EERA Joint Programme on Wind Energy - Newsletter - February 2023

News from the Coordinator

I would like to start by acknowledging the big success of EERA DeepWind conference in January 2023, with a record number of participants, inspiring speakers, high quality presentations and posters covering a broad range of research topics on offshore wind. Despite the large number of events in wind energy, DeepWind conference is growing and attracts both researchers and industry. It is definitely a very useful tool to support research and to make EERA JP Wind visible. Thanks to all JP members that attended and contributed to make it a success and congratulations to SINTEF and NTNU for a perfect organization.

The JP Management Board has been working on the Tender to develop a Research Program for Wind Energy, which was published on the 23rd of January. The outcome of this project will be a Research Program spanning up to 2050 that will translate the Net Zero by 2050 scenario into research actions. The

aim is to ensure wind energy technology will meet its 2050 targets by addressing the challenges ahead. This initiative is the first step towards the creation of a European Centre of Excellence. The process to build the Research Program will involve the full JP network, we expect you to bring your ideas, know-how and vision. You will get more information about how to participate in due course.

Another highlight of our JP is the brand new website, the new site is part of a general update of EERA web, it brings a more clear and attractive design. If you have not done it yet, spend some time in the new site and send us your news so we can keep the web content attractive and updated.

These initiatives we have launched recently will hopefully result in high impact and support for wind energy research, but also to revitalize the JP utilizing the full potential of our network.

With my best regards

Ignacio Marti Perez – JP Wind Coordinator

> **EERA JP Wind website has now a new address and a new look !**

For this new year full of challenges for wind energy, we've got the pleasure to announce you the launch of our new website. Please note the new web address : https://www.eera-wind.eu

You will find all the informations, documents, news and contacts related to JP Wind activities.

Note that you can also now subscribe to the contact list of each of the sub-programme by clicking on the

one(s) of your choice :

Sub-Programme 1 (Programme planning and outreach)

Sub-Programme 2 (Research infrastructures, testings and standards)

Sub-Programme 3 (Wind conditions and climatic effects)

Sub-Programme 4 (Aerodynamics, loads and control)

Sub-Programme 5 (System Integration)

Sub-Programme 6 (Offshore Balance of Plants)

Sub-Programme 7 (Structures, materials and components)

Sub-Programme 8 (Planning & Deployment, social, environmental and economic issues)

We hope you will like it and we are looking forward to seeing you there !

2023 DeepWind Conference in Trondheim

This 2023 DeepWind Conference was held for the first time in physics since the pandemic. The context was quite particular : post-covid period, war in Ukraine and European energy crisis. The objectives and stakes around offshore wind energy resonated all the more strongly in this unstable geopolitical landscape.

The first day was marked by a series of wide presentations from research, industry and political leaders. It was more about objectives and perspectives on offshore wind.

State Secretary **Elisabeth Saether** from the Norwegian Ministry of Petroleum and Energy opened the conference by presenting the government's objectives for offshore wind energy in the coming years. SINTEF's Managing Director, **Alexandra Bech Gjørv**, followed with an overview of the state of play of the offshore wind research institute. She advocated for the creation of a European centre of excellence on offshore wind energy to solve research problems and help make offshore wind a pillar of the European energy system. **John Olav Tande,** Chair of the EERA DeepWind Conference and SP6 JP Wind coordinator, is very familiar with this Center of Excellence project and went on to outline the major developments and progress in offshore wind over the past 20 years. He was followed by **Jon Dugstad,** Director of Norwegian Energy Partners, who presented a status and outlook of the global offshore wind market. Next, **Finn Gunnar Nielsen**, Professor at the University of Bergen (UiB) emphasized the reduction in costs, which is expected to follow the same pattern as for onshore wind.

And at last, **Ignacio Martí Perez,** Head of Division on Materials and Componants at DTU Wind and Coordinator of EERA JP Wind, then described the international collaboration that is currently taking place in Europe on offshore wind research, emphasising the development of a European Centre of Excellence on offshore wind energy in order to address the research challenges in the light of the major European energy objectives.

The second day was devoted to more technical and scientific presentations. Grid connection and integration of power systems were one of the recurring themes : **Harald Svendsen**, SINTEF Energy

Research, presented his analysis of wind conditions along the Norwegian coastline and in the southern North Sea. **Thomas Sauder**, SINTEF Ocean, gave a presentation on substructures and mooring, in a session co-chaired by **Arno van Wingerde**, Chief Scientist in Fraunhofer IWES and SP7 Coordinator of JP Wind. The regulatory framework surrounding offshore wind and the environmental impact of wind farms were also the subject of a series of presentations. **Anne Reumer** from DNV gave an overview of the current regulations for offshore wind. **Paula Bastos Garcia Rosa** from SINTEF Energy Research presented a series of mitigation measures to prevent bird strikes with turbines. The section on wind farms control was co-chaired by **Paul McKeever**, Head of Electrical Research at ORE Catapult and SP2 Coordinator in JP Wind.

The last day mainly focused on societal impact and controversies but also on operation and maintenance. The last session was co-chaired by **Lena Kitzing** from DTU (former coordinator of SP8 JP Wind) and **Rita V. d'Oliveira Bouman**(PhD) who gave a presentation on the "Ethical dimensions of social conflict in offshore wind".

Tomas Moe Skjølsvold from NTNU, presented a paper on identifying and addressing societal aspects of offshore wind energy in the North Sea

Jade McMorland, University of Strathclyde, presenting on her side an exploration of failure rates and failure classification for multi-rotor wind turbine systems.

Finally, the conference ended with the closing session co-chaired by **John Olav Tande**, focusing on future, industry and market perspectives, including a presentation by **Jacob Edmonds**, Vice-Chair of ETIP Wind and Head of Innovation and Digital at Ørsted, who recalled the objectives of ETIP Wind. **Catherine**

Banet, Professor at the University of Oslo, Scandinavian Institute of Maritime Law, presented the legal and regulatory aspects of offshore wind. She highlighted the importance of including offshore wind in the forthcoming overhaul of the European electricity market, in order to ensure that the market rules allow for the integration of a large proportion of renewables. **Jose Luis Domínguez García**, Head of the Electrical Systems Group at IREC, presented the latest innovations to reduce the cost of floating wind in the Horizon 2020 Corewind project.

A total of 80 presentations and 125 scientific posters were displayed at this 20th edition, the first in physics since COVID-19 pandemic. A great success with nearly 400 participants.

> ## Offshore wind: Member States combined targets double EU's original ambition for 2030

The new targets of EU Member States for the installation of offshore renewable energy capacity bring the EU's ambition to between 109 and 112 GW by 2030, almost double the target (60 GW) set out in the EU strategy unveiled in November 2020, says a European Commission press release published on 19 January. This figure comes from non-binding agreements reached between certain Member States during 2022, such as the Esbjerg Declaration and the Marienborg Declaration. For the time horizons 2040 and 2050, the cumulative targets of Member States for offshore energy are between 215 and 248 GW and between 281 and 354 GW respectively. This degree of approximation is due to the fact that some national targets are expressed as ranges, partly reflecting ongoing national discussions and/or a degree of uncertainty associated with the level of future offshore renewable energy

development. In its strategy adopted in 2020, the EU has set itself the long-term ambition of reaching 300 GW of offshore wind capacity and 40 GW of ocean energy capacity (wave or tidal energy) by 2050.

Net Zero Industry Act announcement

The "Net Zero Industry Act" is the name of Europe's response to the "Inflation Reduction Act", the massive plan unveiled by the Biden administration a few days ago. This American plan is part of the Inflation Reduction Act voted in the United States and includes a 369-billion-dollar subsidy package intended mainly to support "made in the USA" and the projects of American economic players in the fields of sustainable development.

The European Commission (EC) considers that this subsidy programme, which effectively excludes foreign projects, including those carried out by European companies or groups, represents a distortion of competition.

It is in this context that during the Davos Economic Forum, the President of the EC, Ursula von der Leyen, presented the "Net Zero Industry Act", a European draft law aiming to accelerate the emergence of clean technology and industry programmes led by companies or groups in the European Union. "The bill sets out a series of clean technology targets for 2030 to compete with the huge green subsidy programme of the United States," the commission president acknowledged.

The legislation under consideration also includes tax breaks for Europe's green industry. Currently under consultation, the draft divides member states. However, Commissioner Margrethe Vestager believes

that the competitiveness of the European bloc "cannot be built on subsidies" and that future changes to EU state aid rules should remain temporary.

> **The countries bordering the Baltic Sea agreed to increase their offshore wind energy capacity sevenfold by 2030, to 20 GW**

"We have agreed to increase wind energy in the Baltic Sea sevenfold by 2030," announced Danish Prime Minister Mette Frederiksen, who organised the meeting in Copenhagen which also brought together Germany, Poland, Sweden, Finland, Estonia, Lithuania and Latvia. *"We are on the front line of European energy security,"* she said. *"In this war, Putin is using energy as a weapon and has put Europe, as we all know, on the verge of an energy crisis with skyrocketing energy prices. The 20 GW, which Copenhagen expects to provide electricity to at least 20 million homes, "is more than the current offshore wind capacity in the whole of the EU,"* Frederiksen said.

By 2050, Baltic wind capacity could be increased to 93 GW, according to the statement. *"Vladimir Putin's attempt to blackmail us with fossil fuels is failing. We are accelerating the green transition. We are getting rid of the dependence on Russian fossil fuels,"* European Commission President Ursula von der Leyen said. The Commission said in March that it wanted to cut its purchases of Russian gas by two-thirds this year and by the full amount by 2030. At the time, Brussels proposed raising its target for the share of renewables in the energy mix by 2030 from 40% to 45%. On the climate front, the EU is aiming to cut greenhouse gas emissions by at least 55% by 2030 and become carbon neutral by 2050. Denmark announced that it would increase its wind power

capacity off the island of Bornholm in the Baltic Sea by 2 to 3 GW and link this production to the German grid. In May, Germany, Denmark, the Netherlands and Belgium had already announced a similar agreement to install nearly 150 GW of wind turbines in the North Sea by 2050, to make it the "green powerhouse of Europe".

> **The European Commission defended its proposal to source 45% of the EU's energy from renewable sources by 2030 as EU countries look to lower ambition**

EU countries and the European Parliament are currently in talks about a new law to boost green energy production, including a target setting out how much of Europe's energy mix should come from renewables by 2030.

In December, EU countries supported a 40% renewable energy target as part of ongoing talks to revise the EU's renewable energy directive, a goal lower than the 45% tabled by the EU's executive Commission and supported by Parliament.

When it first proposed updating the renewables directive in July 2021, the European Commission suggested a 40% target for 2030 but it upped this to 45% last year in response to Russia's invasion of Ukraine. A Eurostat study published last 19 January has shown that 21.8% of the energy consumed in 2021 in the EU originated from renewable energies. Since the current target is set to 32% for 2030, the 21.8% achieved in 2021 is still well below the target, which further highlights the need to intensify the efforts towards renewable energy development and investment. In this picture, Sweden still has the highest share of energy from renewable sources

with a 62.6% figure.

Julien Balsen - EERA JP Wind Operations & Communications Manager

j.balsen@eera-set.eu - +32486717349

EERA Joint Programme on Wind Energy
European Energy Research Alliance aisbl
Rue de Namur 72
1000 Brussels