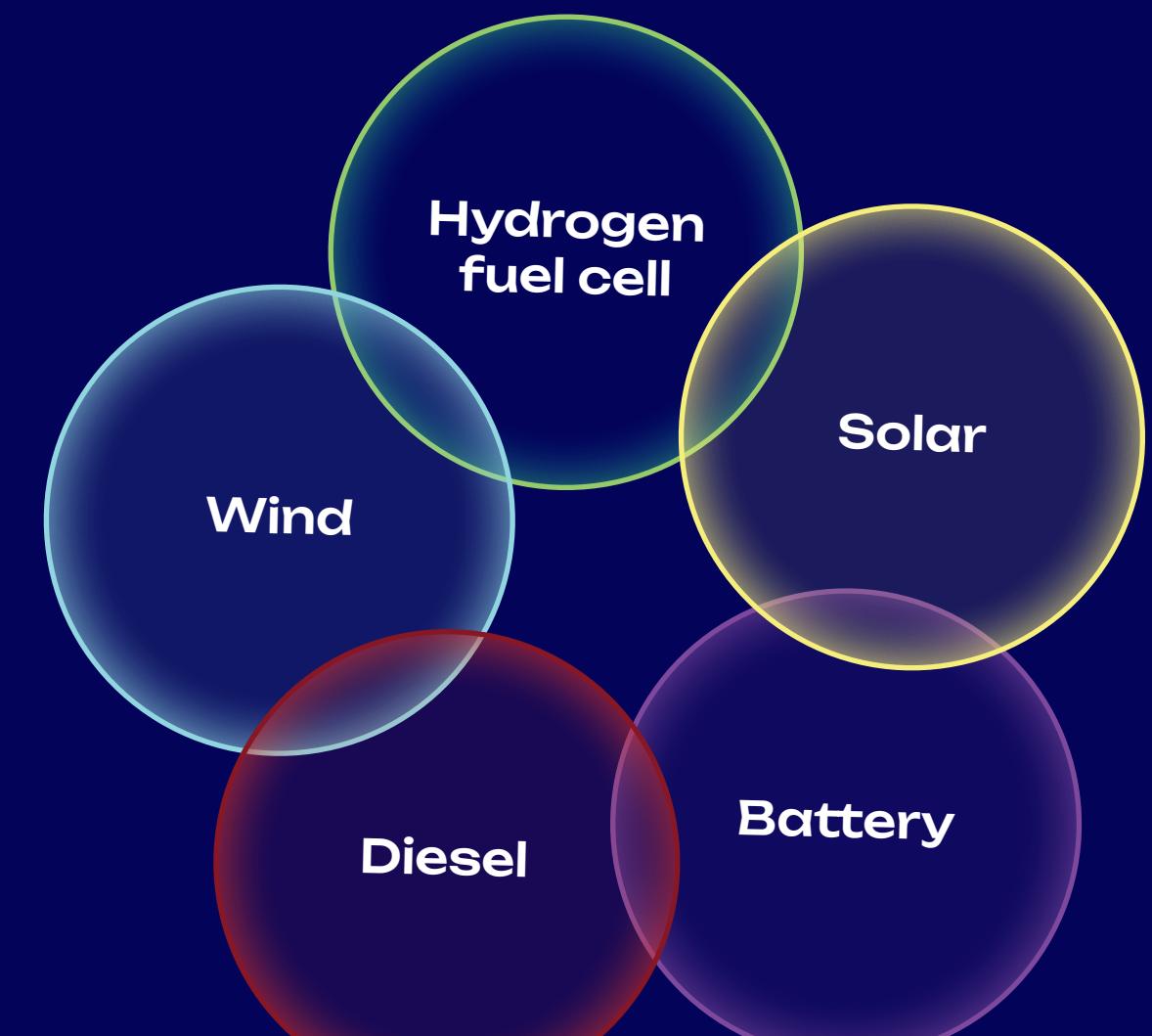
Boats (<50m)



Solar
50%

Battery
50%

Boats (50-100m)



Combination

Ships (>100m)



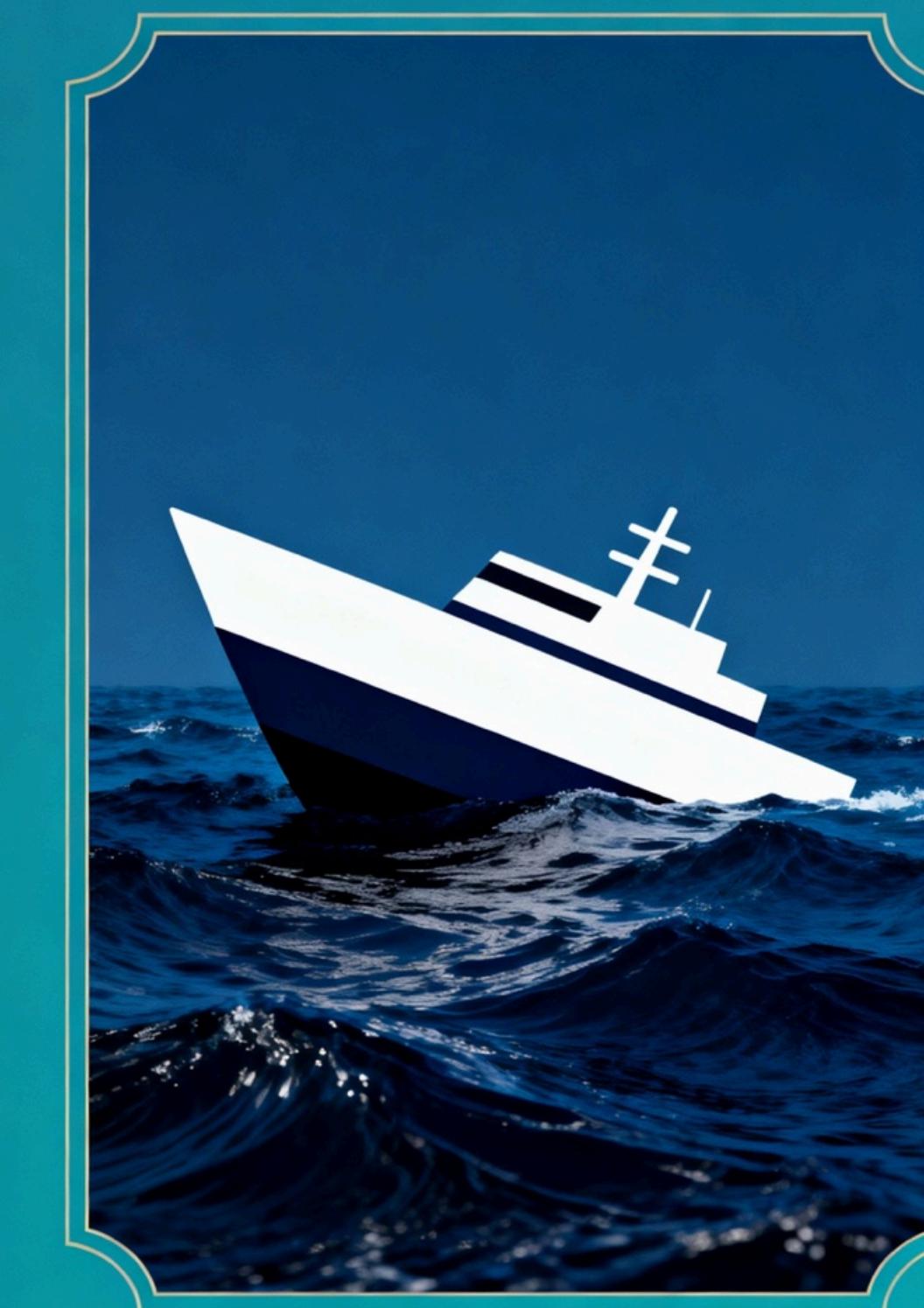
Hydrogen fuel cell
79%

Wind
20%

Solar
1%







OPEX





Weight

Challenge

from

35 Ton —→ to

17 Ton

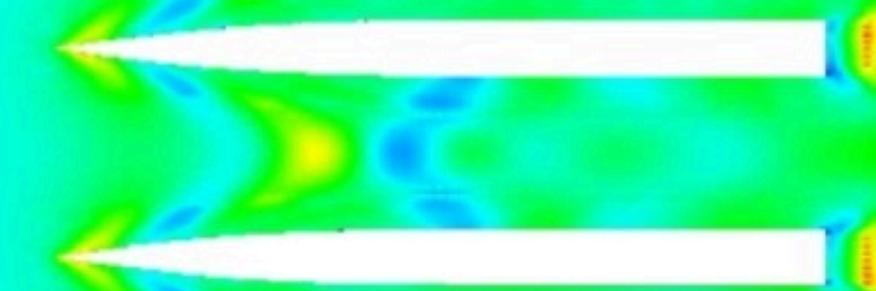




Hull Efficiency

Challenge

from
45 KW ————— to
15 KW



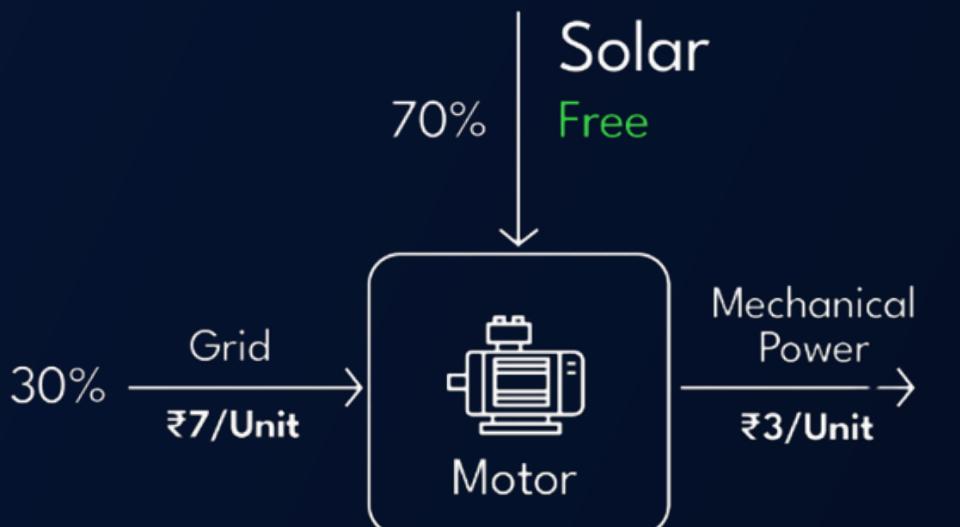
Diesel Boat



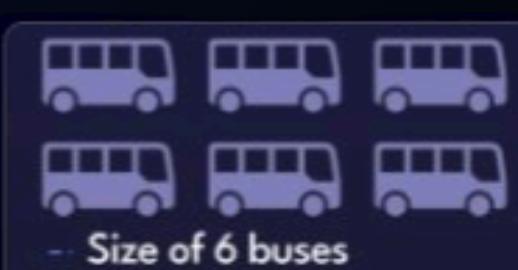
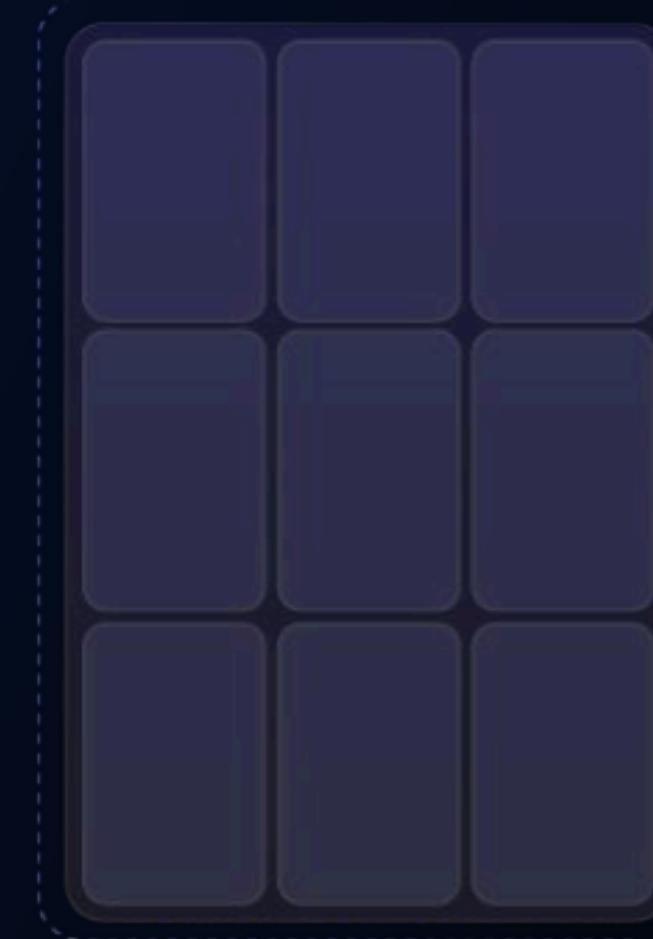
Electric Boat



Solar Electric Boat



5m x 15m



- Size of 6 buses
- 7m x 21m
- 20kW Solar Panel
- 80kWh Battery



ADITYA

India's First Solar Ferry



8+ years in operation

2.6 Crore+ rupees fuel money

money saved

30L passengers served

sevived

3.1 lakh+ litres of fuel saved

sevived

403 tonnes CO2 savings

trees saved

4200+

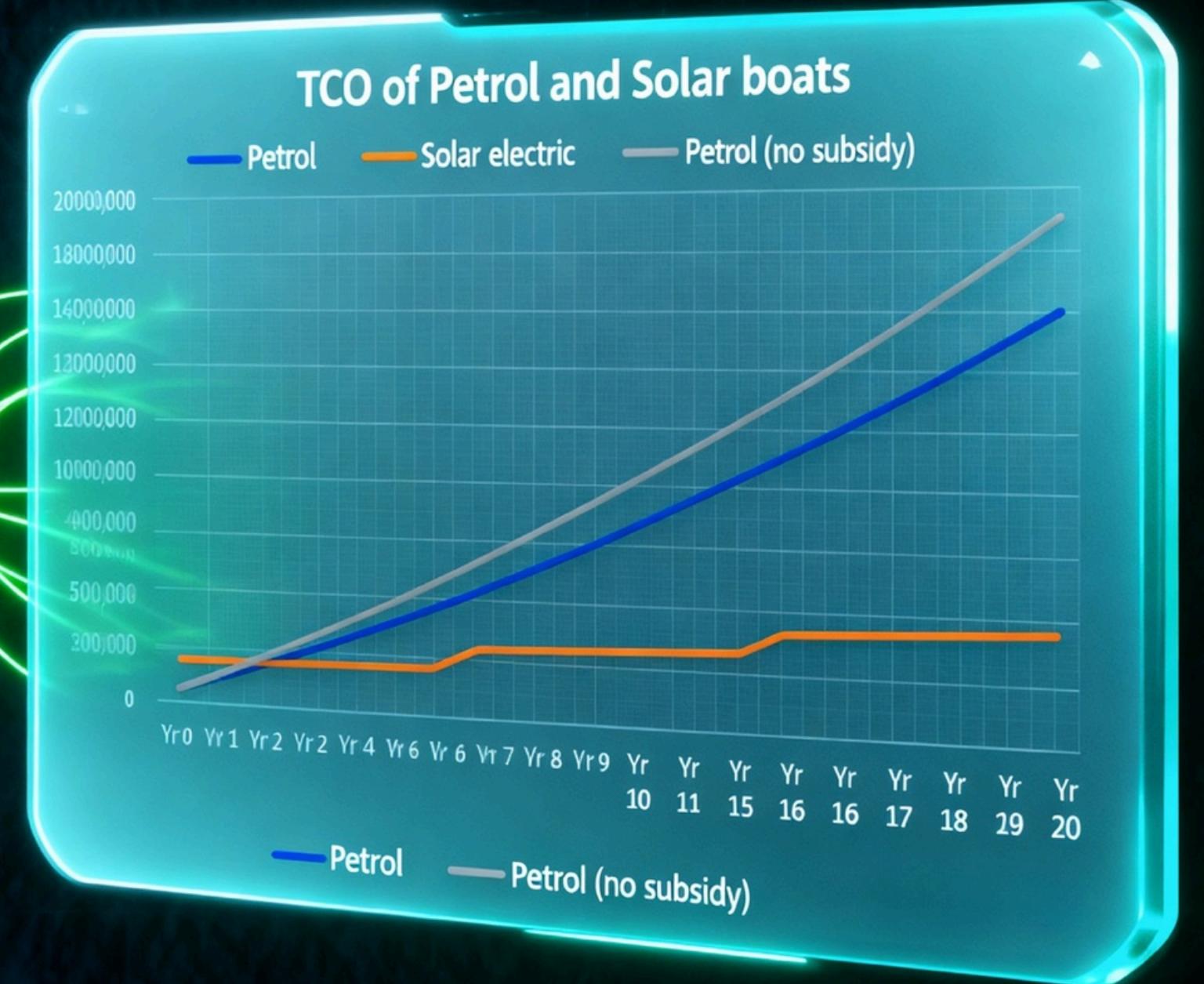
trees saved







Srav







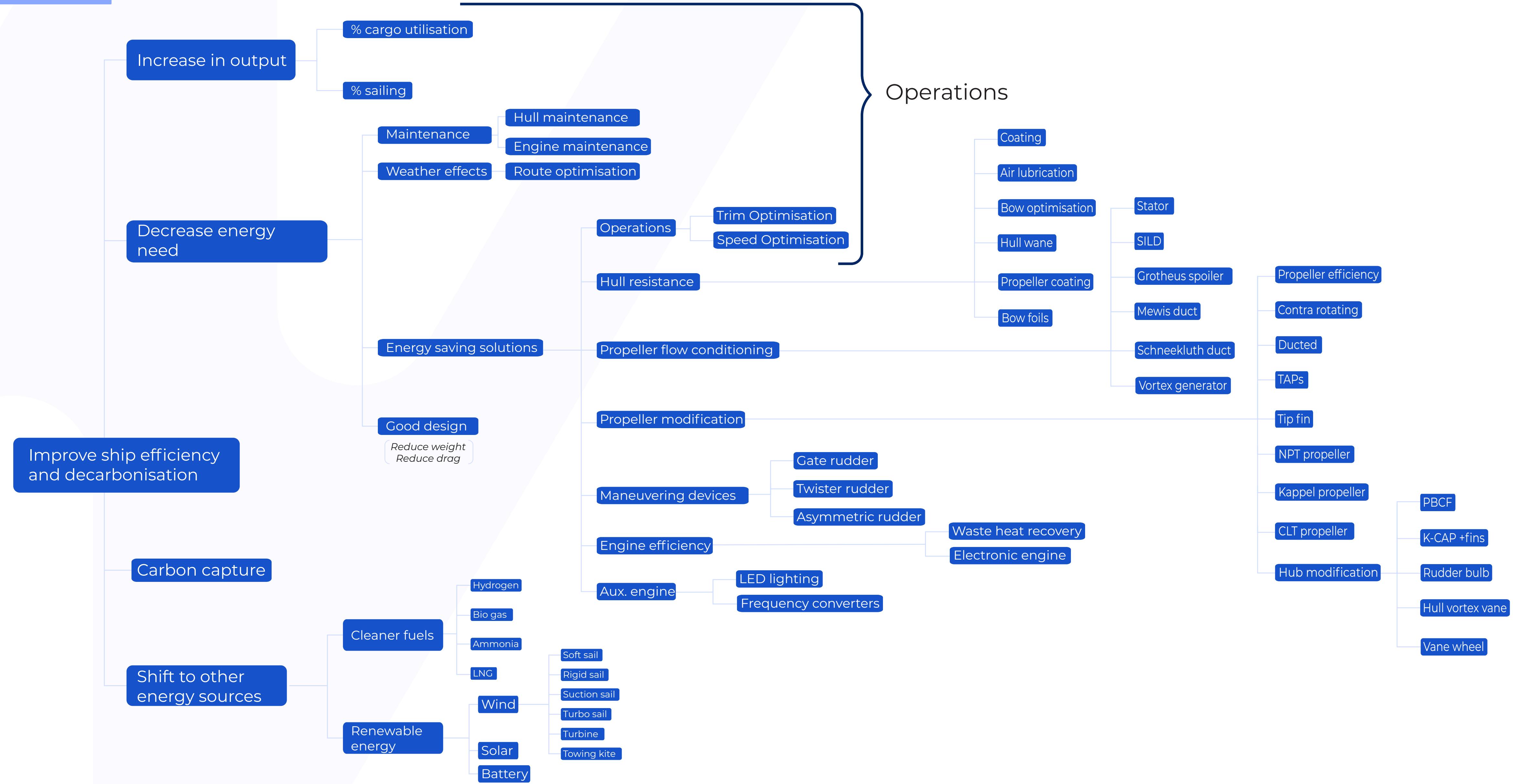








Decarbonisation Pathway





77 Total No.
of Boats

40 Boats in
Operation

37 Boats in
Construction



Locations

Canada
01

Israel
01

Maldives
01

Seychelles
01

India — 72
Kerala — 47
Uttar Pradesh — 06
Punjab — 04
Maharashtra — 03
Madhya Pradesh — 02
Odisha — 05
West Bengal — 01
Karnataka — 01
Tamil Nadu — 01
Himachal Pradesh — 01
Goa — 01

Applications

Tourism — 47
Passenger Transport — 19
Fishing — 06
Vehicle Transport — 02
Work Boat — 02

A dark, moody background image of ocean waves. The waves are rendered in a deep blue color, with bright, glowing blue highlights that create a sense of depth and movement. The overall atmosphere is mysterious and ethereal.

Oceans, Electrified.