



Centro Tecnológico de Eficiencia
y Sostenibilidad Energética

PROJECT: EFFIVESSEL



Why EFFIVESSEL

- IMO and European Union regulations force to reduce air pollution coming from fuels used in ships
- The use of natural gas as fuel has a positive impact in the environment and contribute to the reduction of ship fuel costs
- There is an increasing demand of gas-fuelled ships from shipowners
- There are no common standards applicable to the training and certification of small gas powered ships falling out of the scope of the international Conventions: SOLAS (IGF Code) and STCW (Tugs, Fishing ships, Ferrys, etc.)
- There are no common standards for bunkering operations and installation of LNG&CNG in ports
- There is a lack of trained staff for operations in ships and ports involving LNG&CNG

EFFIVESSEL aims to break down legislative and training barriers in order to implement natural gas as fuel in small ships

Main Activities

LEGISLATION & STANDARDS:

- Developing a **proposal for new standards/guidelines** covering:
 - Bunkering operations using LNG&CNG;
 - Installation of LNG&CNG supply chain systems.
- Developing a **proposal for a new legislative framework** covering the certification of non-SOLAS gas-fuelled ships.
- Developing a **proposal for new legislation on the certification** of non-STCW crews embarked in gas powered ships
- To be applicable to the 5 countries of the AA programme

TRAINING:

- Developing and delivering **training courses** for the following staff:
 - Naval architects;
 - Marine engineers;
 - Port staff involved in bunkering operations;
 - Shipyard staff involved in installation of gas-fuelled propulsion plants;
 - Health&Safety Officers.
- During a period of 1 year delivery of:
 - 50 courses including 10 cadets per course;
 - 10 courses per country;
 - 2 courses per country for each group (naval architects, port operators, etc.)
- Developing an **innovative containerized training** facility for conducting practical training in the 5 countries

Project Schedule

WORK PACKAGE	TAKS	YEAR		
		1	2	3
1 PROJECT COMMUNICATION	1.1 Develop and implement a communication plan for the project			
	1.2 Search, gather and disseminate information on companies providing services for gas-fuelled propulsion plants and bunkering operations			
2 DESIGNING A NEW LEGAL FRAMEWORK FOR SMALL SHIPS USING NATURAL GAS AS FUEL	2.1 Review existing standards /legislation related to: LNG and CNG bunkering operations and approval of NG supply chain facilities for ships			
	2.2 Propose new standards/legislation on bunkering, installation, operation and maintenance of LNG and CNG supply chain systems			
	2.3 Contact national authorities and gather information on national/international legislation related to certification of gas-fueled ships and their crews			
	2.4 Proposal of a new legal framework covering the training of ship crews and other onshore staff			
3. DESIGNING AND IMPLEMENTING TRAINING PROGRAMMES FOR STAFF INVOLVED GAS-FUELLED SHIP OPERATIONS AND TECHNOLOGIES	3.1 Design training programmes for staff involved in the design, installation, operation, bunkering and maintenance of gas-fuelled ships			
	3.2 Design and build a mobile training facility for delivering the appropriate practical training included in the courses designed in 3.1			
	3.3 Plan, prepare and deliver 50 training courses for demonstration purposes			

Partners

Current Partners

- Port of Vigo
- Port of Dublin
- University of Strathclyde
- Higher Nautical School of Lisbon
- Energylab
- INOVAlabs



Potential Partners

- Port Authorities
- Universities
- National Associations
- Nautical Schools/Centres
- National Maritime Administrations
- Research Centres



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Thank you for your attention

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