# Marine transport emissions are 1.5 megatonnes per year

That's the equivalent of over 600,000 cars. There is huge potential to decarbonise.



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## Insights

- Emissions reduction potential varies according to available technology, but all energy efficiency measures will deliver savings
- Most technologies analysed require <\$1m Capital funding per instance
- Most technologies analysed show a reduction in operating costs

## Selected marine sector carbon reduction technologies

## Medium petrol powered boat (inboard) Electrification

- 24% emissions reductions
- 104,000 tCO<sub>o</sub>e/yr

### Medium petrol powered boat (outboard)

Electrification

- 37% emissions reductions
- 156,000 tCO2e/vr

#### **Ferry**

Hull coating



- 0-2.0% emissions
- reductions 0-20,400 tCO2e/vr

#### **Ferry**

Propeller optimisation

- 3.9-5.9% emissions reductions
- 40,800-61,200 tCO2e/yr

## **Ferry**

Hydrofoils



• 20,400-30,600 tCO2e/yr

## Commercial fishing boat

Hull coating



• 0-15,000 tCO<sub>o</sub>e/yr

## Available technology for energy efficiency and emissions reduction



Propeller optimisation reduces propulsion energy lost



Electrification where possible for greatest decarbonisation



Hydrofoils improve performance and energy efficiency



Biofuels and biofuel blends offer cleaner fuel



Hull coating improves energy efficiency across a variety of vessels



Hybrid drive requires higher investment, but a good expected ROI



Shore power will require investment to support dockside charging

## Key challenges to overcome in the marine sector













New build vs. retrofit

Mindset

Infrastructure

Operational lifecycle