

MEDports Association Green Transition Seminar

# Green Transition and Innovations in Maritime Transport Initiatives and Experience from the Cruise Industry in Marseille

**Jean-François SUHAS**

President of Marseille Provence Cruise Club

Chairman of the Development Board, Port Authority of Marseille Fos

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# BIG PICTURE – THE GREEN TRANSITION OF CRUISING



## Energy innovations

- **Liquefied Natural Gas (LNG)**  
Elimination of PM, -25% of CO<sub>2</sub>
- **Scrubbers**  
Reduction in sulphur emissions
- Sail-powered cruise ships
- Hybrid propulsion (auxiliary battery)



## Optimization of sailing

- Reduction of friction (air lubrication, painting)
- Route management
- **Lower speed**
- Manoeuvring with MGO

## 60Hz shoreside power (cold ironing)



- **Mitigation of air pollution and noise disturbance** during cruise calls (direct impact on the quality of the port environment and residents)
- Available in about **15 ports** worldwide today for cruise ships

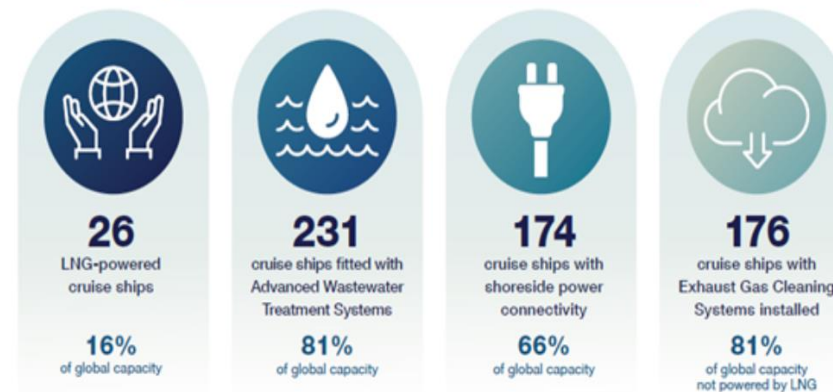
## Life onboard & destination stewardship



- **Green means of transportation ashore:**  
seaborne shuttles, electric buses, segways ...
- **Flow regulation**
- Elimination of single-use plastics
- Waste management
- Water management

## CLIA's targets

BY 2027, THE CLIA MEMBER FLEET WILL INCLUDE



**\$22  
BILLION**

Invested in new energy efficiency technologies and cleaner fuels

**40%  
TARGET**

Reduction in rate of carbon emissions by 2030 (compared to 2008)

# #1 – THE MARSEILLE PROVENCE CRUISE BLUE CHARTER

- **Goals:** To mitigate the emission of GHG and air pollutants, to accelerate the energy transition of cruise ships calling in Marseille and to preserve the local environment
- **Tool:** A binding agreement signed by cruise lines calling at Marseille, which includes more stringent rules than the current regulation and anticipates the creation of the SECAMed zone
- **Rules of the charter:** 4 commitments to follow while calling at Marseille =



1. Use of Maritime Gas Oil **with 0,1% of sulphur** (or equivalent means: LNG, scrubbers...) upon entry into the port's regulatory zone



2. **Imperative use of shorepower** when available



3. Scheduling of LNG-powered ships cruise calls and support of the development of a local service



4. **Low-speed manoeuvring** (10 knots max.) within the pilot zone

- **Enforcement :** constant monitoring by the Harbour's Master and the Pilots. Any breach of the rules must be reported to the Maritime Affairs

# #1 – THE MARSEILLE PROVENCE CRUISE BLUE CHARTER



1st signatures during the *Blue Maritime Summit*  
(Marseille, 17th October 2019)

## Cruise lines



## Public authorities



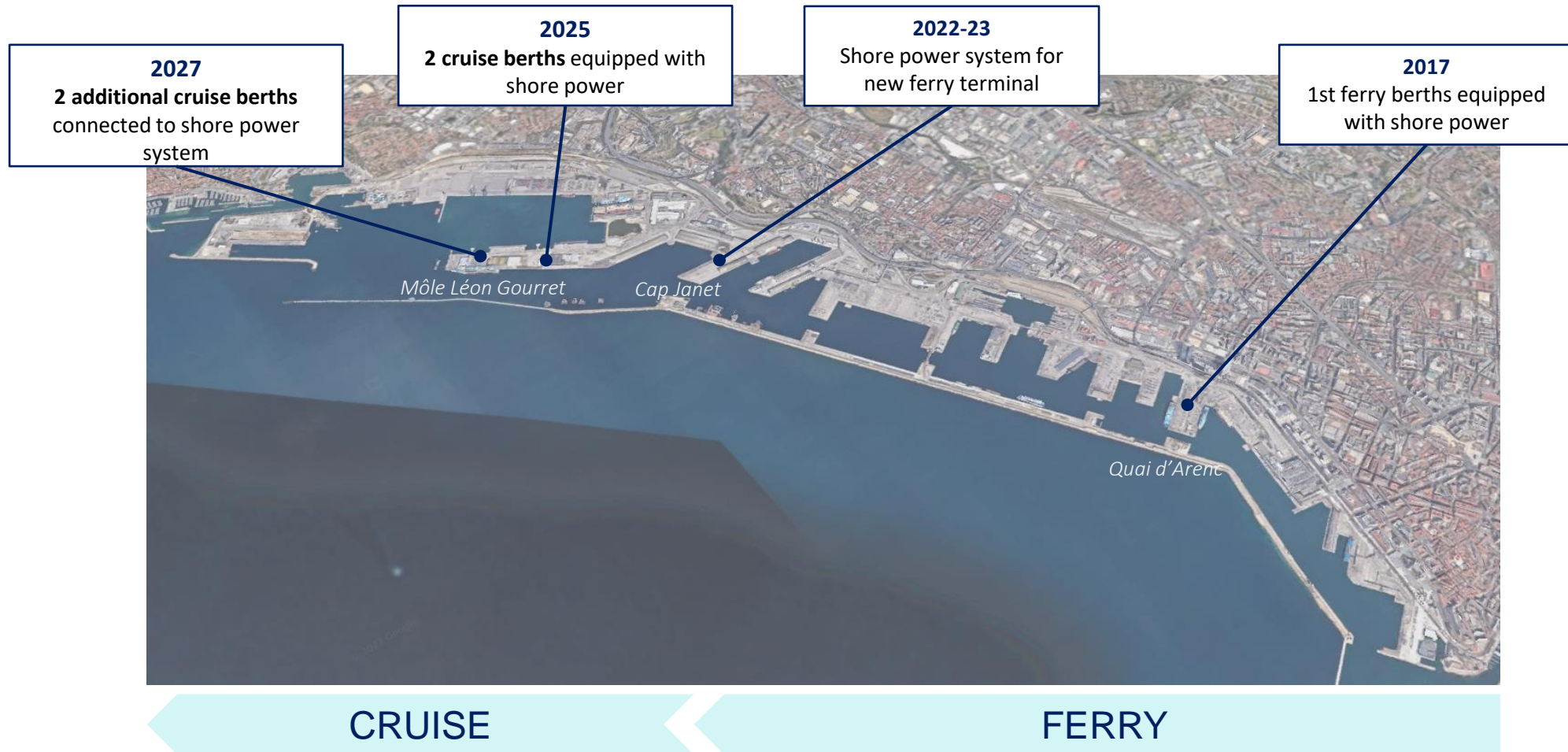


## #2 – SHOREPOWER IN MARSEILLE



- **CENAQ program** = *Connexion Electrique des Navires A Quai*, supported by the French State and local authorities
- **Goals:** to cut down the emissions of air pollutants and GHG + to reduce noise disturbance for people living near the port area
- **From ferries to cruise ships:** shore power system already operative for ferries since 2017. Innovation needed to scale up the technology to cruise ships: higher demand in power + frequency conversion required (50Hz → 60Hz)
- **Marseille = among the 1st ports in the Mediterranean** to offer shorepower solutions to cruise ships. About 15 ports only feature shorepower connection worldwide
- **Green electricity:** partnership with ENEDIS + development of a photovoltaic plant within the port area

## #2 – SHOREPOWER IN MARSEILLE



# #3 – PROMOTING MARSEILLE AS A LNG HUB



- **LNG terminals of Fos Cavaou et Fos Tonkin:** LNG-bunkering service. Construction of a bunker barge by Total Energies for CMA CGM-owned container ships

- **Trajectory of cruising towards LNG in Marseille:**

- Handling of the first newbuild LNG-powered cruise ships upon their maiden voyage (*Costa Smeralda* and *AIDAnova*)
- From 9% of passengers handled by LNG-powered ships in 2019...up to 20% in 2021
- 2 LNG-bunkering ship-to-ship operations of *Costa Smeralda* (4th May and 15th June 2020)
- Agreement for LNG supply between Total Energies and MSC Cruises (2021)

- **Reducing the environmental footprint of cruise calls:**

- Elimination of nearly all SO<sub>x</sub> and PM emissions
- 20-25% decline in CO<sub>2</sub> emissions
- 80% decline in NO<sub>x</sub> emissions



# #4 – MAPPING & MONITORING CRUISE-RELATED AIR POLLUTION

- **Long-term partnership for data exchange** between the Port authority (GPMM) and AtmoSud (association recognized by the local authorities for air pollution monitoring)
- **SCIPPER EU program** (*Shipping Contributions to Inland Pollution Push for the Enforcement of Regulations*)
  - Improving methods to measure and monitor ship emissions and to model the spread of smoke plumes
  - Measure campaigns at the exit of chimneys, with remote "sniffer" drones and on-board systems
  - Assessment of the contribution of cruise ships to the overall air pollution + compliance with regulation
  - 2 out of 5 campaigns conducted in Marseille, in 2019 and 2021
- **"Port Vert" project carried out with the Marseille-Fos Maritime & River Association (UMF)** to develop new environmental KPI





# A NEW STEP TOWARDS GREEN TRANSITION OF CRUISING IN MARSEILLE!

## Blue Maritime Summit #2 – Thursday 20th October 2022

Grotte Cosquer – Villa Méditerranée, Marseille

SAVE THE  
DATE!

- **Event co-organized by:** Marseille Provence Cruise Club, the Marseille Fos Maritime and River Association, the Port of Marseille Fos and the Marseille shipowners committee
- **Main goals:**
  - Follow up of the commitments undertaken with the signature of the Blue Charter
  - Definition of an annual reduction cap of cruise ships' emissions until 2025 (implementation of cold ironing for cruise ships in Marseille)
  - Signing of a new Blue Charter, more restrictive, with a West Mediterranean scope + extended to biodiversity issues. Charter to be co-written by the French State, institutions, Marseille Provence Cruise Club and private operators. Expected starting date = January 2023.
- **Program:** conferences and workshops about green port strategy, biodiversity, regulatory frameworks, operators' initiatives...
- **Languages:** English/French