ATENA

FUTURE TECHNOLOGY

HyPOTT
Hydrogen hybrid POwer unit for a 4x2 Terminal Tractor

Title

Hydrogen hybrid POwer unit for a 4x2 Terminal Tractor

Project

The port-logistic sector plays a crucial role in the economic development of a country. In addition, given the current growth of port commercial traffic worldwide, it has a significant impact also in terms of quality of life, mainly in the environment nearby ports and on the surrounding coastal areas. Promoting innovation on efficiency and sustainability of ports is therefore a fundamental issue. This holds especially considering the increase of foreign trade cargo volumes, which have driven maritime ports into developing their capacities from all perspectives, and the European Commission's strategic vision for achieving a climate neutral economy by 2050.

The port environment is indeed a large ecosystem, made of complex infrastructures, variegate services and advanced equipment, which require a conspicuous energy demand, today inherently related to the release of a high amount of harmful emissions, due to the intensive use of fossil fuels. Within this context, the proposed action aims at facilitating a fast decarbonisation of the port logistic industry by applying hydrogen technologies, already used in other sectors, but not yet adopted in the port sector. In particular, this project aims to develop and assess a fuel cell/ battery hybrid powertrain for a yard tractor, that is a special vehicle used in terminals to move heavy trailers within different areas. This particular vehicle has been selected as it is one of the most spread machinery used in port handling operations. Thus, the successful demonstration of a fuel cell electric configuration of this vehicle may be an effective driver for the introduction of hydrogen technologies into the port sector.

Info:

Type of action: RIA
Timing: 27.05.2024 – 31.08.2025
Website: to be defined
Budget: 300.000,00

Call:

2024 PNRR MUR - M4C2 – NEST - Extended Partnership Network 4 Energy Sustainable Transition” Bando a Cascata per Organismi di Ricerca

Funding

MUR
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Coordinator

Università degli Studi di Napoli Parthenope – UniParthenope

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Partner

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HyTECS

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