



The perspective of European ports on shore-side electricity and alternative fuels

Valter Selén

*Senior Policy Advisor for Sustainable Development, ESPO
European Maritime Safety Agency (EMSA), 20 October 2022*

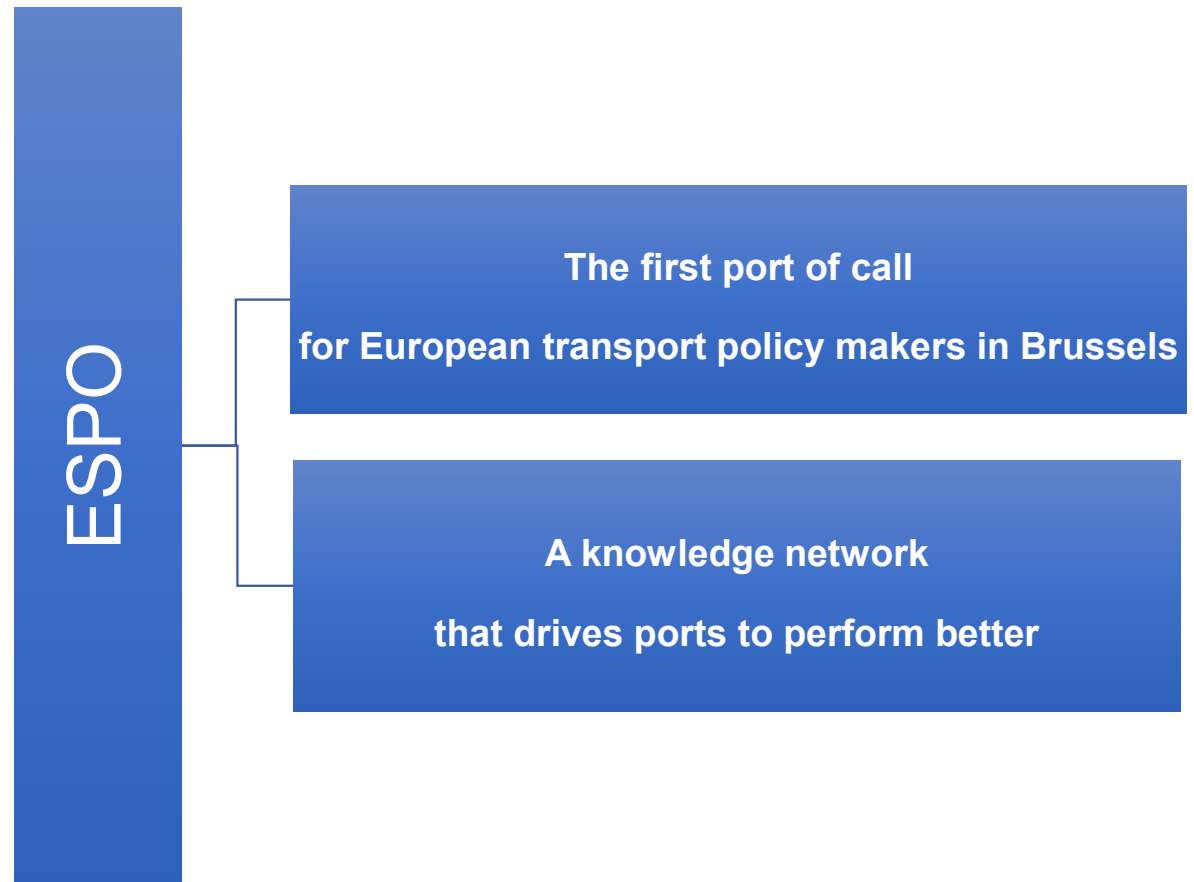


Introduction: European Sea Ports Organisation (ESPO)

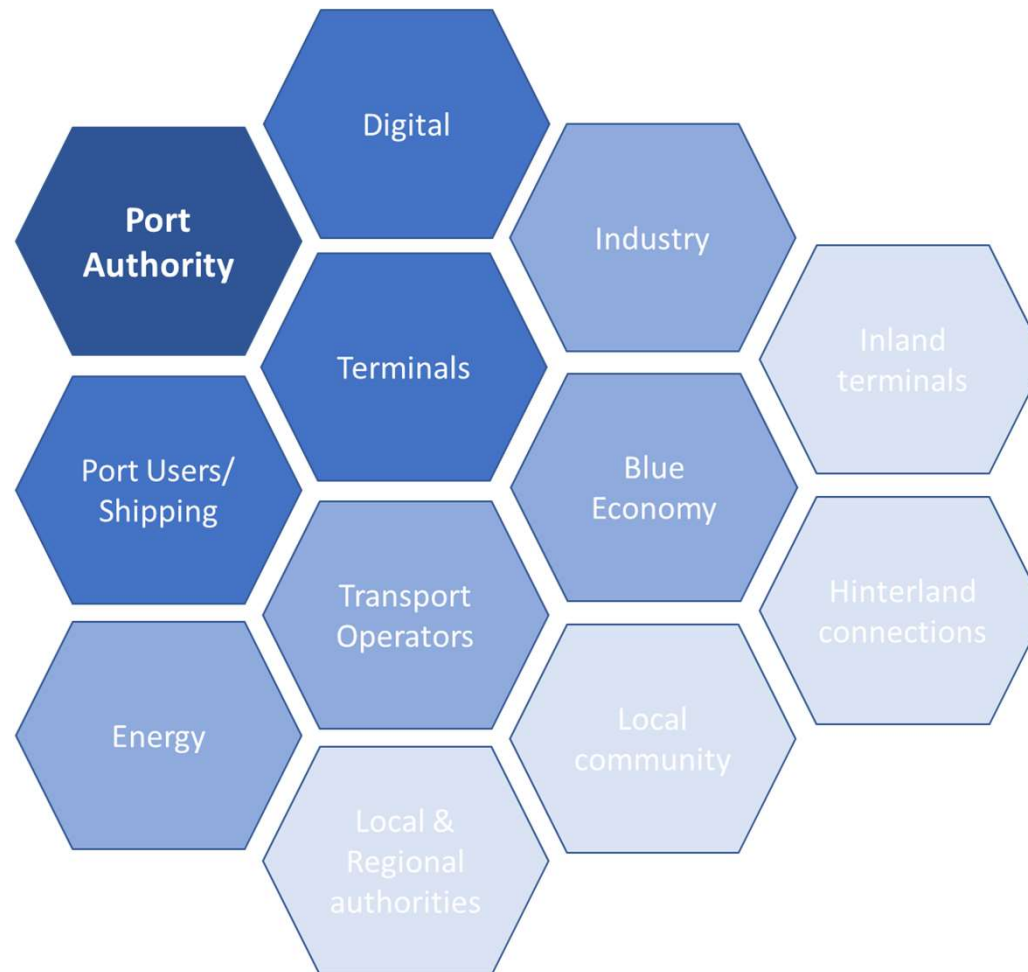



ESPO represents the port authorities, port associations and port administrations of the seaports of 22 Member States of the European Union and Norway at EU political level.

ESPO also has observer members in Albania, Iceland, Israel, Montenegro, Ukraine and United Kingdom.



Port Governance – the different actors operating in the port area





Central message: Ports are partners in the green transition

We support Europe's goals and ambitions

**TOP 10
ENVIRONMENTAL
PRIORITIES OF
THE PORT SECTOR
IN 2022**

2022





Environmental Trends

- EU Green Deal/binding reduction targets
 - Clean fuels
 - Modal shift
- Climate change: extreme weather
- Clustering of transport, energy and industry
- Pressure on conventional throughput
- Citizens' involvement

➤ Increased focus on sustainability

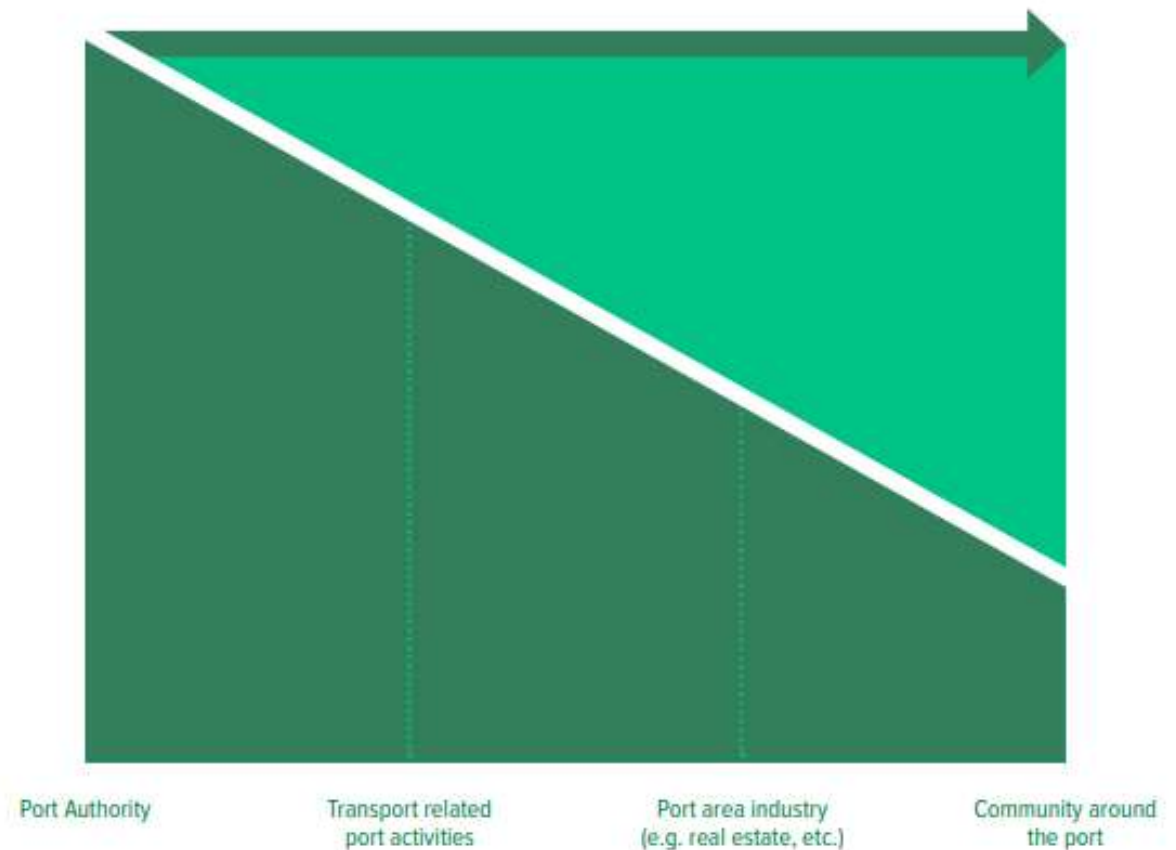
- Greener transport
- Greener energy in ports
- Greener port industry
- Increased focus on sustainability
- Green recovery from COVID-19

Role of the port authority and other stakeholders in greening



Greening the

- port authority
- the port area
- greening the community around the port



European Ports are complex entities



-> Greening the maritime sector requires a differentiated approach involving the port authority itself and the different stakeholders in the port area.

- European ports are already taking steps to green operations within their own remit
- Aim at lowering emissions at berth by at least 50% by 2030
- Co-developed EMSA quick reference-guide for SSE, and contributed to overall SSE guidance
- Promotes good environmental management through the EcoPorts Network and the ESPO Green Guide



The European Green Deal and Fit for 55

*Delivering the greening of shipping through ambitious
climate policies on the European level*

Ports are partners in the green transition – the greening of shipping is a priority



European ports support the European Green Deal ambitions

ESPO welcomes the Fit for 55-package published in July 2021

- A comprehensive package of policy proposals (new legislation and revisions of existing rules)
- Intended to deliver 55% GHG reductions by 2030 -> making the EU “Fit for 55”
- **All sectors of the EU to contribute to emission reductions – including shipping**

-> Crucial to making the Green Deal ambitions a reality



Overview of key proposals in the Fit for 55-package



Key proposals	Purpose
Alternative Fuels Infrastructure Regulation (AFIR)	Sets mandatory targets for the deployment of OPS and LNG in ports (supply)
FuelEU Maritime	Introduces requirements for ships to reduce emissions and to use OPS when at berth (demand)
EU Emission Trading System (ETS)	Expands cap and trade of CO2 emissions in the EU to include shipping emissions
Energy Taxation Directive (ETD)	Sets rules for how and when Member States can tax energy. Introduces possibility of tax exemption for electricity provided to ships at berth.

ESPO is committed to facilitating the greening of shipping and to lead by example



- An ambitious emission reduction path needed for shipping
- Fit for 55 the first time the sector is explicitly targeted by EU climate policy -> a sea change
- Greening the shipping sector means greening during navigation (95% of total emissions) + at berth (5-6% of total emissions)
- Individual proposals must work together as part of a cohesive legislative framework
- Crucial to coordinate and to plan together with shipping companies

Onshore power supply where it makes sense to maximise emission reductions per invested Euro



Requirements to use and provide onshore power supply (OPS) in ports is the main focus for European ports

- OPS is an important technology to reduce emissions at berth
 - Installing OPS is complex and costly
- ⇒ OPS should only be installed if it is effectively used.
- ⇒ Where it is available, it must be used.
- ⇒ **Focus** on locations/berths/terminals in the port where it makes sense in terms of emissions reduction

“Where it makes sense”-criteria: OPS must be fully used, segment, size of ship, time at berth



IS ONSHORE POWER SUPPLY (OPS) AVAILABLE AT ONE OR MORE BERTHS?

55%
IN 2022



58% 57% 55%
2020 2021 2022

HIGH VOLTAGE*

49%
IN 2022

46% 46% 49%
2020 2021 2022

* The percentages of these indicators are calculated on the basis of the 51 ports offering OPS, not out of the total of participating ports.

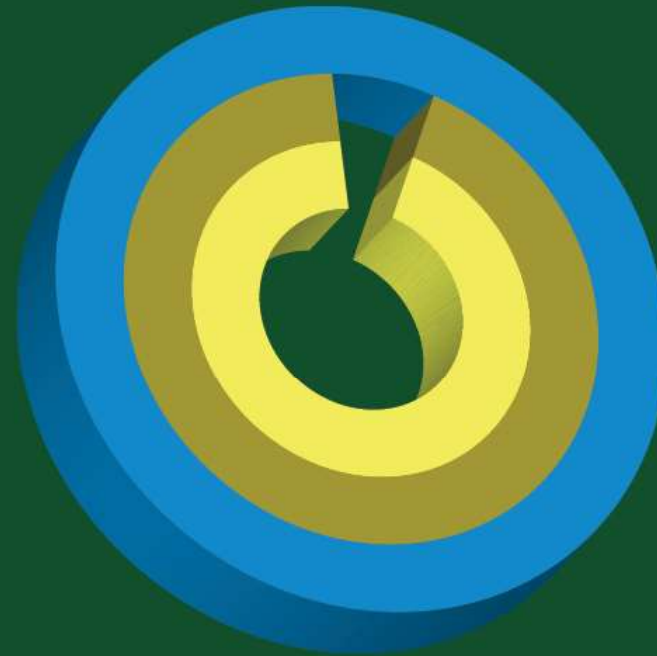


BY FIXED INSTALLATION*

100%
IN 2022

93% 93% 100%
2020 2021 2022

* The percentages of these indicators are calculated based on the 51 ports offering OPS, not out of the total number of participating ports.



DOES THE PORT PLAN TO OFFER OPS DURING THE NEXT 2 YEARS?

48%
IN 2022

40% 46% 48%
2020 2021 2022



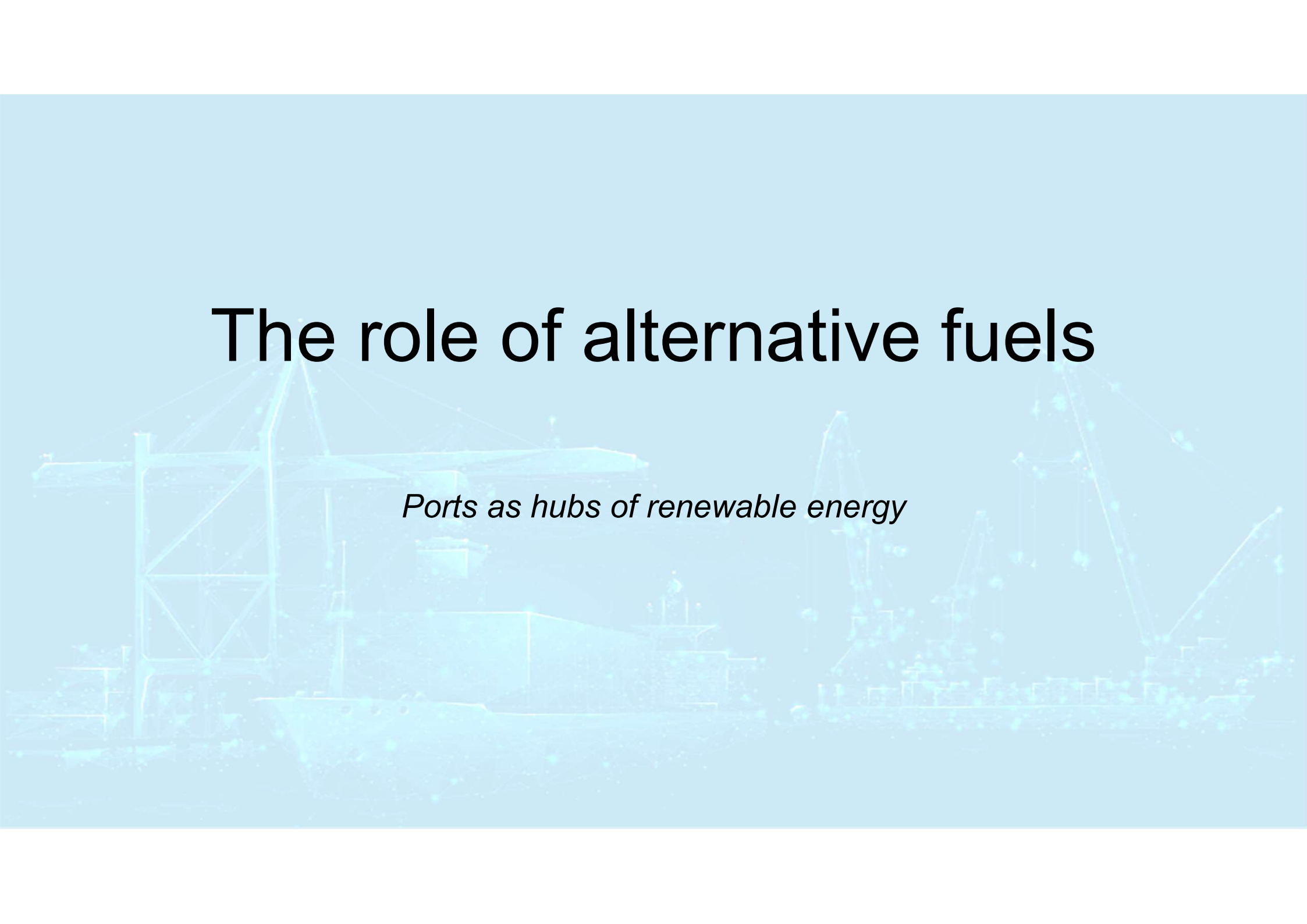
Funding and better coordination needed to deliver onshore power supply where it makes sense



- OPS deployment has to be seen together with the availability of the grid:
proposed AFIR scope means current capacity x 15
- **MS must provide sufficient grid capacity/infrastructure**
- Need for funding:
 - No examples of OPS being deployed without public funding
 - At least 50% needed on average
 - Lack of dedicated EU/Member State funding available
 - > dedicated funding under EU ETS
 - > tax exemption for OPS in Energy Taxation Directive
- Need for dialogue/cooperation between stakeholders and users – structured dialogue mechanism in both files.
- Create standards for OPS onboard ships + introduce monitoring on OPS demand/use

The role of alternative fuels

Ports as hubs of renewable energy



How are ports positively contributing to the energy transition?



Ports are contributing in a positive way to greening Europe's economy, and society as a whole.

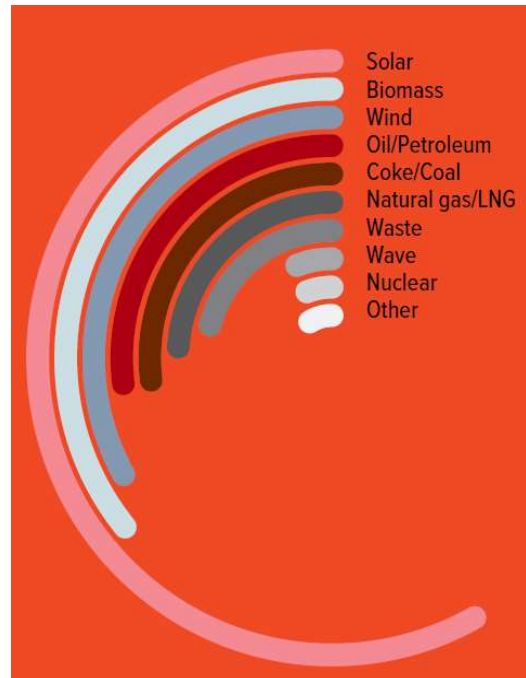
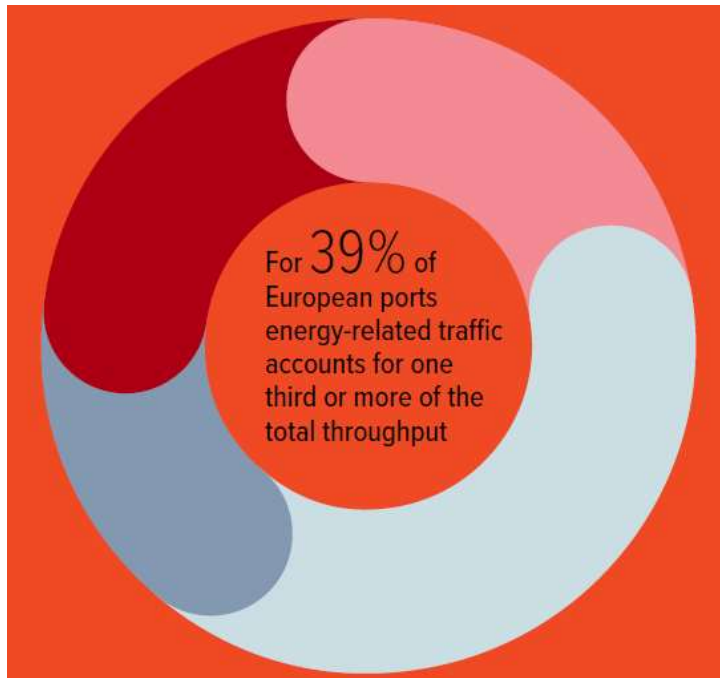
- **Ports are important producers and providers of clean energy solutions;**
- **They are key players in the blue economy (offshore, sustainable cruise);**
- **Ports are hubs for circular economy;**
- Ports are committed to strengthening port-city relationships.

Ports as hubs of renewable energy



- Ports have an important role to play in the greening of the shipping market
- > Ports are where a lot of the fuels are either consumed, stored, bunkered, transported or produced.**
- Ports do not have a direct say in what kind of fuel goes into the vessels, but can support and facilitate greening efforts by port stakeholders.
- Today ports are using tools such as green charging (providing green incentives) to promote greener fuels in their port area when it comes to fuel selection.
- Also, investments in renewable infrastructure aimed at providing alternative fuels are already well established (e.g. LNG)
- The next generation is in full development (shore power, ammonia, hydrogen and methanol).

State of play for energy in ports: Trends in EU Ports Governance 2022



Alternative fuels increasingly provided in European ports



ESPO Environmental Report 2022 (92 ports): Are there any projects under development for infrastructure clean fuels?

Hydrogen: 36.14%

Ammonia: 12.05%

Biofuels: 16.87%

Synthetic fuels: 9.64%

New needs and issues associated with alternative fuels in ports



Lower density and higher operational risks associated with alternative fuels makes lack of space is an issue in ports. ESPO-Deloitte Energy Study:

- Ammonia needs two times as much space as fossil fuels – safety perimeter estimated to 1.5-3 km.
- Hydrogen needs three times as much space as fossil fuels
- Standardisation and specifications for the use and supply of alternative fuels
- Operational safety is a major issue that will need further consideration
- Lack of disaggregated data on hydrogen, ammonia, and methanol demand/use by vessels.
 - 2021 EU MRV Report: vast majority of vessels use conventional fuels (HFO, MGO), methanol –propelled ships part of 'other' categories.

How does this relate to Fit for 55?



- Too early to introduce binding requirements on EU level for alternative fuels. Bottom-up initiatives already under way in ports all over Europe.
- Recognise that the potential clash between short-term needs and long-term priorities requires ambition but also pragmatic, workable legislation here and now.
- Support and promote the development and deployment of alternative fuels, including through funding and standards.
- Ensure investment certainty through coordination mechanism also for renewable fuels – what do vessels need, where and when?
- Avoid 'fuels à la carte' in ports – there is no time and no money to waste.

Encouraging the greening of shipping and ports from the bottom up

Other initiatives by European ports





OUR GOOD GREEN PRACTICES

ALL **Energy & Fuels** Climate & Air Port & City Waste & Circular Environment & Biodiversity

LIST OF TAG – ENERGY & FUELS

Port of Kapellskär offers onshore power supply (OPS) to ferries

Energy & Fuels | 15 May 2022

Electric hydraulic cranes at the Port of Ipswich

Energy & Fuels | 15 May 2022

Hybrid port vessels at the Port of Hamburg

Energy & Fuels | 17 March 2022

Use of LNG at the Port of Barcelona

Energy & Fuels | 17 February 2022

LNG bunkering operation at the Port of Marseille Fos

Energy & Fuels | 11 February 2022

Renewable hydrogen for operations at the Port of Vigo

Energy & Fuels | 11 February 2022

DOES THE PORT OFFER DIFFERENTIATED DUES FOR “GREENER” VESSELS?

60%
IN 2022



57% 53% 60%
2020 2021 2022

DOES THE PORT PLAN TO INTRODUCE ENVIRONMENTALLY DIFFERENTIATED PORT DUES DURING THE NEXT 2 YEARS?

33%
IN 2022

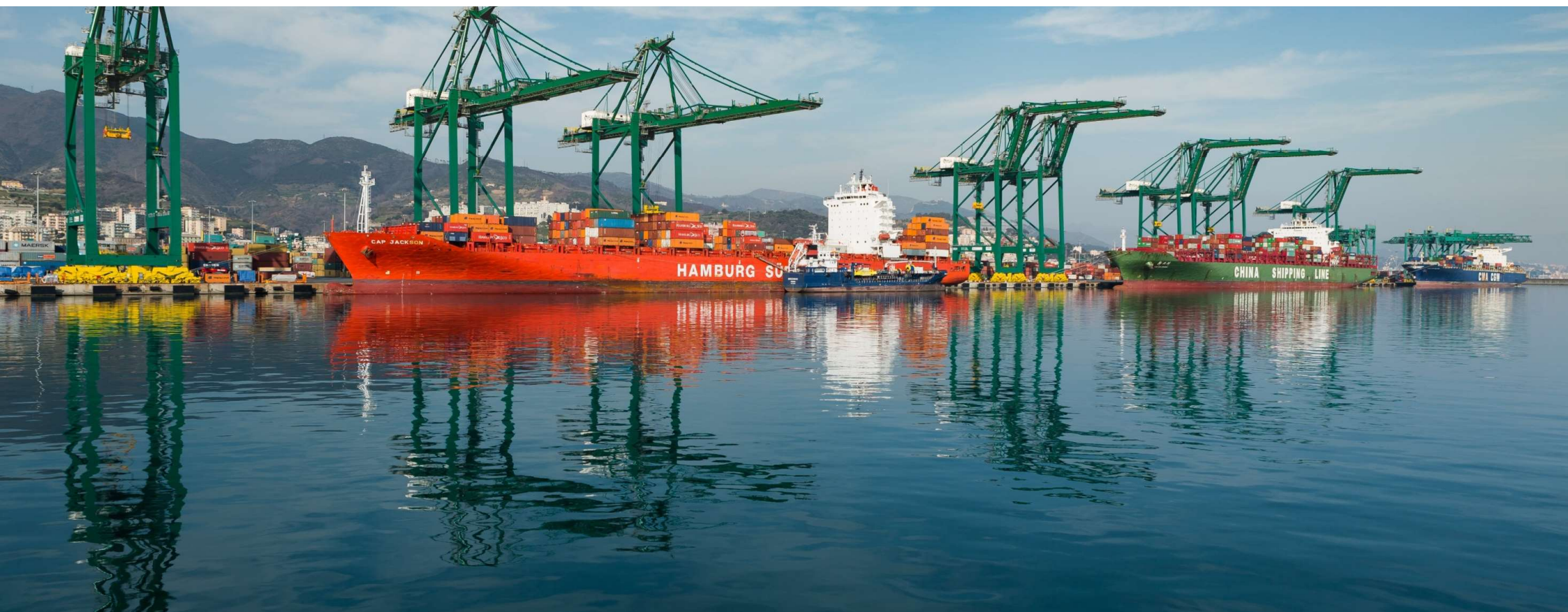


30% 30% 33%
2020 2021 2022



Re-calling the central message: Ports are partners in the green transition

We support Europe's goals and ambitions



Thank you!

Valter.selen@espo.be

