

Final report

General information

Project title	Varetagelse af opgaver i forbindelse med Danmarks medlemskab af IEA-OES 2021
File no.	64021-0021
Name of the funding scheme	EUDP
Project managing company / institution	RAMBOLL
CVR number (central business register)	35128417
Project partners	
Submission date	05 April 2022

1. Summary

English:

This project involves assistance in connection with Denmark's membership of the IEA Technology Collaboration Program for Ocean Energy Systems (OES) in 2021. OES was founded in 2001 by Denmark, the UK and Portugal and today 25 countries are members of OES. Kim Nielsen, Ramboll was initially appointed as Danish Alternate to the EUDP relating to Denmark's membership of the IEA-OES when the OES was founded.

The assistance on a yearly basis involves participation, preparation, and presentation of Danish interests in relation to Wave Energy Conversion at the two annual meetings of the ExCo. Also in 2021 the EXCO meetings was held as shorter webinars due to COVID 19. The normal two annual ExCo Meetings was replaced by four two-days online meetings of two hours EXCO meeting 40 in March, 41 in May , 42 in September and 43 in December. Additional Webinars concerning the National Ocean Energy activities was also arranged – the Danish activities presented in June.

Further the project included dissemination activity, in connection with Ocean Energy, participation in the creation of new activities such as metrics for technology assessment. Dissemination of Danish wave energy activities at the ExCo meetings and synthesis to OES annual report. Ramboll is coordinating the international activity on WEC Numerical Modelling and Verification. In 2018-19 Ramboll contributed to the activity "Cost of Ocean Energy: Analysis and forecasts of the cost of energy of ocean energy converters" a task that is expected to be relevant also in the future.

2021 was the first year with Chairman Yann-Hervé De Roeck, Directeur Général France Energies Marines.

Dansk:

Dette projekt omfatter assistance i 2020 i forbindelse med Danmarks medlemskab af det Internationale Energi Agentur (IEA) samarbejde på energiområdet under det såkaldte "Technology Collaboration Program" (TPC) for området Ocean Energy Systems (OES). OES blev grundlagt i 2001 af Danmark, England og Portugal og i dag er der 25 lande som er medlemmer af OES. Kim Nielsen, Rambøll er siden starten i 2001 dansk suppleant til EUDP i forbindelse med Danmarks medlemskab af IEA-OES,.

I lighed med tidligere år omfatter dette projekt deltagelse, forberedelse og præsentation af danske interesser på de to årlige ExCo møder. Også i 2021 blev EXCO-møderne afholdt som kortere webinarer på grund af COVID 19. De normale to årlige ExCo-møder blev erstattet af fire to-dages online EXCO-møder; EXCO-møde 40 i marts, 41 i maj , 42 i september og 43 i december. Der blev også arrangeret yderligere webinarer om de enkelte landes Ocean Energy-aktiviteter – de danske aktiviteter, der blev præsenteret på webinar i juni.

Projektet omfatter desuden formidlingsaktiviteter i forbindelse med Havenergi, deltagelse i og medvirken til at skabe af nye samarbejdsaktiviteter om relevante opgaver. Formidling af danske bølgeenergi aktiviteter på udvalgte konferencer og en sammenfatning til OES-årsrapport. Rambøll er koordinator af opgaven omkring numeriske modeller for bølgekraft systemer og bidrager til LCOE aktiviteten "Cost of Ocean Energy: analyse og prognoser for omkostningerne ved energi til omdannede af havenergi".

År 2021 var det første år med formand Yann-Hervé De Roeck fra Frankrig, direktør i France Energies Marines.

2. Project objectives

The objective of this project is to assist EUDP concerning the Danish participation and part in the international Technology Collaboration Programme on Ocean Energy Systems (OES) under IEA. The objective of OES is to become the authoritative international voice on ocean energy, to collaborate internationally to accelerate the viability, uptake, and acceptance of ocean energy systems in an environmentally acceptable manner. Ocean Energy Systems OES concerns technologies to convert energy from the Ocean to electricity and other products from the natural resources in the Ocean including Waves, Tidal current and Tidal range as-well as Ocean Thermal (OTEC) and Salinity gradients. These resources are described on the OES Webpage:

<https://www.ocean-energy-systems.org/ocean-energy/what-is-ocean-energy/>

3. Project implementation

Denmark is one of the three (UK, PT & DK) founding members of the Implementing agreement on Ocean Energy Systems in 2001. The OES-IEA is steadily compiling results and progress in both technology development, international sharing of results as well as increasing the number of member countries which today counts 25 countries in 2021. In 2021 the Small Island Developing States DOCK (SIDS DOCK) has been proposed as partner under OES. The perspective of a closer co-operation and exchange of information between international partners, development of an international assessment methodology including test centres and test sites are means to help accelerate the technology development and transfer of real sea experience. The international co-operation and ex-change involve little risk and might create potential benefits in terms of defining markets and collaboration projects.



2021 Publications and Webinars Timeline

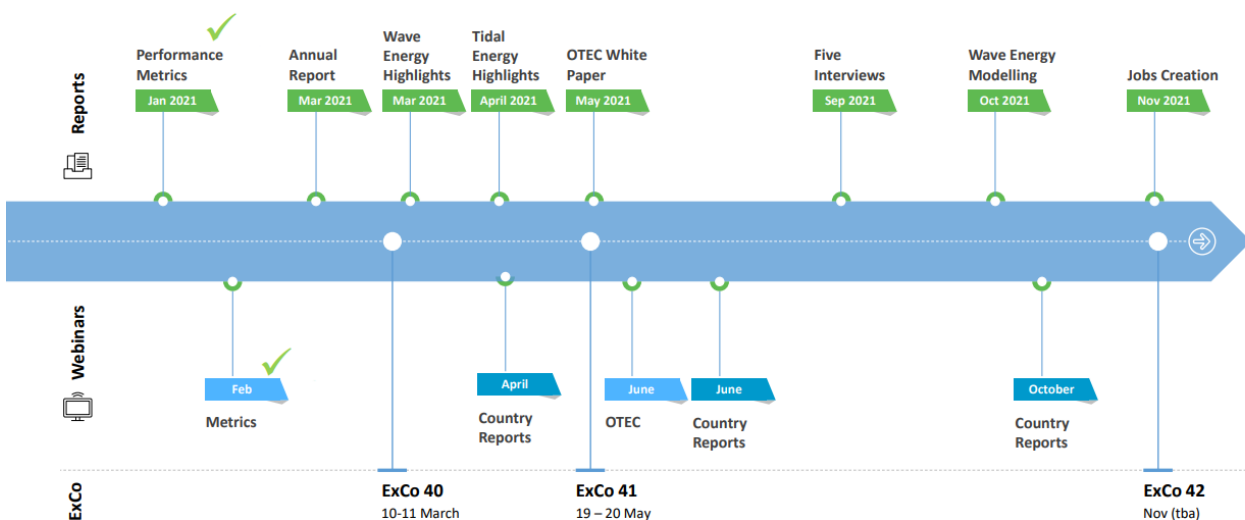


Figure 1 Planned timeline for OES 2021

7. Project conclusion and perspective

Nations across the world recognise the potential benefits of ocean renewable energy, pursuing the development of new technologies and projects to take advantage of their natural resources. Wave and tidal stream projects, and the associated technology, have generated interest from governments, investors, and developers, all keen to help build the sector. The successful transition from nascent technology to commercial proposition relies on the most efficient use of available resources, and world class R&D.

<https://www.ocean-energy-systems.org/newsletter.php?nlID=40>

Attended meetings during 2021 (online):

Exco 40, March

Exco 41, May (Report on Numerical modelling of wave energy)

Exco 42, September

Exco 43, December (Report on Numerical modelling of wave energy + presentation of a new task on education)

Presentation of country report at webinar (UK, Denmark, and Spain) June 2021.

8. Appendices

Relevant links

<https://www.ocean-energy-systems.org/>

<https://www.ocean-energy-systems.org/about-us/members/contracting-parties/>