



Toward Decarbonization: The Future of Marine Energy and Propulsion **Marine Board of the National Academies – 17 November 2021**

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BE A STRATEGY FOR TOMORROW



SUSTAINABILITY

Responsible growth driven by
stewardship, innovation,
customer/partner collaboration
&
investment in the livelihood of our
planet, its people and their
communities

3 PILLARS of SUSTAINABILITY

- **ACTING for PEOPLE**
- **ACTING for PLANET**
- **ACTING for FAIR TRADE**

17/11/2021

BEYOND COMPLIANCE: CMA CGM'S ALIGNMENT WITH THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS: ANCHORING SUSTAINABILITY IN STRATEGY AND GOVERNANCE



DURING COP 25, CMA CGM JOINED THE UNITED NATIONS GLOBAL COMPACT AND ENDEAVOURED TO COMPLY WITH 10 PRINCIPLES REVOLVING AROUND RESPECTING HUMAN RIGHTS, INTERNATIONAL LABOUR STANDARDS AND ENVIRONMENTAL REGULATIONS AS WELL AS FIGHTING CORRUPTION.

GROUP'S SUSTAINABILITY PRESENTATION

17/11/2021

A NEW ERA, A NEW CLASS.

Introducing a generation of 32 LNG-Powered vessels



BETTER WAYS **CMA CGM** LNG PROPULSION ACTING TODAY TO COMBAT CLIMATE CHANGE & IMPROVE HEALTH OF COMMUNITIES AROUND THE GLOBE



The pioneering choice of CMA CGM Group aimed at improving air quality globally in our communities, and driving the energy transition to decarbonization

CMA CGM is the first to use LNG propulsion on its ultra large containerships

32 LNG-powered vessels by the end of 2022: 9 x 23,000 TEUs vessels ; 17 x 15,000 TEUs vessels ; 6 x 1,400 TEUs

44 LNG-powered vessels by the end of 2024

Environmental performances: today, LNG is the most advanced solution when it comes to preserving air quality

A world innovation

The result of 7 years of R&D and the success of a longstanding cooperation with our partners to design this new mode of propulsion

A new generation of vessel/concentrated of innovations and technologies – RNG & e-Methane Compatible

The creation of a dedicated global bunkering supply chain

One of the first steps towards achieving the Group's goal of neutrality carbon by 2050

Up to 20% CO2 reduction (TTW)

Preparing long term energy transition : our LNG vessels are compatible with Biomethane allowing up to 70% CO2 emission reduction

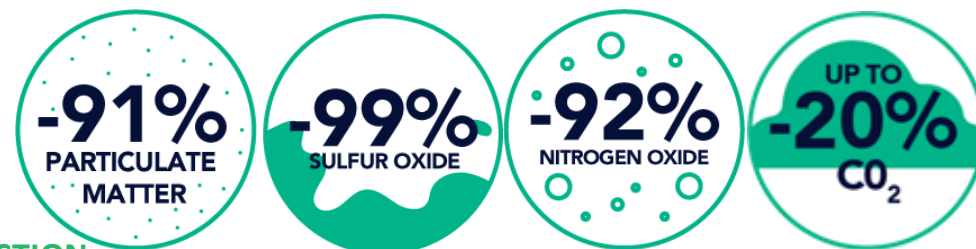
A PIONEERING CHOICE TO DRIVE THE ENERGY TRANSITION OF MARITIME TRANSPORT

CMA CGM WILL BE THE 1st TO USE LNG PROPULSION ON ITS ULTRALARGE CONTAINERSHIPS

- LNG is the best solution available today in terms of energy transition
- LNG vessels are compliant with Liquid BioGas (made from biomethane, allowing up to 70% CO₂ emissions reduction) and synthetic gas (capturing atmospheric or industrial CO₂)

ENVIRONMENTAL PERFORMANCE

- **IMPROVING AIR QUALITY**
 - by eliminating almost all polluting emissions
 - exceeding international air quality regulations
- **BATTLING GLOBAL WARMING with CARBON REDUCTION**
 - up to -20% CO₂ and -14% considering the methane slip impact
- **LEADING THE INDUSTRY IN LONG-TERM ENERGY TRANSITION to RENEWABLE & SUSTAINABLE FUELS**
 - LNG vessels are compliant with Liquid BioGas (made from biomethane, allowing up to 70% CO₂ emissions reduction) and synthetic gas (capturing atmospheric or industrial CO₂)



32 LNG-POWERED VESSELS BY 2022 and GROWING TO 44 IN THE FLEET BY 2024

- 9 x 23,000 TEU vessels, 5 of which are already in service
- 23 x 15,000 TEU vessels, 6 will be dedicated to the U.S. market. And arriving on the West Coast in 4Q of 2021
- 6 x 1,400 TEU vessels, 5 of which have already been delivered to Containerships and are in service
- 6 x 12,000 TEU vessels to be deployed in 2024

To know more :

<https://www.lng-powered-cmacgm-vessel.com>

CMA CGM LAUNCHES THE FIRST LOW-CARBON SHIPPING OFFER BY CHOOSING BIOMETHANE



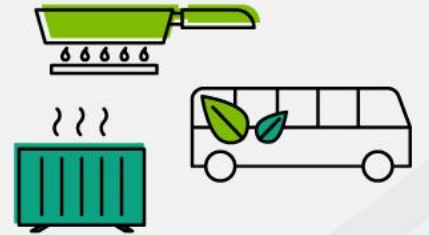
Organic waste and agricultural
plant residues from
European agricultural lands
U.S. partnership in development



heated in a METHANIZER
producing a biogas more
respectful of the planet



BIOMETHANE



**Powering
EVERYTHING**
from household appliances
to public transportation



Guarantee of
Origin (GO)

**CMA CGM : supporting
the production of
12,000 TONNES OF BIOMETHANE**



Equivalent to
250 000
kms at sea for one year

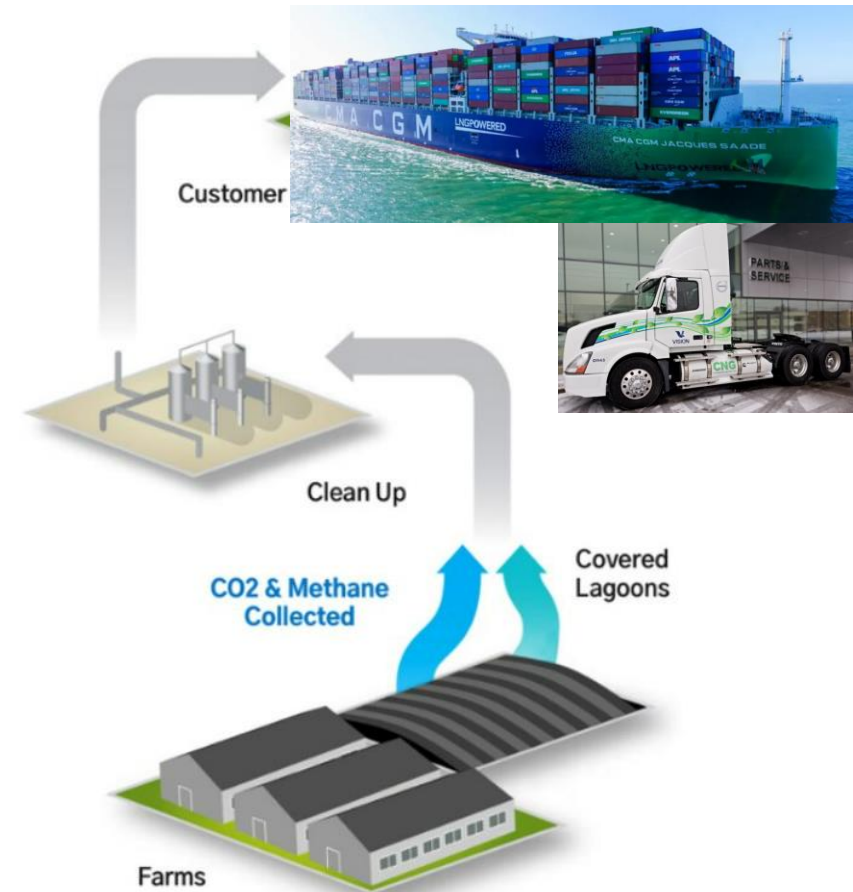
Resulting in
-67% of
carbon emission

A new milestone on
our journey to become
CARBON NEUTRAL
by **2050**

BETTER WAYS RENEWABLE NATURAL GAS PROJECT FROM U.S. FARMS TO U.S. GRID

CMA CGM

- Development of a U.S. renewable LNG/RNG bunkering option for LNG-fueled vessels. Goal to advance production/delivery of biomethane from U.S. Farms to the U.S. gas grid and to a future liquefaction and bunkering site.
- Project is underway. EY study of U.S. renewable gas market to be delivered Dec. 2021. Working group to map gas pipeline/future bunkering infrastructure.
- Opportunity exists to identify fueling locations in Southern California for CNG/Biomethane blend fuel for 13 CEVA trucks operating within Port of L.A. in 2023
- Timeline: 2021 – 2024
- Benefits to CMA CGM: Supports CMA CGM roadmap to carbon neutrality. Advances production renewable gas in U.S. and development of bunkering infrastructure



ENERGY OBSERVER.org

Partnership to experiment,
test and develop

Next generation of zero/low
marine energy/fuel solutions

Hydrogen, solar, tidal and
wind power.

Goal Advance the use of
hydrogen as a zero-
emission fuel source for the
shipping industry



GLOBAL COMMITMENT and ACTION ACHIEVE CARBON NEUTRALITY BY 2050



ACTING TODAY TO REDUCE OUR CARBON FOOTPRINT

- Priority to LNG/RNG to power its future ships
- Advancing production of renewable fuels, which will represent 10% of our bunkering by 2030
- Objective to operate 70% inland shipments on barges or trains by 2025
- Cold ironing program to continue to address air quality & carbon reduction.

ACTING FOR TOMORROW WITH CONTINUOUS RESEARCH & DEVELOPMENT to design/build zero-emission hydrogen-powered ships with our partners

FOUNDING PARTNER OF INTERNATIONAL COALITION TO WORK ON TOMORROW'S ENERGY

WHAT IS NEEDED IN THE U.S. TO EXPEDITE ENERGY TRANSITION IN MARINE SHIPPING?

- Infrastructure – getting LNG/RNG and other alternative fuels bunkering location. to advance the transition.
- Changes to the REC/RINs definition of marine fuels / transportation fuels
- Dedicated Maritime Fuel Investment and Subsidy Program to achieve goals
- Need to ACT today so that the industry can transition tomorrow.

To know more :

<https://www.lng-powered-cmacgm-vessel.com>

IS ALL ABOUT "CORPORATE SOCIAL RESPONSIBILITY" or "SUSTAINABILITY"
or "ENVIRONMENT SOCIAL AND GOVERNANCE"



"We are paving the way for a maritime transport industry where both economic competitiveness and growth will go hand in hand with sustainable development and the fight against climate change [...] and we will go further to build an even cleaner industry"



B E T T E R W A Y S

MAKING SUPPLY CHAINS MORE SUSTAINABLE EVERY DAY

