

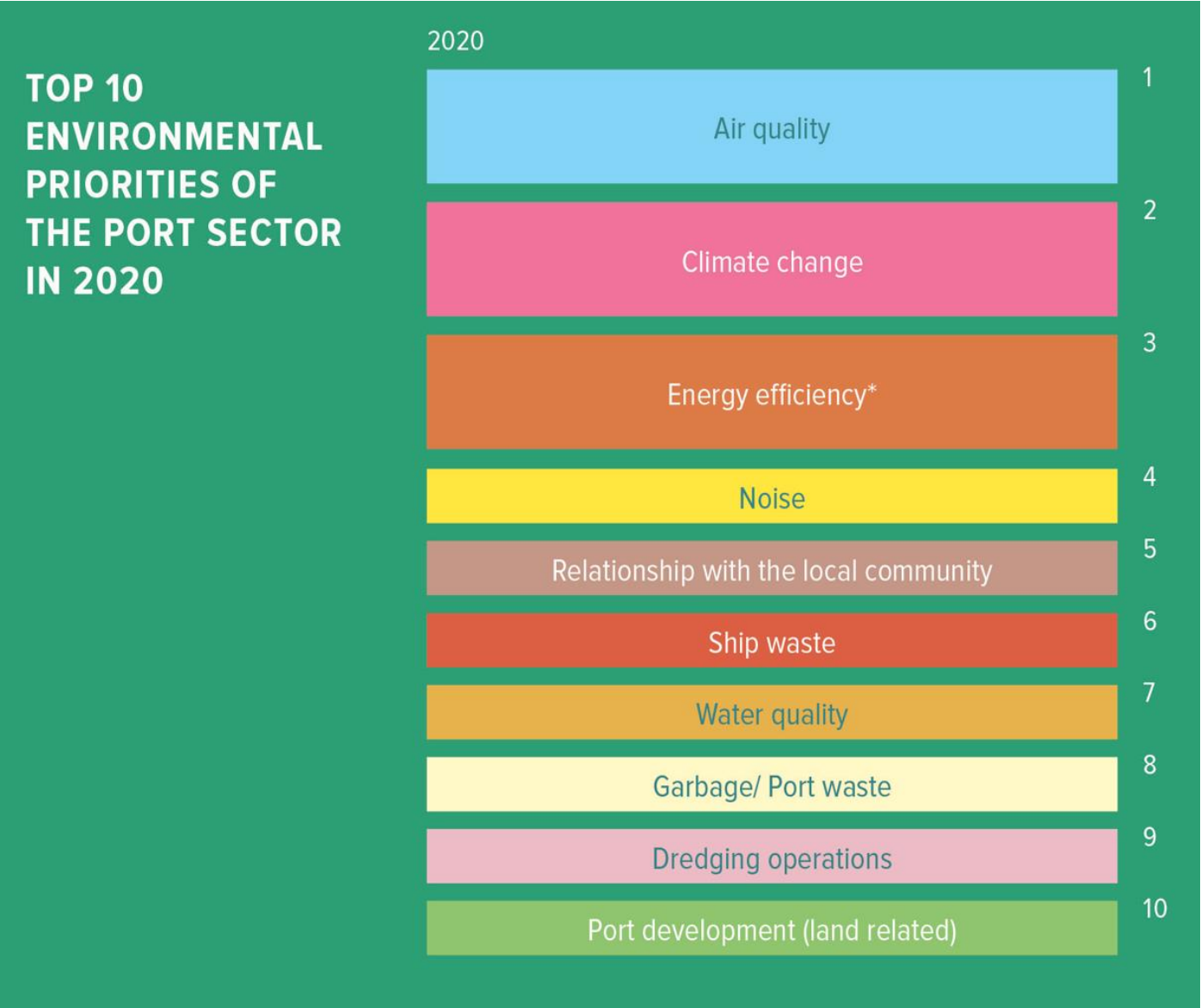
European Sea Ports Organisation (ESPO) – charting the way forward on OPS

EALING OPS

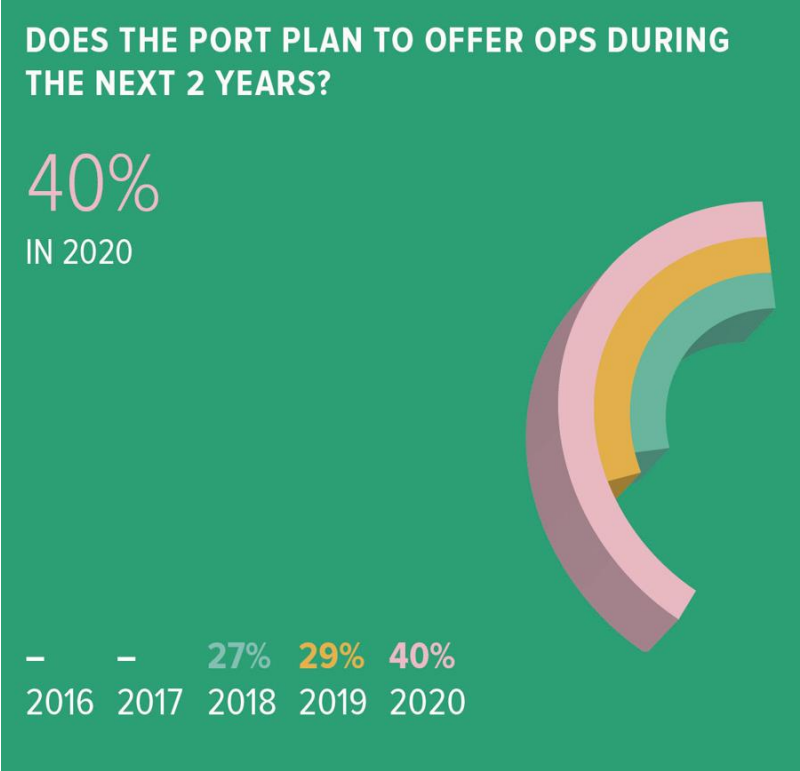
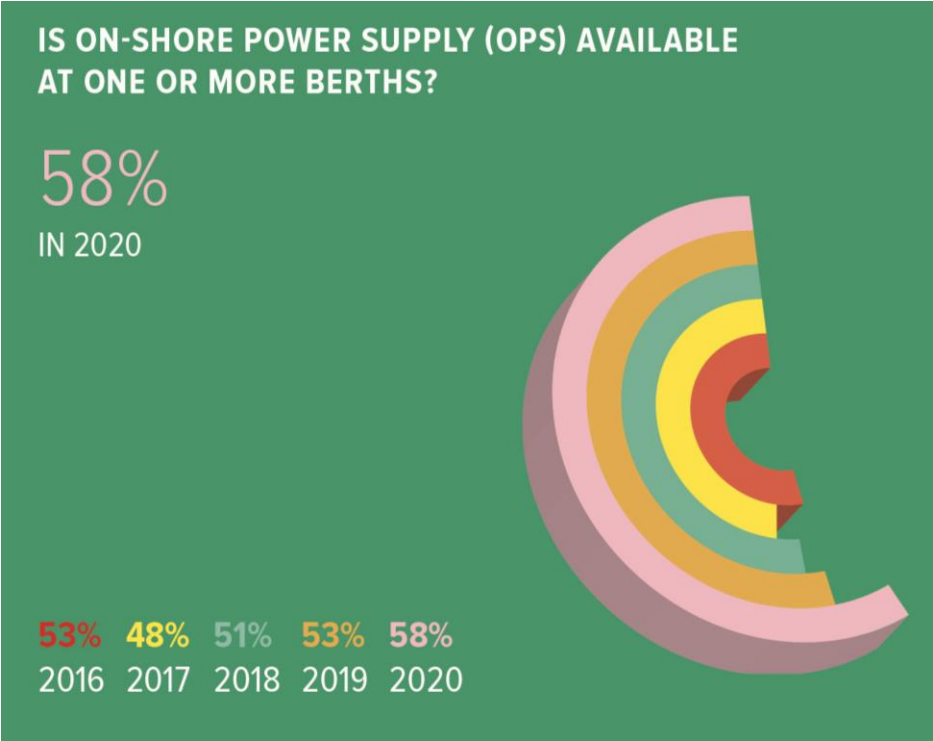
Thursday 25 February 2021



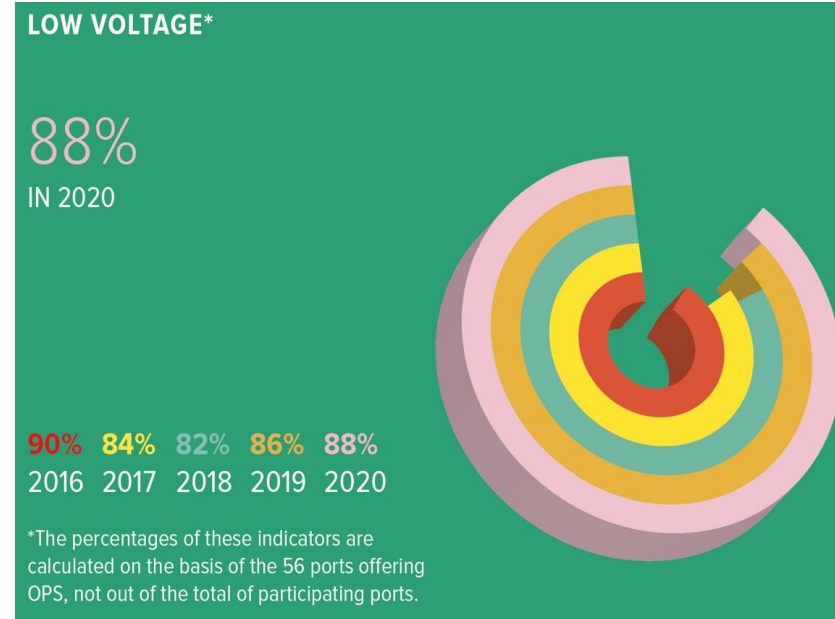
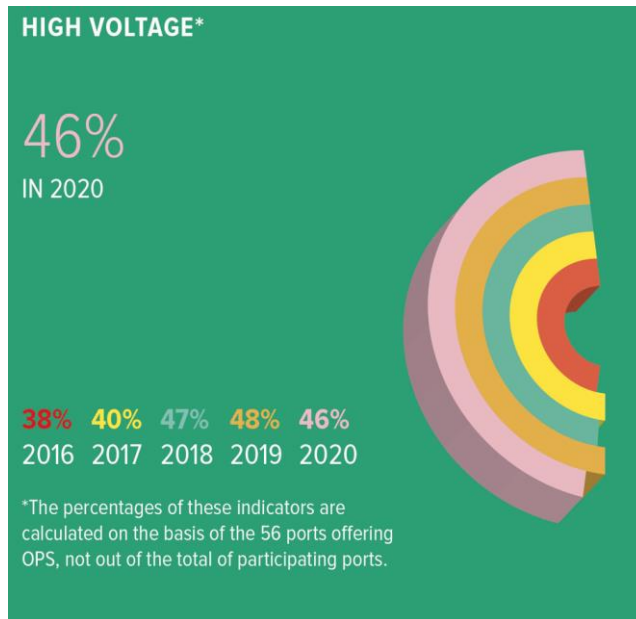
Reducing emissions from shipping in navigation and at berth is a key priority for European ports



European ports provide OPS currently, and are looking to deploy more OPS in the coming years



No one type of OPS provided across European ports



Barriers that need to be addressed



- Lack of renewable electricity and accessible energy grid: REDII
 - Especially an issue in the case of electricity production in outermost regions (could partially be addressed via offshore energy and local green electricity solutions)
- Lack of financial incentives: Energy Taxation Directive
- Huge cost and price gap creating uncertainty around environmental effectiveness/feasibility
 - TEN-T Core ports currently struggling to find money for OPS.
 - Estimated cost of introducing OPS at most berths in a large European port estimated to equal three times total annual budget of the port.
 - Need to consider not only up-front installation costs but also running costs, especially cost of the subscription to the electrical grid when the OPS installation is not used.
- Incompatibility of existing funding:
 - CEF and Recovery and Resilience Fund (RRF) not compatible. OPS will be funded under RRF, meaning a port could not ask for CEF in the coming years.
 - Question if subsidies by MS are allowed under state aid rules if OPS is made mandatory
- Technical complexity and safety concerns

Significant difference in CO₂ savings depending on grid – ETH Zürich



Table 4

Overall CO₂ reduction potential of SSE compared to total shipping emissions. Averages are weighted by the amount of emissions per ship category.

	CO ₂ reduction potential if electricity is supplied from	
	...national grids	...renewable electricity
Passenger ships	4.9%	9.1%
Combination carrier	4.9%	9.1%
Ro-pax ships	4.3%	7.1%
Container/ro-ro cargo ships	4.2%	6.4%
Chemical tankers	2.7%	4.6%
General cargo ships	2.4%	3.7%
Vehicle carriers	2.3%	3.7%
Gas carriers	2.1%	3.3%
Ro-ro ships	2.0%	3.1%
Bulk carriers	1.7%	2.9%
Oil tankers	1.5%	2.6%
Container ships	1.2%	2.1%
Refrigerated cargo carriers	1.1%	2.0%
LNG carriers	0.9%	1.3%
Other ship types	1.9%	2.9%
Average	2.2%	3.7%

Significant investment needed to overcome barriers and deploy OPS in European ports



- Before the introduction of the European Green Deal, the ESPO Port Investment Study found that European ports' investment needs amount to 48 billion EUR between 2018-2027.
 - This translates to around EUR 5 billion annually.
- According to the Global Maritime Forum based on analytical work conducted by UMAS and ETC (as cited in the T&E briefing on the EU ETS):
- To decarbonise shipping, **land-based infrastructure and production facilities for low carbon fuels** (hydrogen production, ammonia synthesis, storage and bunkering, etc.) **make up around 87% of the total investment needs.**
- Only 13% of the investments needed are related to the ships themselves.
- These investment needs in ports must be reflected in any fund intended to help the maritime sector decarbonise, with a sufficient share of total revenues generated by a maritime EU ETS going to investments in infrastructure in European ports.

Criteria that matter for ports when deciding whether to provide OPS



For ongoing projects, we see a mixed picture:

- Container segments (around 8000-16000 TEU) are often interesting due to the OPS readiness of the ships (ESI, 2021)
- Ferries and smaller port vessels can also be relevant due to frequency of calls and lower power demands
- Berths near the city or in areas with air quality issues sometimes favour OPS
- Limited space available in many ports and on quays – a lot of ports were not designed for electricity supply at berth (converter and transformer need space)
- Some segments are seemingly not relevant at this stage due to their business models, use of alternative solutions, or lack of OPS readiness (bulkiers, tankers)

An intelligent approach to OPS



Consider OPS where:

- It would minimise greenhouse gas emissions, air pollution and noise from vessels at berth
- There is a minimum use of berths by vessels (50%)
- Vessels spend a minimum amount of time at berths (not less than five hours)
- Vessels are of a certain age (able to retrofit or recent/newbuilds)
- There is a balance between commitments from vessels and ports through coalitions, stimulation at user side, or obligations to use facilities
- There are direct project subsidies and user contributions available to finance OPS projects
- There is sufficient physical space in ports
- OPS is viewed alongside/can be combined with other equivalent alternative solutions
- It is possible to provide OPS through either mobile, fixed, or floating installations or batteries

An intelligent approach to OPS

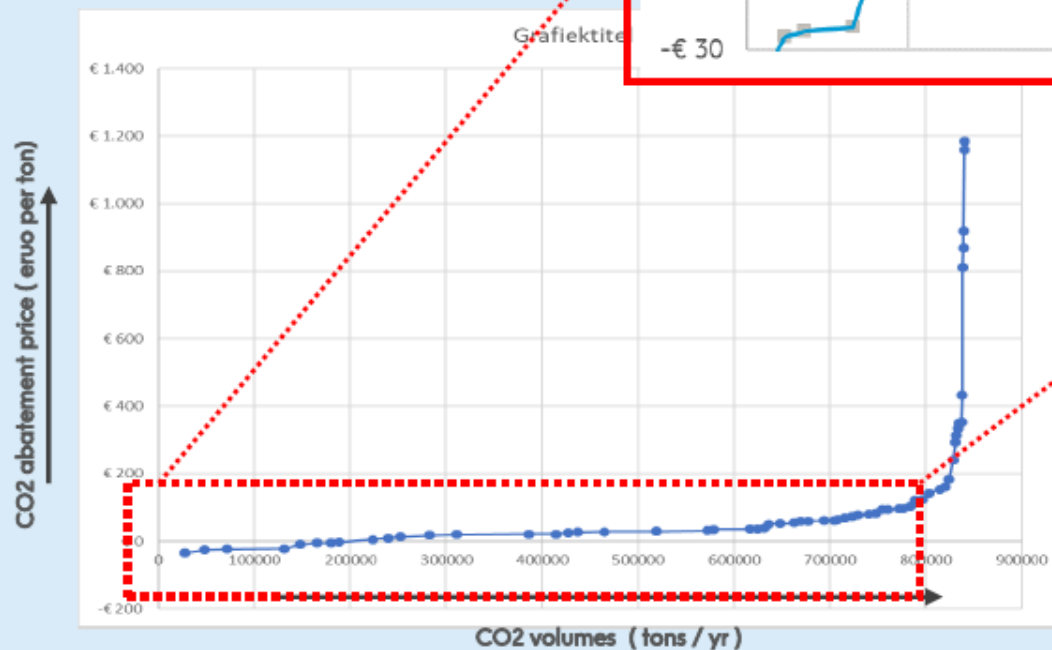


- **Apart from these general criteria for when OPS would make sense, the choice to deploy OPS is often the result of individual port circumstances.**
- **Important to note that when introducing criteria, we run the risk of creating an unlevel playing field and carbon leakage**
- -> Not suitable with a one-size fits all.
- -> Keep the door open for alternative and complementary solutions.
- -> Need to apply broad definition of OPS that could be combined with alternative equivalent solutions.
 - Should consider all possible solutions for the “supply of electricity to vessels at berth”: fixed, mobile installation at quay and floating installations should be allowed.
 - Power from the grid / from generator (shelters) / from batteries should be allowed (case of electrical vessels).

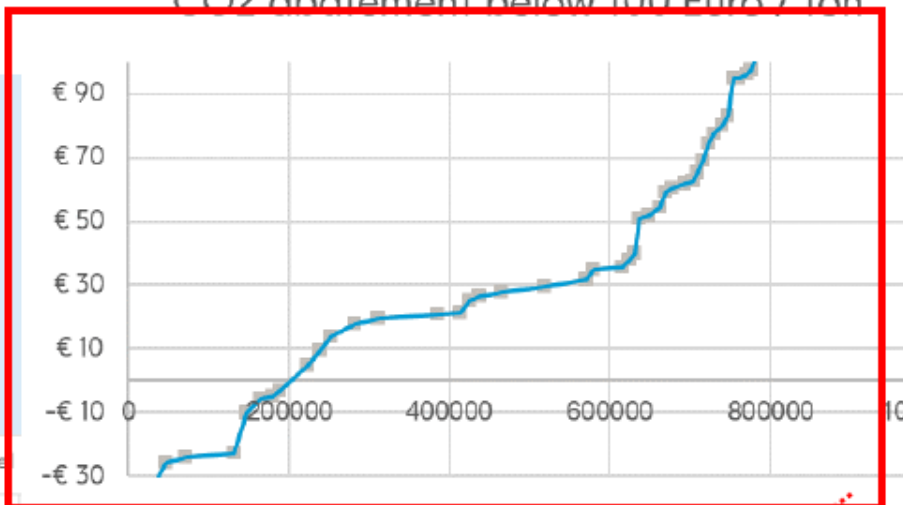
An intelligent approach to OPS



Shorepower is not a competitive solution for all quays



CO2 abatement below 100 Euro / ton



approx
80% for less
than 100
Euro / ton

How European ports view OPS as part of the solution



- European ports are committed to help greening shipping, including through the deployment and use of OPS where it can reduce greenhouse emissions in an effective manner
- ESPO favours a goal-based approach to reducing shipping emissions at berth, and technology-neutral requirements
- The decision to deploy OPS by ports needs to adequately consider individual port circumstances
- ESPO supports OPS alongside other alternative equivalent solutions that deliver effective emission reductions, and calls for onboard performance standards.

How European ports view OPS as part of the solution – ensuring their successful deployment



- Criteria developed as part of an intelligent approach should focus on minimising shipping GHG emissions at berth.
- OPS must be based on the fundamental principle of the polluter pays and commitments to use OPS.
- Differentiated approach – No size fits all for ports/berths.
- Significant future investments in maritime sector will need to be dedicated for OPS infrastructure in ports.
- A level playing field must be established with other fuels, including a permanent tax exemption for OPS.
- Access to renewable electricity must also be ensured in order to avoid shifting emissions upstream.



Thank you!

valter.selen@espo.be

