GREENHOUSE GAS EMISSIONS

Reducing greenhouse gas (GHG) emissions is our #1 sustainability priority. In fact, we are producing ~15% less total* GHG emissions today than our peak historical year (2011), despite increasing capacity by roughly 38% since that time.

**As of YE2025*

We are tackling decarbonization with a comprehensive strategy that reduces our impact now, builds new capabilities and supply chains for the future and maintains flexibility in ship design as the world works together to find zero-emission energy solutions for all industries, including maritime.

Our decarbonization strategy has three areas of progress and innovation:

1 OPERATIONAL EFFICIENCY

With commercially viable low- and zero-emission fuels not yet available at scale, reducing fuel use is one of the fastest ways to lower our emissions. We are focusing on this by designing, planning and refining itineraries and navigational procedures to maximize fuel efficiency and minimize emissions, in addition to pioneering new energy-saving technologies and investing in fleet energy efficiency enhancements.

- **Itinerary Efficiency:** Our investment in seven corporate-owned port destinations in strategic locations close to several key home ports helps enable shorter travel time and distance. More energy-efficient routes and operational improvements and techniques such as weather routing and speed reduction where possible also contribute to a reduction in absolute GHG emissions while maintaining a superior guest experience.
- **Power Saver Packs:** We continue implementing Power Saver Packs that work together to reduce the energy required for onboard systems and services on each ship.
- **Air Lubrication Systems:** We continue installing Air Lubrication Systems to cushion the flat bottom of a ship's hull with air bubbles, which reduces frictional resistance and the propulsive power needed to drive a ship through water.
- **Shore Power:** We are expanding shore power capability to allow ships to "plug in" to shoreside electric power, where available, while in port rather than running their engines, which reduces emissions and noise in port.
- **Waste Heat Recovery:** We are identifying innovative ways to reuse energy from waste heat recovery, such as using heat generated by a ship's engine to make steam.

2 NEW TECHNOLOGIES AND ALTERNATIVE FUELS

We are focused on pioneering new technologies and alternative fuels, while working closely with companies, universities, researchers, NGOs and others to identify and scale sustainability solutions not yet readily available for the cruise industry.

- **Biofuels:** Since 2022, we have successfully tested several biofuels as a replacement for fossil fuels on a number of our ships, including trials using both liquefied bio-methane and residual biofuel.
- **LNG:** We pioneered liquefied natural gas (LNG) in the cruise industry in 2018, delivering immediate GHG reductions today compared with conventional fuels, and we now lead the industry with 11 LNG cruise ships in operation and seven more on order.
- **Technology Developments:** We have piloted maritime-scale battery technology and a methanol-powered fuel cell as well as are assessing carbon capture and storage technologies.
- **Other Fuels:** Through our key partnerships and Classification Societies, we are also assessing bio and e-methanol, bio-LNG, e-LNG and hydrogen as future low carbon fuel options for cruise ships. 100% of our ship engines are ready to be adapted for sustainable alternative fuels such as biofuels, green methanol and synthetic fuels when available at scale.

3 FLEET OPTIMIZATION

We are building larger, more efficient ships fitted with the latest energy-saving technologies while continuing to upgrade our existing fleet to operate more efficiently throughout its lifecycle.

- **New Ships:** Our seven new ships scheduled to join our global fleet through 2033 are 20%+ more efficient per passenger than the previous ship class. Our new ships are fitted with proven technologies including hull designs, high efficiency advanced air conditioning systems, LED lighting and smart energy management systems among others.
- **Ship Operations:** Several of our ships utilize Azipod® steerable propulsion systems, which help deliver greater maneuverability for improved fuel efficiency and reduced emissions.
- **Replacing Legacy Vessels:** We've also exited 29 older less-efficient ships since 2020.
- **Ongoing Maintenance:** Across our existing fleet, we are fine-tuning every aspect of engine monitoring in real-time to continuously find ways to improve operational performance. In addition to optimizing hull and propeller designs to minimize drag for energy savings, we are trialing systems to more regularly clean hulls of marine plaque and debris to improve hydrodynamics.

Princess Cruises EU Innovation Fund

In 2025, Princess Cruises secured EU Innovation Fund backing for Project INDIGO, a transformative retrofit that will equip a ship to run on low-carbon methanol paired with hybrid energy storage. Working with the ship's classification society, engine supplier and shipyard, the project will help shape future low-carbon fuel and hybrid propulsion standards and regulations.

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