Integrated Research Programme on Wind Energy

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NEWSLETTER EERA JPWIND SPRING 2014

This is the first bi-annual newsletter for the EERA Joint Programme on Wind Energy (EERA JPWind) after EERA JPWind has successfully acquired the EU funded IRPWind project. The management of the EERA Joint Programme will use the IRPWind project to further professionalize the EERA JPWind.
The first visible result is this newsletter. Feel free to distribute the newsletter among your colleagues and friends!

Introduction by the coordinator of the EERA JPWind

The IRPWind (Integrated Research Programme on Wind Energy) comprises 24 partners, who are all European research institutions and universities working in the area of wind energy research. All partners are part of the European Energy Research Alliance (EERA) Joint Programme on Wind Energy, except for The European Wind Energy Association (EWEA). The IRPWind project and the EERA JP Wind are highly interlinked in its partners, objectives, strategy and organization. In short the EERA JP Wind has been working for 4 years on voluntary basis, but with the IRPWind project the European Commission has made it possible to accelerate the collaboration and ambitions in order to form a European Integrated Programme on Wind Energy Research.

The aim of the IRPWind is to foster better integration of European research activities in the field of wind energy research with the aim to accelerate the transition towards a low-carbon economy and maintain and increase European competitiveness. The IRPWind is expected to both benefit existing priority settings as well as to improve the quality and implementation of future priority settings through the coordinating effect on the research communities. An objective is to integrate the various capacities and resources in the joint research activities, described in this IRP, with other ongoing European and National projects carried out by IRPWind partners and/or other EERA JP Wind members.

The IRPWind and EERA joint programme on wind energy provides the strategic leadership for the medium to long term research to support the European Industrial Initiative on Wind Energy in the framework of the Strategic Energy Technology (SET) Plan and provides added value through:

- Strategic leadership of the underpinning research
- Joint prioritisation of research tasks and infrastructure
- Alignment of European and national research efforts
- Execution of coordinated and structured research in medium to long-term programmes
- Coordination with industry, and Sharing of knowledge and research infrastructure.

The total budget for IRPWind is 9,8 M EUR., approx. 6 M EUR for the 3 technical core projects within offshore, structural Reliability and Integration and approx. 4 M EUR for the Coordination and Support Actions, which among others cover the facilitation and coordination of the IRPWind mobility scheme.
There are also EU-funded Integrated Research Programmes in the areas of Photovoltaics, Concentrated Solar Power and Smart Grids.

Peter Hauge Madsen, DTU

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IRP Wind news

IRP Wind started 1-3-2014

Funded from the FP7, 24 EERA partners started the Integrated Research Project IRPWind in order to support the EERA Joint Programme Wind, professionalize its management and increase its effectiveness. It was evident that the JP will have to gradually streamline and professionalize some of its internal procedure in the coming years as the JP has now grown substantially, both in number of members as in number of activities. With the start of the IRPWind there are more options to do so, but also obligations to deliver a more robust strategy, planning, reporting etc. In the future planning and reporting of the EERA JP Wind activities the focus will be on outcome and delivery in each of the sub-programmes. PPYs indicated by a member should reflect and correspond to a specific delivery (milestone) in the Yearly Strategic Action Plans – and the members will be asked to report on this in connection to the new, yearly EERA Wind Conference as well as in the yearly reporting documents.

This integrated research programme has been developed based on the Strategic Research Agenda (SRA) of TPWind, the Technology Roadmap on Wind Energy, as well as various dispersed national strategies and programmes for wind energy research.
In this scenario, IRPWind, gathering 24 leading research institutions across Europe, will directly contribute to

- The exploitation of European added value by promoting joint collaborative projects and overall reinforcement of research excellence, in a sector which will be key to Europe's sustainability and economic growth;
- The optimization of networking benefits from joint use of European facilities and other coordination efforts around national and European R&D initiatives;

Call for mobility grants opens in Q2

The goal of the Mobility Programme for Researchers in IRPWind is contributing to overcoming fragmentation of research activities, programmes and policies across Europe, thus overcoming one of the barriers to reach an effective and successful European Research Area (ERA). The WP is designed towards that goal and has four main objectives and expected results:

1) To ensure an efficient implementation of the CPs and in general of the research activity in EERA;
2) To facilitate the cooperation between EERA research organizations and the broad scientific community to fill gaps in the ERA in the wind energy sector;
3) To connect relevant National projects/Initiatives to the IRPWind core projects and generally to the EERA JP Wind Energy Joint Sub Programmes, keeping an eye to future emerging technologies and scientific topics;
4) To conduct actions oriented to promote the concept of mobility of researchers as brain gain and foresight schemes to enable effective mobility.

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The funding scheme consists of **39 Grants for a period length of 1 month; 18 Grants for a 3 month period and 16 grants for a 6 month period**. A lump sum will cover travel expenses from/ to home institution.

The first call will open in Q2 2014; Further calls are planned for January 2015; June 2015; January 2016; and January 2017.

Applications should be submitted online using a template available on the IRP website, http://www.IRPWind.eu/Mobility. where to find further information and FAQs.

Anna Maria Sempreviva, DTU

Announcement: IRPWind Conference on September 25th and 26th in Amsterdam

On September 25th and 26th, a dissemination event of IRPWind will be organised. The EERA partners will present the contributions to the EERA programme, the results of the pre-competitive R&D activities are shared and the progress of IRPWind will be discussed. The conference will lead to stronger collaborations between the EERA partners, synergies are sought and highlighted.

This conference is obligatory for the partners of EERA JPWind. Registration can be done through the conference webpage: http://www.irpwindconf.eu/

Keep a close eye on the conference website for any updates on the programme.

Martijn van Roermund, ECN

EERA news

News from the JPWind management board

The 7th EERA JP Wind Steering Committee meeting was held on 15 January 2014 at DTU Wind Energy. The most important topics are:

Implementation of a new sub-programme: Wind integration – economic and social aspects. Poul Erik Morthorst, DTU Management Engineering presented the ideas and scope for a new, seventh EERA WIND sub-programme taking a holistic approach on socio-economic aspects including system integration, power markets, economic incentives, component and system costs, environmental issues including life cycle assessment, and public engagement. Other relevant issues might be included, like Macroeconomics, innovation, resource efficient etc. The SC approved the new sub-programme.

New applicants. Based on the positive review presented by Sintef and UoS the SC decided to approve Marintek (associated to Sintef) and Narec (Associated to UoS) as Associated Participants in EERA JP WIND.

Peter Eecen, ECN

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The 5 EERA IRPs are starting

In EERA a total of five Integrated Research Programmes (IRPs) officially started their activities. The ELECTRA IRP (JP Smart Grids) held their Kickoff meeting in December. The other three will hold their Kick off meetings in February and March: CHEETAH IRP (JP PV), STAGE _STE IRP (JP CSP), IRPWIND (JP Wind). The MATISSE IRP (JP Materials for Nuclear) is launched – funded by the Euratom Framework Programme. Combining traditional FP7 collaborative projects with Coordination and Support Actions (CSA) to increase coordination activities, all 5 IRPs benefit from a funding of nearly 10M € from FP7.

Peter Eecen, ECN

EERA submitted 5 research proposals to Horizon2020

Four LCE-2 Horizon 2020 applications have been submitted to the EC within the area of control and substructures:

i) control strategies and systems for new and/or large rotors and wind farms (on- and offshore):

- "Advanced control and operation of wind power plants" (Coordinator: Nicolaos A. Cutululis - DTU,)
- "All-under-Control" (Coordinator: Arno van Wingerde, Fraunhofer IWES)

ii) new innovative substructure concepts, including floating platforms, to reduce production, installation and O&M costs for water depths of more than 50m.

- "Life cycle cost reduction of future innovative support structures for offshore wind turbines" (Coordinator: Raimund Rolfes, ForWind-Hannover)
- "Qualification of offshore wind substructures for water depths beyond 50 meters" (Coordinator: Ole David Økland, Marintek)

A fifth proposal has been submitted within the area of materials (NMP), coordinated by Denja Lekou, CRES. Deadline for submitting was 6th of May. The application procedure is two-staged.

Christian Orup Damgaard, DTU
Søren Siggaard Knudsen, DTU

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Sub-programme news

North Sea Offshore and Storage Network (NSON) – an initiative of EERA JP Wind SP Grid Integration

The above-mentioned and hereby proposed co-operative NSON project is closely related to several existing frameworks and initiatives as it builds on their results and takes their intentions one step further.

Following the European Strategic Energy Technology Plan's (SET-Plan) core idea of making low-carbon technologies affordable and competitive, the herein introduced NSON answers the need for specific European co-operation research and implementation projects taking up new energy technologies. Hence, the scientific research and implementation regarding the proposed NSON is also in line with the vision of the EERA Joint Programme on Wind Energy (EERA JP Wind Energy) targeting a transformation of the energy supply system by, among other means, a sustainable and well-coordinated grid extension and expansion on the European level.

In addition this NSON proposal corresponds to the proposed Integrated Research Program (IRPWind) of the EERA JP Wind Energy and the European Technology Platform for Wind Energy (TPWind) since it includes improving the overall integration activities and the industrial innovation opportunities of renewable energy resources, especially wind offshore energy in the North Seas region.

Intending to find common solutions to questions related to current and possible future grid infrastructure developments in the North Seas region the North Seas Countries Offshore Grid Initiative (NSCOGI) provides a framework for regional cooperation. The afterwards further elaborated NSON resonates with the NSCOGI's objectives to establish a sustainable low-carbon economy while maintaining security of supply and cost efficiency. Maximizing the potential of renewable energy resources in the North Seas and tackling barriers to offshore grid development are therefore crucial aspects addressed in the proposed project in order to facilitate a strategic, coordinated and cost-effective development of offshore and onshore grids. These objectives pursued by the NSCOGI are also directly supported by the ENTSO-E Regional Group North Sea.

Core partners of the initiative are
SINTEF (NO), University of Strathclyde (UK), Fraunhofer IWES (DE), DTU (DK) and ECN (NL)

Horizon 2020 proposal Smart-Wind submitted
In March, a consortium of EERA JP Wind SP Grid Integration submitted the proposal "Smart Wind" addressing the H2020 call LCE 2.

Kick-Off Event of IRPWIND Work Package 8 "European-wide measures and structures for a large scale wind energy integration" successfully
On 6.-7. May 2014, the Kick-Off Meeting of IRPWIND WP8 was successfully processed at ECN in Amsterdam. All smart deliverables of the work package have been finalized and submitted to the EC.

Kurt Rohrig, Fraunhofer IWES

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New sub-programme approved: Economic and social aspects of wind integration

The new and seventh sub-programme takes an integrated approach to social and economic challenges. These challenges play an important role for the expected high penetration of wind power in a number of countries in the future.
Topics stretch from the technical cost development of components and different turbine type and to questions as e.g. “How can wind power provide most benefit to the power system?”. This entails interactions with power markets, e.g. for controlling forecast errors and contributing to overall system balancing. Moreover, social aspects are decisive for the future deployment of wind energy: how can factors leading to local acceptance for wind power be better understood, hence reducing project timelines and development cost? Simultaneously, how can support be designed in a cost-efficient way, increasing acceptance at both national and supranational levels?
This new sub-programme can hence provide the other sub-programmes with a broader context that relates society, technology, environmental and economic aspects of wind integration which will play an increasing role with higher penetration levels.

Poul Erik Morthorst, DTU

Suggestions and feedback?

If you have any topic suggestions for the next newsletter, or if you have ideas on how to improve it, feel free to send your input to vanroermund@ecn.nl.

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