

**Our Ocean Conference, Malta – October 6, 2017.** 

Pioneering the use of Liquefied Natural Gas (LNG) for the Cruise Industry

Speaker: Mr. David Dingle – Chairman, Carnival UK

Thank you for your invitation and the opportunity to share with you <u>Carnival</u> <u>Corporation & plc's efforts on pioneering the use of liquefied natural gas (LNG) for the Cruise Industry.</u>

First, I would like to provide you with an overview of our organization: Carnival Corporation & plc is the world's largest leisure travel company and among the most profitable and financially strong in the cruise and vacation industries. We have a portfolio of 10 dynamic brands that include nine of the world's leading cruise lines. We have operations in North America, Europe, Australia and Asia, and our portfolio features Carnival Cruise Line, Holland America Line, Princess Cruises, Seabourn, AIDA Cruises, Costa Cruises, Cunard, P&O Cruises (Australia) and P&O Cruises (UK), as well as Fathom, our immersion and enrichment experience brand.

Together, the corporation's cruise lines operate 103 cruise ships and visit over 700 ports around the world.

We know that climate change can seriously impact the ecosystems, communities and local economies we all depend on. Cruise travel like other travel options, produces greenhouse gas emissions and we are taking specific and proactive steps to reduce our carbon footprint. We have been actively participating in and contributing to the process of determining our industry's role in addressing climate change and we have publicly disclosed our carbon footprint since 2006. Energy is vital to running the facilities and amenities our guests enjoy on our ships while at sea and in port. Specifically, fuel is the primary source of energy consumed for the propulsion of our fleet and our on board hotel power requirements. Our shipboard fuel consumption contributes to more than 97% of our direct and indirect carbon emissions and is therefore the main focus to reducing our carbon footprint.

We at Carnival Corporation & plc are continuously working to reduce our air emissions and improve air quality by evaluating both established and emerging technological solutions. With less carbon and cleaner emissions, liquefied natural gas (LNG) is one of our solutions. Switching from marine diesel fuel to LNG provides many air emission benefits including:

- 0 Sulfur Dioxide emissions
- 25% reduction in Carbon emissions
- 85% reduction in nitrogen oxides
- 95-100% reduction in particulate matter

We began the implementation of our LNG vision by first using LNG in port. In 2015, as a pilot project, AIDAsol was the first cruise ship in the world to be supplied with power by an LNG Hybrid barge while in Hamburg, Germany.

We have now expanded our LNG capabilities to supply LNG directly to two additional ships at port, AIDAprima in 2016 and AIDAperla in 2017. AIDAprima became the first cruise ship in the world with a dual-fuel engine that can be powered by LNG. Both ships switch to LNG while in select ports in Europe, with LNG supplied by trucks on the pier.

Having delivered on our vision of using LNG in port, we now look forward to launching the first of seven new LNG cruise ships on order. These new vessels will be part of the first generation of cruise ships to be fully powered by LNG. Pioneering a new era in the use of low carbon fuels, these new ships will use LNG to generate 100 percent of their power both in port and on the open sea – an innovation that will significantly reduce exhaust emissions to help protect the environment and support our sustainability goals. These seven ships, with delivery dates between 2018 and 2022, will be built by leading German and Finnish shipbuilders Meyer Werft and Meyer Turku.

As part of our LNG strategy, we also signed a framework agreement with Shell Western LNG B.V. to supply marine LNG to our ships. We will use Shell's infrastructure in cruise ports to refuel with LNG. Shell will be our supplier for the fuel to power our first fully LNG-powered cruise ships. We look forward to a productive partnership with Shell, which has the experience and shared commitment to quality, safety and operational efficiency needed to help us bring this innovative LNG initiative to life.

We know that the transition to LNG is no simple task and the demands- technical or otherwise – associated with the implementation make it something of a milestone both for Carnival Corporation and the wider cruise industry.

For additional details on our carbon footprint, status on our LNG cruise ships and our sustainability performance, I invite you to please view our latest sustainability report and website at:

www.Carnivalsustainability.com