# PRESS RELEASE

# Oceans of Energy will build 1 MW offshore solar off the coast of Scheveningen

## Expansion of world's first offshore solar system supported by parties such as Vattenfall

Scheveningen, The Netherlands; November 11, 2021 – Today Oceans of Energy and partners & observers announce the upscaling of the world's first offshore solar farm system 20 times and expand it to 1 MW (MegaWatt). In the coming years, the company plans to further scale up this system to 10 MW and then 100 MW. 100 MW is equivalent to an energy supply for 30,000 households. The expansion of the offshore solar system to 1 MW is supported by a public contribution from the Demonstration Energy and Climate Innovation (DEI+) arrangement, provided by the Netherlands Enterprise Agency (RVO).

"With the scaling up to 1MW we, together with our partners & observers, are taking another huge step towards a future in which the Netherlands can meet its full energy needs from renewable energy from its own sea and land. With only 5% of the Dutch North Sea, we can generate half of the entire Dutch energy requirement with offshore solar," says Allard van Hoeken, founder and CEO of Oceans of Energy.

He continues: "I am extremely proud of the Oceans of Energy team, of our partners & observers, the Dutch government and all parties that contribute to add this new and potentially largest form of clean energy generation to the energy mix in the Netherlands and worldwide. After all, half of the world's population lives in coastal regions."

More than twenty high-profile parties, such as **Vattenfall** and **RWE Renewables**, have joined this project as partners or observers. A full list of partners and observers follows at the bottom of the press release.

## **About Oceans of Energy**

Oceans of Energy is a Dutch company that specializes in offshore solar energy and the associated anchoring technology and environmental impact research. The company is the market leader in this, founded in 2016 and has since grown to twenty-five employees. The company has so far raised €15 million to scale up production and projects. Projects are amongst others supported by RVO, MIT-Zuid-Holland, REACT EU, INTERREG, and Horizon-2020 programs.

## About RVO

The Netherlands Enterprise Agency (RVO) stimulates sustainable, agricultural, innovative and international entrepreneurship. With subsidies, finding business partners, knowledge and complying with laws and regulations. RVO works on behalf of ministries and the European Union. RVO is part of the Ministry of Economic Affairs and Climate.

## PARTNERS AND OBSERVERS

The project has several partners and observers who all have their own expertise and input:

**Deltares** facilitates testing in the Deltares Delta Flume and leads the stakeholder research.

Deltares is an independent institute for applied research in the field of water and subsurface. Throughout the world, we work on smart solutions, innovations and applications for people, environment and society.

Managing densely populated and vulnerable areas is complex, which is why we work closely with governments, businesses, other research institutes, universities and NGO's at home and abroad.

<u>Fugro</u> will be monitoring the floating solar panel connectors, including the forces experienced by the panels as they float on the sea. Fugro will employ its state-of-the-art technology to monitor and improve the (relative) real-time kinetic (RTK) position to sub centimeter accuracy.

Fugro is the world's leading Geo-data specialist, collecting and analysing comprehensive information about the Earth and the structures built upon it. Adopting an integrated approach that incorporates acquisition and analysis of Geo-data and related advice, Fugro provides solutions. With expertise in site characterisation and asset integrity, clients are supported in the safe, sustainable and efficient design, construction and operation of their assets throughout the full life cycle. Employing approximately 9000 talented people in 61 countries, Fugro serves clients around the globe, predominantly in the energy and infrastructure industries, both offshore and onshore. In 2020, revenue amounted to EUR 1.4 billion. Fugro is listed on Euronext Amsterdam.

#### **<u>NWO-NIOZ</u>** and <u><u>Wageningen Marine Research</u> carry out the ecological monitoring.</u>

NWO-NIOZ Royal Netherlands Institute for Sea Research is the national oceanographic institute and principally performs academically excellent multidisciplinary fundamental and frontier applied marine research addressing important scientific and societal questions pertinent to the functioning of oceans and seas. NIOZ also serves as national marine research facilitator (NMF) for the Netherlands scientific community. NIOZ stimulates and supports multidisciplinary fundamental and frontier applied marine research, education and marine policy development in the national and international context.

With knowledge, independent scientific research and advice, Wageningen Marine Research substantially contributes to more sustainable and more careful management, use and protection of natural riches in marine, coastal and freshwater areas. Wageningen Marine Research is part of the knowledge organization Wageningen University & Research. Within Wageningen University & Research, nine specialized research institutes of the Wageningen Research Foundation work together with Wageningen University to contribute to solving the most important questions in the field of healthy food and living environment.

**TKF** develops and manufactures the power export cable.

Since its founding in 1930, TKF has developed from a cable manufacturer to a technologically leading supplier of connectivity solutions. With a broad portfolio of cables, systems and services for a variety of applications, including construction, industry, marine, energy, telecom and offshore wind, we provide customers worldwide with solutions for creating secure and reliable energy and data connections. We do this with more than 750 colleagues and production locations in Haaksbergen and Lochem. As part of the technology company TKH Group NV, TKF has access to groundbreaking solutions, concepts and technologies.

**Primo Marine** leads the process surrounding the offshore cable installation.

Primo Marine is a leading independent technical consultant for sustainable energy connections at sea. For more than 2 decades, we have been advising our clients on major submarine power cable projects, thereby contributing to the greening of the world's energy supply. We offer a unique combination of academic knowledge and years of practical experience for thoughtful, workable solutions. We do this by providing guidance in technical, contractual and commercial matters. We make sure that the cost, risk and technology interests are protected throughout the life of the project.

**<u>TNO</u>** is conducting research into the suitability of solar panels for offshore use and is studying integration in wind farms in this project.

The Netherlands Organization for Applied Scientific Research (TNO) is an independent research organization. We connect people and knowledge to create innovations that boost the sustainable competitive strength of industry and well-being of society. Now and in the future. This is our mission and it is what drives us, the over 3.500 professionals at TNO, in our work every day. We work in collaboration with partners and focus on transitions or changes in nine social themes that we have identified together with our stakeholders.

## Utrecht University conducts research into energy yield.

Founded in 1636, Utrecht University is a leading educational and research institution with a growing international reputation. UU conducts fundamental and applied research in a wide range of scientific fields. The Copernicus Institute for Sustainable Development conducts research and education in the field of the transition to a sustainable society. Central to energy research is system-level analysis of sustainable energy systems, energy carriers and technologies. In recent years, knowledge and experience has been gained in the field of analysis, modeling, monitoring and optimization of sustainable energy systems, in particular solar PV. A recent project with Oceans of Energy has resulted in a detailed performance model of offshore floating PV systems and a feasibility study on the benefits of integrating solar energy in an offshore wind farm. This new project enables UU to build on previous research into comparing offshore and land-based solar energy.

**Vattenfall** has indicated that it is interested in supporting the project as an observer.

Vattenfall is a leading European energy company, which for more than 100 years has electrified industries, supplied energy to people's homes and modernised our way of living through innovation and cooperation. We now want to make fossil-free living possible within one generation. That's why we are driving the transition to a sustainable energy system through initiatives in renewable production and climate smart energy solutions for our customers. We employ approximately 20,000 people and have operations mainly in Sweden, Germany, the Netherlands, Denmark, and the UK. Vattenfall is owned by the Swedish state. For more information: group.vattenfall.com

**<u>RWE Renewables</u>** indicates that it wishes to provide interest and support for the project as an observer.

RWE Renewables is one of the leading companies worldwide in the field of sustainable energy. The company with approximately 3,500 employees has wind farms both on land and at sea, solar PV installations and battery storage with a total capacity of approximately 9 gigawatts. RWE Renewables is accelerating renewable energy expansion in 20 countries on five continents. RWE Renewables aims to invest  $\leq$ 5 billion net in renewable energy in the period 2020-2022 and expand its renewable energy portfolio to a net capacity of 13 gigawatts. In addition, the company plans to grow further in wind and solar energy. Central to this are the Americas, the core markets in Europe and the Asia/Pacific region.

## Ventolines acts as observer in the project.

Ventolines guides clients in the development, construction and asset management of now more than 2 GW of installed renewable energy capacity. The service provider has both onshore and offshore experience and works on solutions for solar, wind, storage and system integration projects.

North Sea Farmers manages the offshore test site where the pilot will be installed.

North Sea Farmers is an international non-profit membership organization for the seaweed sector, consisting of approximately one hundred diverse partners including Oceans of Energy. NSF works on joint investment projects and knowledge exchange on all aspects of sustainable seaweed cultivation. Its activities are focused on but not limited to the North Sea.

## TKI Urban Energy

TKI Urban Energy is a network organisation which brings together innovative companies, knowledge institutes and the Dutch government to work together in innovative consortia on topics related to renewable energy and the built environment. TKI Urban Energy is involved in establishing national innovation agenda's and dissemination of innovation results.

## TKI Wind Op Zee

TKI Wind Op Zee facilitates research, development, demonstration, valorisation, knowledge transfer, (international) collaboration, education and market development towards maximizing the cost reduction and economic impact related to offshore wind. The TKI Wind Op Zee Program aims to provide a large contribution to the energy transition by means of cost reduction and optimization, integration in the energy system, and spatial integration.

#### **Dutch Marine Energy Centre (DMEC)**

Dutch Marine Energy Centre (DMEC) is an accelerator for marine energy solutions. Our belief is that the enormous amount of energy stored in our oceans, seas and rivers will be a crucial driver to realise our global energy transition and to foster sustainable growth. By accelerating innovation, mobilising capital and shaping policies, we create multipurpose energy solutions for a wide variety of markets.

#### **OWIC – Offshore Wind Innovation Center**

The Offshore Wind Innovation Centre (OWIC) in Eemshaven is an information, training and innovation organisation for companies and knowledge institutions involved in offshore wind energy. The OWIC facilitates the development of activity and innovation in the field of offshore wind energy. It brings together knowledge and experience and makes it accessible to public authorities, knowledge institutions and the business community.

#### **NWEA - Netherlands Wind Energy Association**

The Netherlands Wind Energy Association (NWEA) is the wind energy sector's branch association. NWEA promotes the development of wind energy on- and offshore to achieve a sustainable Dutch energy supply. Together with, and on behalf of its members, NWEA is working on creating a robust wind energy sector, in combination with new and relevant policy.

#### **Rijkswaterstaat**

Rijkswaterstaat manages the North Sea and from that role looks at aspects related to the offshore floating solar park, such as ecology. Rijkswaterstaat is the implementing organization of I&W.

#### North Sea Foundation

The North Sea Foundation is an independent nature and environmental organization and has been the go-to organization when it comes to protection and sustainable use of the North Sea for over 40 years. The foundation focuses on four goals: Marine Protected Areas, a clean sea, sustainable food and nature-friendly energy. Together with our partners we work on a clean and healthy North Sea.

<u>Vogelbescherming Nederland</u> is observer and provides input on how the project can contribute to improving the knowledge of the impact of floating solar panels on bird populations.

*Vogelbescherming Nederland is the Dutch partner of Birdlife International, a worldwide partnership of independent non-governmental conservation organizations that seeks to protect birds and their habitat.* 

#### **END OF PRESS RELEASE**

#### For more information:

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