The Port of Barcelona and OPS

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The Port of Barcelona currently has two OPS connections for mega yachts in our Marina Barcelona 92.

The first one is operational since 2014 with 4MVA supply to 6 kV.

The second was delivered on August 2020, with 3.5MVA supply to 6 kV.
OPS future development at the Port of Barcelona

- **90 million € investment** for global electrification (the whole port in 2050)
- **Container vessels and ferries connected in 2022** with temporary equipment (Best and Trasmediterránea)
- **OPS facilities for cruise terminals in 2026** (after connection to the national grid to obtain 80Mw)
World Ports Climate Action Program

The World Ports Climate Action Program (WPCAP) initiative was launched in 2018 to address climate change.

Member ports are working together in reducing greenhouse gas emissions through collaborative actions and joint research.

Among other objectives, the initiative aims to accelerate the development of power-to-ship (P2S) solutions in ports. This task depends on the Working Group 3 of the WPCAP.
WPCAP MEMBERS

Port de Barcelona
Hamburg Port Authority
Port of Long Beach
The Port of Choice
Port of New York & New Jersey
PORT of Vancouver

Port of Antwerp
PORT OF GOTHENBURG
Le Havre Port
Port of Los Angeles
Port of Rotterdam
YOKOHAMA-KAWASAKI INTERNATIONAL PORT CORPORATION

WPCAP
WORKING GROUP 3 (POWER TO SHIP) PROGRESS

- Collected state of the art analysis and overview of P2S installations (68 ports)
- Analyzed: infrastructure, configuration, usage, connecting time, emission reductions and policy instrument
- Made knowledge available graphically through a tool based on Google Earth
- Tool assists decision making by ship owners, infrastructure providers, other ports
The ports that have been part of the survey are as follows:

- Port of Rotterdam
- Port of Zeebrugge
- Port of Ystad
- Port of Vancouver
- Port of Seattle
- Port of New York & New Jersey
- Port of Long Beach
- Port of Los Angeles
- HAROPA- Port of Le Havre
- Port of Kristiansand
- Port of Hamburg
- Port of Halifax
- Port of Gothenburg
- Ports of Stockholm
- Port of Barcelona
- Port of Kemi

These ports have P2S solutions in place. The sample of 16 ports is considered only partially representative taking into account that approximately 65 ports worldwide declare they have OPS solutions.
## 2. OPS equipment

This section presents the information on the OPS equipment currently implemented:

<table>
<thead>
<tr>
<th>Port of Rotterdam</th>
<th>Port of Zeebrugge</th>
<th>Port of Ystad</th>
<th>Port of Vancouver</th>
<th>Port of Seattle</th>
<th>Port of New York &amp; New Jersey</th>
<th>Port of Long Beach</th>
<th>Port of Kristiansand</th>
<th>Port of Hamburg</th>
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Bar chart showing the distribution of equipment across various ports.
5. Environment

This section presents only the results of emission reductions specifically notified by ports.
6. Recommendations (1)

- The main barriers for ship owners to adapt their vessels so they can connect to the OPS system

Barriers to deploy OPS systems

- Cost: 37%
- RoI: 4%
- Retrofitting downtime: 4%
- Lack of incentives: 15%
- Competition with other solutions: 11%
- OPS availability (ships and ports): 4%
- In-transit ships: 4%
- Regulation: 3%
Google Earth tool– IAPH website

INFORMATION SOURCES

• Detailed WG3 Survey, answered by 16 ports
• Supplemented with cross-furthest referenced information on ports:
  - IAPH World Ports Sustainability Program (WPSP)
  - European Alternative Fuels Observatory (EAFO)
  - DNV GL Alternative Fuels Insight portal
  - Annex submission by Friends of the Earth to the IMO’s 73 Marine Environment Protection Committee (MEPC 73)

Total: 68 ports
Google Earth – IAPH website

Click here to access OPS Google Earth tool
Thank you
www.portdebarcelona.cat