

CTN Blue Growth – Cluster project “BIG”

TEOREMA

Technological solutions for multi-objective offshore energy platforms

Fincantieri Oil & Gas S.p.A. is Partner of TEOREMA (Technological solutions for multi-objective offshore energy platforms), a research and development project co-financed by the Italian Ministry of Education, University and Research, benefiting from the European Regional Development Fund, through the Decree No. 1610 “Notice for the development and strengthening of 4 new national technology clusters”.

The project systemize partners’ scientific and technological competences for the collection and fruition of the necessary information and data in order to finalize the project of two different *concepts* of offshore energy platform, currently in the process of being studied. Thus, the technical feasibility and the economic sustainability of the platforms will be verified in the context of realistic scenarios of resource availability and of users operating conditions, opening to new growth perspectives of the blue energy sector in the Mediterranean area and for those blue economy potentially synergistic fields.

The scalability analysis of installations for eventual modifications of identified scenarios will allow the extension of technological applications proposed beyond the narrow limits of the case studies considered, making them more attractive to investors and stakeholders.

The modeling tools developed in the scope of the project will be at disposal of the participants in the *Blue Growth* technology cluster. Thus, the target community will have available quick and effective tools for the preliminary evaluation of different platforms performance in the context of resources and consumption scenarios defined by the user.

Small-scale tank experiments will provide an immediate validation of planning choices, giving directions for the following steps of technology development.

Furthermore, the development of an innovative integrated decision support solution, accessible via a web interface, will represent a new benchmark for the offshore marine energy sector. The new system earns a chance to be the single point of access to statistics data, dynamic components and guided simulation paths of the decision-making process from a normative and operational point of view. Thanks to the modular architecture, all these elements will be able to be gradually integrated into the system of new numerical models and analysis tools, potentially relevant in other contexts too.

Finally, in the medium-long term, the spread of good practices is expected in the framework of an informed and sustainable use of marine resources at the local government level, the identification and organization of stakeholders and the identification of new sectors of investment.

BEGINNING AND DURATION OF THE PROJECT: 1st June 2019 - 36 months

BUDGET: € 741.700,00

AMOUNT FINANCED: € 347.000,00

PARTNERS: CNR (Lead partner), Fincantieri Oil & Gas S.p.A., ENEA, ENEL Green Power S.p.A., Wave for Energy S.r.l., Politecnico di Torino.