



Report 2021

Task 11

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Wind SCOUT

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Task 11 promotes and disseminates knowledge on emerging wind energy topics by international co-operative activities.

This is accomplished through Topical Expert Meetings (TEMs), in which active researchers, industry and government experts meet to exchange information on R&D topics of common interest to the IEA Wind TCP members. When considered useful, a factsheet is prepared with the main results of a TEM. Task 11 also disseminates knowledge by developing Recommended Practices. Many IEA

Wind Recommended Practices have served as basis for both national and international standards.

In 2021, Task 11 was strongly involved in the establishment of updated, detailed procedures to better organize the internal communication within the IEA Wind TCP, to accelerate the procedures for new task approval and provide support to the Operating

Table 1. Task 11 Participants in 2021

COUNTRY/SPONSOR	PARTICIPATING INSTITUTIONS
Belgium	Government of Belgium
Canada	Natural Resources Canada
CWEA	Chinese Wind Energy Association (CWEA)
Denmark	Danish Energy Authority
Finland	Business Finland
Germany	Federal Ministry for Economic Affairs and Energy (BMWi)
Ireland	Sustainable Energy Agency Ireland (SEAI)
Italy	Ricerca sul Sistema Energetico (RSE S.p.A.)
Japan	New Energy and Industrial Technology Development Organisation (NEDO)
Korea	Korea Institute of Energy Technology Evaluation and Planning (KETEP)
Netherlands	Rijksdienst Voor Ondernemend (RVO)
Norway	Norwegian Water Resources and Energy Directorate (NVE) and The Research Council of Norway, Norges Forskningsråd
Spain	Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT)
Sweden	Energimyndigheten (Swedish Energy Agency)
Switzerland	Swiss Federal Office of Energy (SFOE)
United Kingdom	Offshore Renewable Energy Catapult (ORE)
United States	U.S. Department of Energy (DOE)

Agents. In regular meetings with the Leadership Team, the aim was to increase the dynamics of the TCP Wind and define the conditions for TEMs to be organised in collaboration with other IEA TCPs. Travel restrictions have affected the organisation of Task 11 in 2021. The TEM#103 on Offshore Wind Consenting, initially foreseen for 2021, was finally made online beginning of 2022.

The reports and activities of Task 11 bring the latest knowledge to wind energy experts in the member countries, offer recommendations

for the future work of the TCP and operate as a catalyst for starting new IEA Wind TCP Research Tasks. Task 11 has been active since 1978, with the participation of the majority of the IEA Wind TCP participating countries.

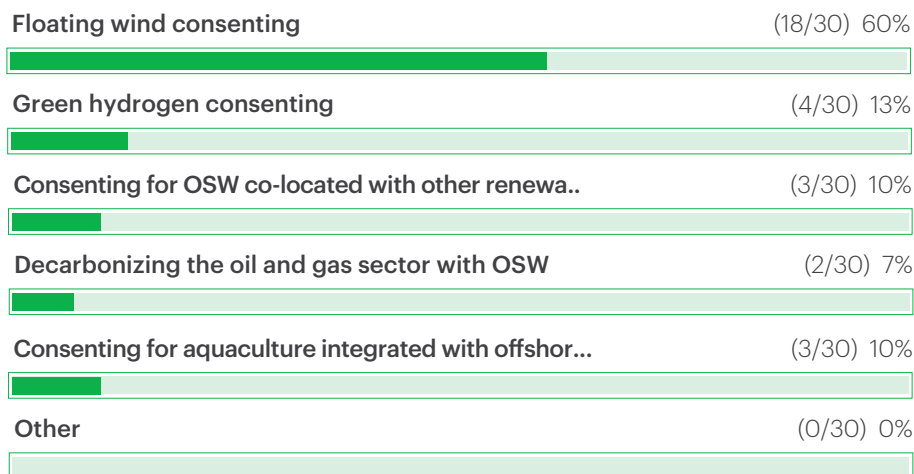
Introduction

Task 11 of the IEA Wind Technology Collaboration Programme (TCP) promotes and disseminates knowledge on emerging wind energy topics by international cooperative activities. This is accomplished through Topical Expert Meetings (TEMs), in which invited experts meet to exchange in-

formation on R&D topics of common interest to the IEA Wind TCP members. TEMs can be catalyst for starting new IEA Wind TCP research Tasks, can address specific internal needs or also serve as a dissemination platform.

Task 11 also share knowledge by developing IEA Wind TCP Recommended Practices and Factsheets. Many IEA Wind Recommended Practices have served as the basis for both national and international standards.

Task 11 has been part of the IEA Wind TCP since 1978 and nearly every



member country participates. It allows members to react quickly to new technical and scientific developments and information needs.

Task 11 reports and activities bring the latest knowledge to wind energy experts in the member countries and offers recommendations for the future work of the TCP. Task 11 is also a catalyst for starting new IEA Wind TCP research Tasks.

Topical Expert Meetings

TEMs are conducted as workshops, where information is presented and discussed in an open manner. Generally, oral presentations are expected from all participants. Meeting proceedings are made available to Task 11 participating countries immediately and to the public one year later. Although several subjects were retained interesting for the organization of a TEM, only one has been organized for 2021.

A TEM on Asset Management for the wind industry was proposed by Ireland and approved for organization in 2021, but despite two meetings organized with experts to discuss the organization of the meeting, none could endorse the technical leads.

The 2020 TEMs has also been published and disseminated, contributing to news tasks or news factsheet for the wind communities. TEM#100 on Aviation System Cohabitation lead to best practices for mitigation of conflicts between wind turbines and aviation systems. TEM#101 on Hybrid Power Plants Challenges and Opportunities opens the collaboration for the and TEM#102 on Airborne Wind Energy Challenges and

TEM #103 on Offshore Wind Project Consenting

TEM #103 on Offshore Wind Project Consenting was organized by representatives from the Sustainable Energy Authority of Ireland, the US Bureau of Ocean Energy Management and the US Department of Energy as a virtual meeting over four days, planned initially in 2021 but postponed to 8-11 February 2022. Across the four days, there was a total of 120 participants from 28 countries.

The IEA Wind TEM #103 brought together different perspectives on offshore wind consenting (or permitting). With regulators, researchers and industry attending, it highlighted the diverse range of regulatory practices across the world, presenting

lessons learned and existing barriers to development.

Interactive questions were included, such as 'what tech frontier in offshore wind (OSW) consenting are you most interested in?' (See answer in the pictures). The meeting also showed the interest in addressing Wind Energy Research Needs in Emerging Wind energy markets.

Highlights

Serving IEA Cross-cutting activities: Organisation of a multi-TCP Topical Expert Meeting

As we achieve higher shares of Variable Renewable Electricity (VRE) such as wind and solar, we begin to experience increased issues of constraint and curtailment, reducing the viability of development. VRE will also likely be the largest contributor to electrolysis energy demand for generating hydrogen, allowing it to affect emissions reduction outside of the electricity sector and have additional non-CO₂ environmental benefits.

The space related to the integration of hydrogen technologies with renewable energy is occupied by a large number of dispersed stake-

holders, each with different priorities. The IEA promotes collaboration between the Technology Collaboration Programmes (TCPs) and such collaboration allows for knowledge sharing, avoids duplication of efforts, and can lead to greater outcomes overall. Other added benefits of converting wind energy to hydrogen include energy security and economic development, both promoted within the IEA Wind TCP.

The goal of the meeting is to lay the groundwork for a cross-cutting collaboration between the wind, PV and hydrogen TCPs managed by IEA Secretariat. The ultimate goal is to address the specific challenge of 100% renewable energy system and realise the IEA 2050 net zero scenario.

Outcomes and Significance

Task 11 is at the core of the IEA Wind TCP's activities. Active researchers and experts from almost all participating countries are invited to attend these meetings. Meeting topics, selected by the IEA Wind TCP Executive Committee, have covered the most important wind energy issues for decades. In 2021, Task 11 participants held a dedicated meeting in conjunction with the spring ExCo meeting. It was a great opportunity to discuss the strategic orientation of the task and define priorities for the next term.

Next Steps

The IEA Wind Scout will remain a leading actor for news activities of the TCP, reacting quickly to topics of top priority. Several new topics have raised the interest of the task members.

The following TEM topics have been prioritized for the next terms

- Grand Challenges in Wind Energy Follow-on
- Renewable Hydrogen
- Superconductivity
- Wind Instrumentation Development
- Harmonized LCA (Sustainability)

And the TEM 104 Wind Farm Asset Management is planned for 2023.

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