Webinar on Ocean Energy
Global Sustainable Water and Energy Solutions Network

Summary
29 June 2021

1. The Global Network on Sustainable Water and Energy Solutions held a virtual seminar on ocean energy on 29 June 2021. The meeting was convened by the United Nations Department of Economic and Social Affairs (UN DESA). More than 40 participants attended from all regions around the world and various sectors including national governments, NGOs, private sector, academic institutions, IGOs and UN system. The objective of the seminar was to share knowledge and experience on ocean energy and provide a platform to ask questions and discuss future plans. (See Annex I – Agenda.)

2. **Welcome:** The meeting was moderated by **Mr. Moez Jomaa of SINTEF**, who welcomed members and spoke on the growing relevance and potential of ocean energy. He also thanked UN DESA, the network, and SINTEF for organizing the meeting.

3. **Opening Remarks: Mr. Ivan Vera of UN DESA**, the coordinator of the network, introduced the seminar. This is the 3rd virtual seminar "2

baseline data and consult and engage the public. Policies need to support innovative financial structures, compensate additional services, and promote innovative business models. Finally, Mr. Cerdan noted that infrastructure needs to improve the availability of networks and firm generation, engage and inform emerging supply chains, and pursue synergies with other renewable energy technology.

b. **Mr. John Olav Tande, Chief Scientist, SINTEF, Norway:** Mr. Tande presented the trajectory of offshore wind comparing it to onshore wind systems. He explained that, in the years to come, we could see offshore wind providing a major source of reliable energy. As R&D continue, wind energy will continue to become cheaper and more efficient. Offshore wind could come to produce 700 GW in the next 20 years if it continues at the same pace as onshore wind. At present, wind energy is most prevalent in Europe and China. The depth of the water in which turbines are built plays a role, with shallower water being easier to build. However, newer projects are planned further away, which is more expensive but could be more productive, with stronger winds. Floating wind projects have also been implemented, with further development continuing, and likely can be made cheaper in the future. The primary challenge presently is implementing these turbines in the deeper ocean. Mr. Tande closed by discussing North Wind, his research organization, and their upcoming conference from 13-15 of January 2022.

c. **Mr. Oliver Wragg, Commercial Director, Orbital Marine Power, Scotland:** Mr. Wragg spoke about tidal stream technology, of which Orbital Marine Power is the leading developer. The O2 turbine, which is on-budget and for which data should be available this year, will be the world's largest tidal turbine. The turbine is anchored in the water, where underwater turbines can harness the power of tides to produce energy. The development of the O2 involved a design collaboration with BMW as well as innovative financing through crowdfunding and 7 million pounds of construction debt finance. Previous turbines had a successful 12-month test period, at times meeting 25% of Orkney Island's electricity demand, and won a number of awards and grants. Moving forward, Orbital Marine Power plans to build two more turbines which should run for 15 years each. Mr. Wragg notes that t

and climate goals, she says, but there is no one “correct” type of ocean energy and tailor-made solutions are also needed, making it difficult to expand the sector. Dr. Tedeschi suggests that we need to exploit synergies within the energy sector (for instance, combining wave and wind installations) and with other sectors. Specifically, the 5 “blue growth” sectors are biotechnology,

closer to the point where renewables drop under the price of fossil fuels, which move higher, shifting demand.

6. **Closing:** In closing, Mr. Vera invited the panelists to share messages that they, as experts, would give to international organizations such as the UN to support the advancement of the deployment and commercialization of ocean energy technologies. Mr. Wragg explained that the biggest factor in the timeline of development is often the collection of baseline environmental data. If international organizations were to collect data on a large scale and make it available publicly, this could help to remove years from project development timelines. In addition, he suggested more risk-adjusted

Annex I – Agenda