WORLD INNOVATION:
CMA CGM LNG-Powered Vessels from 2020
CMA CGM has chosen LNG for its future 22,000 TEU Ships

“We have made the bold decision to equip our future 22,000 TEUs vessels with a technology firmly focused on the protection of the environment. By choosing LNG, CMA CGM confirms its ambition to be the a leading force in the industry in environmental protection by being a pioneer in innovative and eco-responsible technologies.”

Rodolphe SAADE

LNG vessel- November 7th 2017
LNG Propulsion: technological breakthrough for the protection of the environment

- Liquefied Natural Gas (LNG) is an efficient solution for reducing polluting emissions

- Benefits of Liquified Natural Gas:
  - Up to 25% less CO2
  - -99% sulphur emissions
  - -99% particulate matters
  - -85% nitrogen oxides emissions

*Efficiency index compared to fuel-powered ships

LNG vessel- November 7th 2017
A reflection under way since 2010

2010
First LNG project with DSME shipyard and Bureau Veritas.

2012
Project with CSSC shipyard, BV, Engine and LNG tanks providers.

2013
Study to equip already existing feeders with LNG engines.

2015
Participation to PERFECT project to build a large capacity containership powered by a gas turbine along with electric engines in partnership with DNV GL, GTT, ABB, Caterpillar and OMT.

2016
Signing of a partnership with ENGIE for a technical study on the use of LNG as a fuel in the maritime industry.

2017
3-year MoU with TOTAL to provide multi-energy solutions; Participation to the new LNG platform in close partnership with the French Gaz Association.

LNG vessel- November 7th 2017
LNG: a disruptive choice

- The result of a 7 years R&D project in cooperation with shipyards, engine makers, ports and many other partners

- A technology we will apply on 22,000 TEUs containerships for the first time in the history of the shipping industry

- LNG engine by CMA CGM implies a limited number of changes in vessels design:
  - Dual fuel solution for propelling and auxilliary engines
  - Tanks capacity: 18,000 m³

LNG vessel- November 7th 2017
CMA CGM Fleet: a portfolio of technologies protecting the environment

- CO₂ emission - energy efficiency
- Ocean preservation
- Air quality
CMA CGM Fleet: a carbon footprint among the best in the industry

The CMA CGM fleet’s carbon efficiency

- 462 ships at the forefront of technology
- A wide range of volume capacities
- A young fleet becoming more environmentally friendly
- From 62g to 25g CO2/TEU/Km
- Containershipping is more than ever the cleanest mode of transport

LNG vessel- November 7th 2017
CMA CGM Fleet: a carbon footprint among the best in the industry

-50% CO2 emission since 2005

-30% by 2025
CMA CGM Group: pioneers in environmental responsibility

- Bamboo-floor containers:
  - Up to 2 tons of fuel saved per day
  - Up to 6 tons of CO2 saved per day

- Fast Oil Recovery System: a pollution management technology allows hydrocarbons in the fuel bunkers to be quickly recovered without having to go through the hull
CMA CGM Group: committed to the protection of the environment

Gold Note by ECOVADIS

› CMA CGM is part of the top 1% of the world's top suppliers
› The recognition of the Group's CSR policy by an influential organisation

LNG vessel - November 7th 2017
Shipping the Future

LNG vessel - November 7th 2017