

OPS in the Med: A tool for more sustainability and resilience

The MEDports Association

A thriving Association gathering the ports authorities in the Med basin

Enhancing ports cooperation in Med

6 MAIN GOALS

ACHIEVE



A well balanced association between the northern and southern borders of med

EXAMINE



issues related to port activities and maritime sector

INFORM



its Members and seek common positions

PROMOTE



MED interests on the international scene

FACILITATE



The creation of maritime trade links in MED area

IMPROVE



The world visibility of the MEDports

EST.
SINCE
2018

4 BENEFITS



World wide Med promotion

Meeting & networking sessions organisation



Dialogue with decisions makers

Knowledge & best practices sharing



OPS in the Med: A tool for more sustainability and resilience

Potential new ECA Zone in the Med

When sustainable endeavours match environments requirements

- Green transition, green deal, green port, green behaviour, green objectives...
- Perspective of the implementation of an **ECA zone**: 1/3 of the global shipping crossing the Med impacted,
- Study of DNV GL: By 2050, the total electricity generating capacity for industrial ports to **increase more than tenfold**,
- **Renewables** could account for at least 70% of their total electricity generation, compared to 5% today.



The rising number of OPS projects

West Mediterranean realizations

- Barcelona, Spain:
 - Connection points: 2 (Yachts)
 - Maximum Power capacity: 2MVA
 - Holder of the OPS system: Terminal operator
 - Source of electricity: national grid
 - Pillar of its strategic plan
- Valenciaport, Spain:
 - Leading the Power-to-Ship working group of the WPCAP since 2019
 - Medium voltage electricity (20kV) generated by 3 substations
 - 2 ongoing European projects with the Fundacion Valenciaport



Valencia

The rising number of OPS projects

West Mediterranean realizations

- Algeciras, Spain:
 - Studies started in 2014
 - 4 ferry berths to be connected in Tarifa and Algeciras
 - Budget of €30 millions
- Malta Freeport, Malta:
 - 1 connecting point, LNG to Power Floating Storage
 - Max. power: 2.4 MW
 - Lead time of the project of OPS in 2 terminals of 24 months
 - Evaluation cost of €12.5 millions



Marsaxlokk

The rising number of OPS projects

West Mediterranean realizations

- Toulon, France:
 - First Med port to electrify all its wharves
 - 6.500 hours/year to be electrified
 - 80% of emission time erased
 - Source of power: hydrogen, photovoltaic and national grid
- Sète, France:
 - Realization of the “Green Harbour” project: Hydrogen power supply
 - By 2023, 30% of free-carbon passengers and Ro-Ro calls



The Port of Bastia

- Bastia, France:
 - Wharves electrification studies started in August 2020

The rising number of OPS projects

East Mediterranean realizations

- Igoumenitsa, Greece:
 - ECOPORTS-ESPO certified
 - ALFION project for OPS and charging stations for vehicles to reduce the carbon footprint
- Koper, Slovenia:
 - Participation in the European ELEMED program
 - Ro-Ro berths

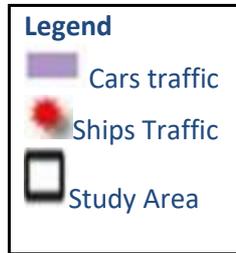


The Port of Igoumenitsa

The OPS and non-EU ports

The OPS in the Southern Mediterranean

- La Goulette, Tunisia (OMMP): feasibility study for a better port-city integration,
- Morocco (ANP): Cooperation agreement with the MASEN (Moroccan Agency for sustainable energy), project of reducing the emissions by 125mt.

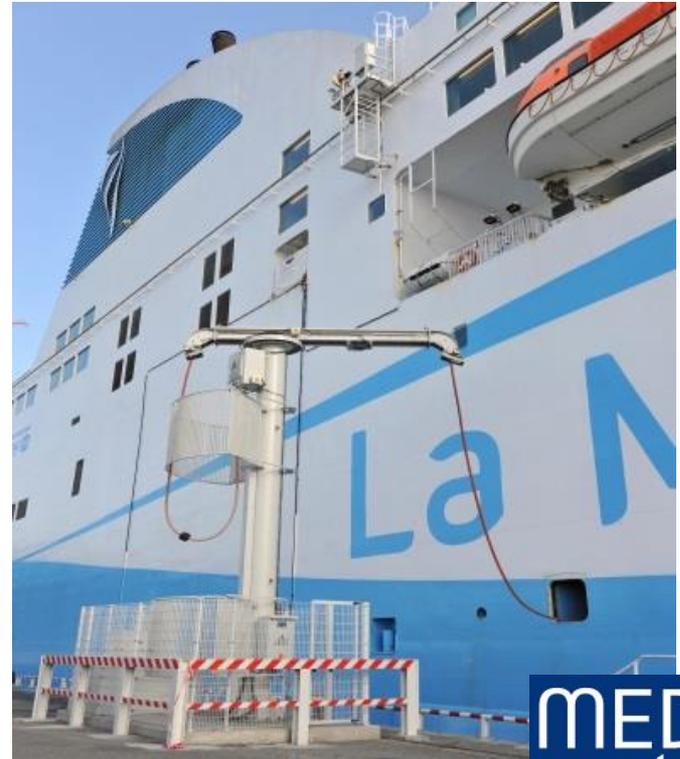


Inventory Area of air pollutant from the port of La Goulette

Marseille-Fos, pioneer of the OPS

First shore-to-ship power supply

- 2015: Installation of first OPS plants,
- 2017: Regular connexions with calling ships of La Méditerranéenne and Corsica Linea,
- In 2020, 6 connectable ships (ferries and RoRo) and 3 connected points,
- In 2022, all the berths equipped,
- 2023: 50% of ships supplied.
 - Max. power: 1.44 MW
 - Green-certified national grid
 - Objective: Onsite-produced photovoltaic energy.



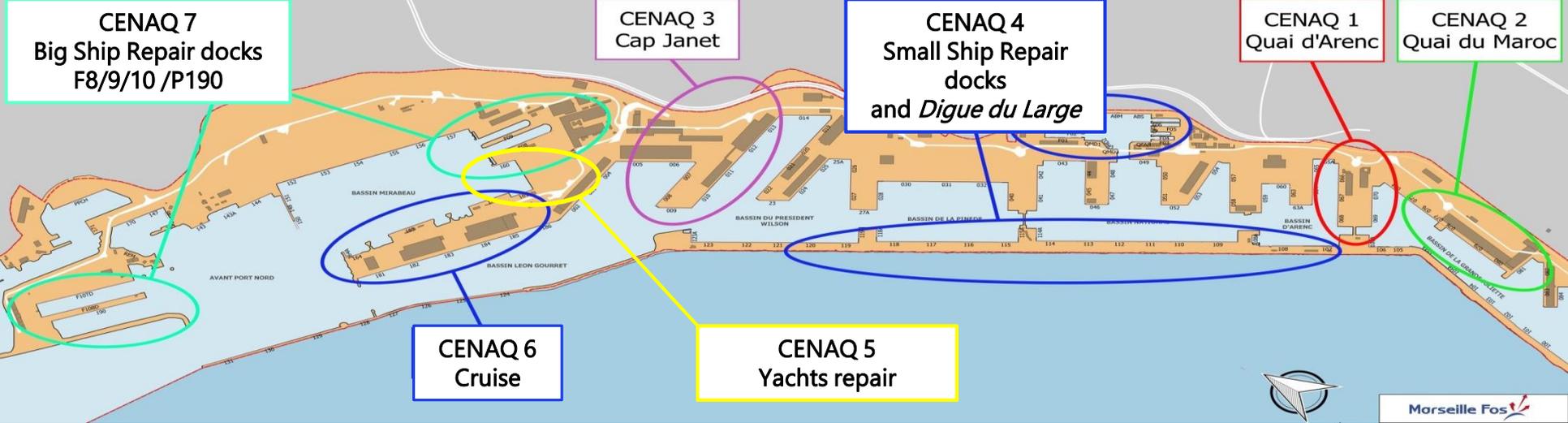
Onshore power supply in Marseille – “CENAQ”

(Connexion Electrique des Navires A Quai)

- 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 - 1st Port in Mediterranean to plug commercial ships on a regular basis: since Jan. 2017 for the passenger ferries to Corsica (every day from 8am to 6pm).



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



Localisation of the CENAQ2024 cold ironing projects in the port of Marseille.
 10 MW to be provided by photovoltaic panels on hangar roofs.



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€



The necessity of cooperation to go further

Cooperation, the only way to achieve successful further OPS

- Need of active cooperation
 - Better harmonization
 - Better interoperability
 - Common interests
- Opportunities to go further
 - EALING project and others,
 - This kind of webinar
 - Roles of the partnerships
- How?
 - Knowledge exchange,
 - Common projects,
 - Regional inclusion



THANK YOU

For your attention

