Report 2021

Task 48

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Airborne Wind Energy

The new Task 48 on Airborne Wind Energy (AWE) deals with the harvesting of wind energy through automatic tethered flying devices such as kites or unmanned aircraft.

AWE systems give access to stronger and more stable high-altitude wind resources, including in remote areas and floating offshore, and thus play an important part in the future energy mix. AWE also reduces material consumption which leads – in combination with a higher capacity factor – to potentially very low LCOEs and lower carbon and environmental impacts. So far, individual AWE units of a few hundred kW have been proven, and the first systems are commercially available. The AWE Task will expand the scope to utility-scale AWE farms, paving the way to make AWE a significant part of the future energy system.

The objective of the Task on AWE is to tackle various of the specific challenges on a global level, also by addressing and including stakeholders who are *not* primarily AWE developers, i.e., policy makers, authorities (like EASA and National Aviation Authorities), regulators, and other wind energy and technology experts.

The Task was kicked-off in October 2021 with more than 100 participants from 15 countries and over 60 institutions. The Task is supported by 9 countries (BE, CH, DE, DK, ES, IE, NL, UK, US), and it consists of five Work Packages: i) Resource potential and markets; ii) reference models, tools, and metrics; iii) safety and regulation; iv) Social Acceptance; v) AWES Architectures. The first results are expected in the course of 2022.

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