

European flagship Action for coLd ironING in ports



Co-financed by the Connecting Europe Facility of the European Union

# EALING Studies - Activity 1. Harmonised Framework for the electrification of the participating TEN-T SEAFUTURE – EALING West Med Macro Regional Workshop

30 September 2021







### 1. State of Play

### EALING



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### 1. State of Play

### EALING

### Activities done so far





Survey on OPS at European Ports – preliminary results

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#### Section 1 of 6

#### EALING Questionnaire for Ports & Terminals

CONTEXT - In the context of the European Green Deal, the "EALING " Motorways of the Sea Action contributes to the Global Project aiming to accelerate the transition to electrification and deployment of Onshore Power Supply (OPS) solutions in at least 16 EU maritime ports. (More info: https://ealingproject.eu)

The Action aims to establish a suitable framework based on EU and national legislations, and to lead all the necessary preparatory studies for effective implementation of OPS infrastructure in the ports of the EALING consortium. The specific objectives of the Action are:

1. Analysing the current technical standards, drivers, and obstacles, and proposing a harmonised approdeployment of OPS infrastructure and equipment in the ports and maritime fleet adaptation.

2. Implementing all the required studies for the future works in the ports: front dengineeril (tudies d other technical studies, environmental studies, clean power supply plans, CBA, and plans, blen, tg sche, s.

The Action will result in further development of a common framework for electricities of the orts d maritime fleet adaptation, and delivery of all the necessary technical and esign die n OP olutions so that the Port Authorities will be ready to launch the construction and end manage.

OBJECTIVES OF THE QUESTIONNAIRE - This contraining framework of Activity 1 of the project. "Harmonised Framework for the Ele frication of e par pating Terrer maritime ports". The questionnaire is divided into 5 main parts with recifice ectives to allect information from the Port Authorities and Terrerinals that have/plan/study are OPS solutions in their ports/terrerinals. The parts are the following:

A - General information - Static information to know he type of port or terminal under study. Elements such as type of traffic, governance model, profile of the person filling in the form, etc. that serve to classify ports based on their characteristics.

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que ions on different aspects of implementation of

**Onshore Power Supply (OPS).** 

Collecting **52** responses from European ports on implementation of OPS facilities in ports

LINK: https://forms.gle/NCrZrv4FjthWCzjM6



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EAU						
SAMPLE		No	OF PORTS	%	OF PORTS	
CONSORTIUM PORTS		16			31%	
NON CONSORTIUM PORTS		36			69%	
COUNTRYC	CONSOR PORT	TIUM S	NON CONSORTIUM PORTS		TOTAL	
BELGIUM			1		1	
BULGARIA	2				2	
CROATIA			1		1	
FRANCE			2		2	~
GREECE	2		5		7	
IRELAND	1		1		2	$\langle \cdot \rangle$
ITALY	3		8			$\langle \rangle$
MALTA			1			
NETHERLAND			1		1	
PORTUGAL	2		5		7	
ROMANIA	1			/	3	
SLOVENIA	1					
SPAIN	4	7/	8		12	
SWEDEN			1			
TOTAL	16		36		52	
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ECA ZONE		TS NON CONSORTIU	TOTAL			
NO	16	13	49			
YES	0	3	3			
REGION	CONSO PC TS	N CONSORTIUM PORTS	TOTAL			
EASTERN EUROPE	The second secon	2	5			
NORTHERN EUROPE	1	1 2				
SOUTHERN E R. TE	12	(28)	40			
WESTERN EL ROPE		4	4			
TA	16	36	52			
REGION	CONSORTIUM PORTS	NON CONSORTIUM PORTS	TOTAL			
ATLANTIC OCEAN	3	7	10			
BALTIC SEA		1				
BLACK SEA	3	2	5			
CANTABRIAN SEA	1	1				
IRISH SEA	1	1				
MEDITERRANEAN SEA	8	(22)	30			
NORTH SEA		2	2			
TOTAL	16	36	52			

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Ports of Trans-European Transport Network (TEN-T) contributed to this survey





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**A - GENERAL INFORMATION** 

#### EALING Type of traffic Number of termin Container traffic -35 (67,3 %) Dry bulk traffic -37 (71,2 %) 1 - 5 General Cargo traffic -41 (78,8 %) 6 - 10 Petroleum traffic -30 (57,7 %) 0 11 - 20 Other liquid traffic -30 (57,7 %) 23.1% > 20 Ro-Ro traffic -36 (69,2 %) -36 (69,2 %) Ro-Pax/Passenger traffic Cruise traffic -38 (73,1 %) -28 (53,8 %) **Fishing traffic** Yatchs/pleasure boats -31 (59,6 %) -20 (38,5 %) Drydock /Shipyard facilities 48,1% 0 10 20 30 40 50 Nu ab col Ship calls per year COMPREHENSIVE SHIP CALLS PER **CORE PORT** TOTAL YEAR **FR** Less than 500 500 – 1.000 2 4 6 **LESS THAN 500** 17,3% 1,001 - 2,500 2 2 8 19.2% 500 - 1,000 2,501 - 5,000 1,001 - 2,500 9 16 5,001 – 7,500 2,501 - 5,000 9 More than 7,500 Δ 11,5% 3 5,001 - 7,500 3

10

52

6

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MORE THAN 7,500

TOTAL

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9

28

1

18

A - GENERAL INFORMATION

2. Survey on OPS at European ports

15,4%



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A - GENERAL INFORMATION



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### EALING

If you plan to install OPS facility/ies in your port/terminal, please select in which type(s) of terminal(s will you make the investment (multiple choice):



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### EALING

If you have OPS installed in your port/terminal or you plan or are in the process to install OPS in you, rour or are ardless of power) please breakdown the status of OPS.



EALING

If you have OPS installed in your port/terminal or you plan or are in the process to install OPS in your port (regardles, of over please breakdown the status of OPS.



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EALING

If you have OPS installed in your port/terminal or you plan or are in the process to install OPS in your port (regardles of over) please breakdown the status of OPS.



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EALING

If you have OPS installed in your port/terminal or you plan or are in the process to install OPS in your port (regardles, of over) please breakdown the status of OPS.



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If you have OPS installed in your port/terminal or you plan or are in the process to install OPS in your port (regardles of lower) please breakdown the status of OPS.



If you already have OPS facility/ies in your port/terminal, please indicate the characteristics of the different OPS points.

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EALING

If you already have OPS facility/ies in your port/terminal, please indicate the characteristics of the difficult points:





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## EALING

Please indicate the main technical/operational/financial difficulties you face/d in planning and imp'en unt up CPS solutions in your port/terminal (e.g. cost of installation, implementation decision, cost of energy, service operations in service, etc.):

- 1. Cost of installations, cost of electrical power and economical viability of the struct and lack pricing framework
- 2. Status and capacity of the port electricity grid (power constraints etc.)
- 3. Lack of technical and operational expertise about shire side electricity for ports (implementation)
  - Estimation the power demands in the port. In particular per hours for different size of ships (Different technical solutions and standards (i.e. 50hz OR 60hz, 11 KV or 6.6 KV) for different types of beit hs (min s)
- 4. Defining role/ responsibility / expectations of stakeholders, and split incentives
- 5. Lack of sistal drivers for OPS installation and operation (regulation of the service)
- 6. Service operator selection

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### EALING

If you already have OPS facility/ies in your port/terminal, please indicate whether this installation is protecting energy grid or if it is separated from it:



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### EALING

If you already have OPS facility/ies in your port/terminal

PORT TERMINAL TYPE	NUMBER OF ANNUAL CALLS IN TERMINAL WITH OPS (2019) (INSERT ESTIMATED OR REAL NUMBER)	AVERAGE SHIP SIZE IN GT [GROSS TONNAGE] DEMANDING OPS SERVICE (INSERT ESTIMATED OR REAL NUMBER)	AVERAGE B RTHING (HOU' a) F SHIP I THE P 31 TF MINA MITH OPS INS. ST F TIMATED OR REAL NUMBER)	ADDITIONAL INFO
RO-PAX/PASSENGER	0	29, 00	8	
RO-PAX/PASSENGER	0	2 50	8	
RO-PAX/PASSENGER	0	29,500	8	
RO-PAX/PASSENGER	59	30	12	
RO-PAX/PASSENGER	00	29,670	8	170 m length y 28 m breadth
RO-PAX/PASSENGER	?.500	60,000	6	
YACHTS /BOATS/T JI O		NOT DEFINED	24	11 MONTHS
YACHTS /BOATS, 'UG" LOTS	NOT AVAILABLE	480	6	
YACHTS /BOATS/TL 3/PILOTS	NOT AVAILABLE	350	7,200 h/ year	Permanent for Tugs/Pilots
YACHTS /BOATS/TUC/PILOTS	NOT AVAILABLE	350	7,200 h/ year	Permanent for Tugs/Pilots



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Please indicate if there is any mechanism to support emissions reduction in your port/terminal for Ope (very mptions, clean maritime fund, maritime or port mechanism, rebates, environmental agreements, ESI, etc.):

COUNTRY	NO	35	OTHER
ITALY	8	2	1
SPAIN	2	10	
GREECE	5	2	
ROMANIA	2	1	
PORTUGAL	6		1
BULGARIA		2	
FRANCE		2	
BELGIUM		1	
NETHE (LA IDL		1	
SEDE		1	
RL ATIA	1		
IN ELAND	2		
MALTA			1
SLOVENIA	1		
TOTAL	27	22	1

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C - SPECIFIC REGULATORY AND ADMINISTRATIVE ASPECTS

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OTHER ASPECTS (SUCH AS FINANCING, BUILDING FACILITIES AND RESOURCES)

EALING

If you already have OPS facility/ies in your port/terminal, please select the gualification of the team operation operation of the team operation operatio





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OTHER ASPECTS (SUCH AS FINANCING, BUILDING FACILITIES AND RESOURCES)

EALING

Please briefly explain what, in your opinion, are the main training needs for OPS operations :

- 1. For Port Authorities (management)
  - Financing of the installation
  - Regulatory standards
  - Safety and Security trainings
  - Other aspects related to OPS steps and connections onboard the ship
- 2. For the operator of the Ope so it, in (operations
  - Safety and Se unity rainings
  - Electrical loading risk assessment, electrical loading
    - Svich anization between shore and ship [plug-in/plug-out]
  - Maintenance and efficient use of OPS facilities

### EALING

Please feel free to add any additional information that could be useful in relation to this questionnal

" OPS in use only covers inland vessels and tugboats and should be extended to seagoing vessels"

" The real impact of OPS in the GHG emission reductions comes if the energy is from renewable energy. It requires storage of the energy to cover the demand vin n arise. The combination of ciffuren energy sources is the Lav "A good cement halysis is key winthe involvement of the shipowner"

> " The experience of specific OPS facilities for a certain type of ship does not provide experience for other type of traffics"

" LNG ships should be exempted of the Obligation to connect" "There is a increasing demand of Cruise lines but is not feasible for small ports because its high cost. It is not sustainable"

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**E – ADDITIONAL INFORMATION** 



### 3. Next steps

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#### What will be next?



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# Thanks!





#### Contacts

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**Discover more at** www.ealingproject.eu



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