Ocean Energy in Insular Conditions

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OCEAN ENERGY SYSTEMS

Background

Islands and rremote coastal areas:

01.

Energy dependence

a major source of economic vulnerability for many insular regions

02.

Costly and polluting imported oil for electricity production,

further strengthening their needs for clean and competitive energy

03.

Little or no access to modern and affordable energy services

04.

Very often benefit from better renewable energy resources than the mainland,

but their potential is not well tapped due to technical, economic and legal barriers

Increasing energy self-sufficiency in island regions and remote coastal areas

will bring significant economic benefits while contributing to the implementation of international decarbonization and climate policy goals.

3 Workshops in 3 different regions of the world

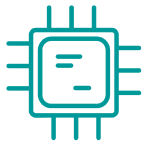
- 2017
  South-East Asia *(Singapore)*
- 2018
  Europe *(France)*
- 2019
  Pacific *(Hawaii)*

Workshop Ocean Energy in Insular Conditions

Main Objectives :

Challenges & Opportunities

Discussing challenges and opportunities for ocean renewable energy as a clean alternative source of energy in insular conditions and remote coastal areas.



Applicability of the Technology

Addressing achievements in the ocean renewable energy field and its applicability to insular conditions.

Stakeholders Engagement

Addressing the contribution and/or challenges of each stakeholder in making use of ocean energy as an alternative source of energy in islands

MAJOR OUTCOMES
Barriers & Recommendations

Technical Supply Chain

- Local supply with a few or no competitors
- Local grid often small and unstable
- Remote locations increase OPEX
- Limited quality and availability of equipment

Financial-Economic

- Often no support mechanism for RE
- Power Purchase Agreements is usually a long and complex process
- Investors require proof of consent prior to investment
- Lack of knowledge by insurance, investors and lenders reduce bankability of projects

Socio-environmental

- Visual impacts and conflict of use
- Technology not well understood
- Natural threats
- Community readiness and working methods

Legal-Political

- Lack of policies in place
- Limited experience in consenting can result in negative perceptions
- Risk-averse approach
- Time intensive consenting path

Enabling Steps and Conclusions

Near term opportunities

(Resilient Coastal Communities, Navigation, Ocean Observation, Underwater Vehicles)

Conventional renewable energies as allies of ocean energy/not competing technologies

"One-stop-shop" approach reducing complexity of consenting processes

Early local community engagement

"Powering the Blue Economy" rather than "niche market"

Grid reliability and resiliency as part of the value proposition

Cost-Benefits analysis considering externalities

Environmental impacts assessments easily available

Need to improve reliability of ocean energy technologies

Thank You

www.ocean-energy-systems.org/

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