



## THE PORT OF MARSEILLE FOS

*A GREEN SMARTPORT TO DEVELOP  
THE BLUE ECONOMY*

# Marseille Fos a multipurpose port

One port, two harbors



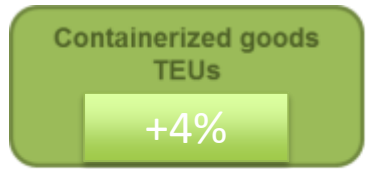
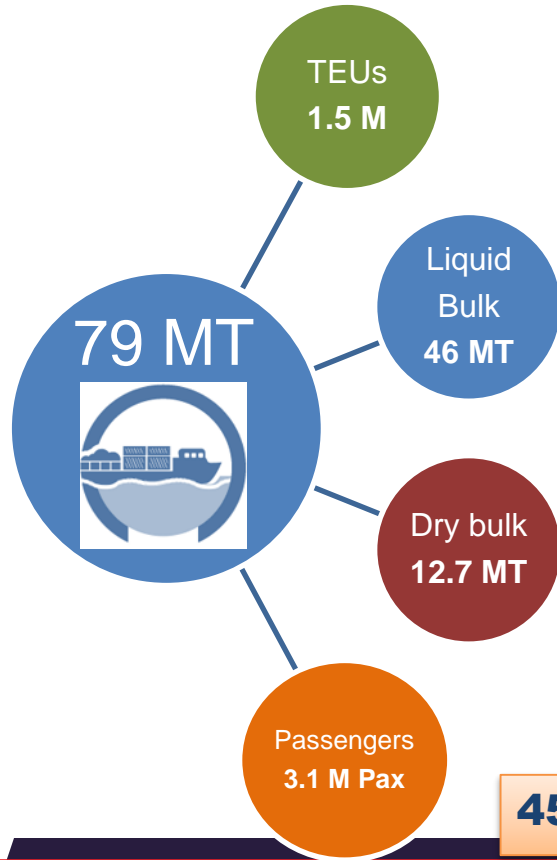
Western Harbors around Fos:  
the Global Port (10 000 ha).

**Activities:** Containers, Solid bulk, Cars, Petro-chemical complex, Energy, Industry & Logistics Zone

Eastern Harbors in Marseille:  
the Shortsea Port (400 ha).

**Activities:** RoRo, ConRo, Cars, Breakbulk, Passengers (cruise & ferries)

# Marseille Fos 2019 vs. 2018



**Cargo +2%**  
**Cars +23% (Q2)**



**LNG +5%**  
**Biofuels +22%**



**Chemical & food +11%**



**45,000 direct and indirect jobs** (Source: INSEE)

**3.5 billion euros of added value**

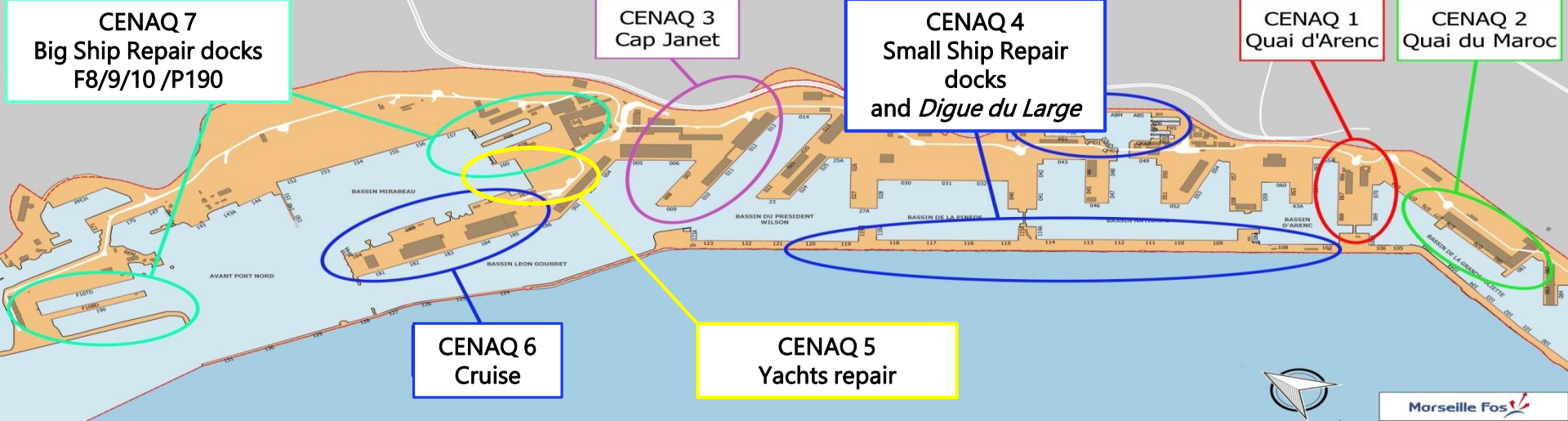
# Onshore power supply – “CENAQ”

## Marseille

- Long experience on low voltage for longer calls (up to 1 MW) and also for small ship repair (400 V and 50Hz), representing 7 to 8 GWh/year.
- Marseille - 1<sup>st</sup> Port in Mediterranean to plug commercial ships on a regular basis: since Jan. 2017 for the passenger ferries to Corsica.



**CENAQ 2024 project: A >40M€ investment plan has been decided by the port authority to expand the CENAQ solution to international passenger ferries, shiprepair and cruise until 2024.**



Localisation of the CENAQ2024 cold ironing projects in the port of Marseille





# Cold ironing deployment – NEXT STEPS

➤ It is proposed a phasing in 3 stages. The main technical issues are 1) when needed, the frequency conversion from 50 to 60 Hz to match that of the ships and 2) the power levels called.

Phases	Targets	Number of targeted ships	Characteristics of the connections				Number of berths to equip	Nb of simultaneous connections	Total est. investment
			Voltage	Frequency	Estimated maximum power per ship	Possible break on connection			
1	Corsica Linea / ships dedicated to the Corsican public service	1 to 4	High	50 Hz	2 MW	No	3 at Quai du Maroc	1 to 2	2 M€
1	Ships in small ship repair or long-term parking	Tous	Low	60 Hz	1 MW	Yes	1 mobile converter	1	0,5 M€
2	Ferries of international lines	5	High	50 Hz	3 MW	No	2 to 3 at Cap Janet	1 to 2	3 M€
2	Ships in industrial ship repair	All	High	50/60 Hz	6 MW	Yes	F8, F9, F10, P190	1 to 2	12 M€
3	Cruise ships	12 to 15	High	60 Hz	12 MW	No	2 to 3 at MLG	1 to 2	18 M€



**THANK YOU FOR YOUR  
ATTENTION**

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