IRPWind

Integrated Research Programme on Wind Energy

Project acronym: IRPWIND
Grant agreement nº 609795
Collaborative project
Start date: 01st March 2014
Duration: 4 years

Plan for the Use and the Dissemination of the Foreground (PUDF) – update 2017-03-31

Work Package 4 – Deliverable 4.17

Lead Beneficiary: ECN
Delivery date: 31th March 2017
Dissemination level: PU

The research leading to these results has received funding from the European Union Seventh Framework Programme under the agreement 609795.

Author(s) information (alphabetical):		
Name	Organisation	Email
Martijn van Roermund	ECN	vanroermund@ecn.nl
Koen Hermans	ECN	hermans@ecn.nl

Aknowledgements/Contributions:		
Name	Name	Name
Peter Eecen (ECN)	German Perez (TECNALIA)	Klaus Skytte (DTU)
Salvatore Amico Roxas (ENEA)		

Document Information

Version	Date	Description			
1	2016-02-29	Initial version			
2	2017-03-31	Updated			
			Prepared by	Reviewed by	Approved by
		Name	Van Roermund	Zeni	Damgaard

Definitions

PUDF	Plan for Use and Dissemination of the Foreground
IRPWind	Integrated Research Project Wind
EC	European Commission
EERA	European Energy Research Alliance
SP	Sub-programme
JP	Joint Programme
IP	Intellectual Property
IPR	Intellectual Property
TTO	Technology Transfer Office
TTE	Technology Transfer Expert

Contents

Executive Summary

This report aims to provide an overview of the foreground from the IRPWind project specifically and EERA Joint Programme Wind (EERA JP Wind) in general. Technology Transfer Experts (TTE's) and the sub-programme (SP) coordinators have an important role in creating an overview of the exploitable foreground, i.e. of the exploitable results of the ongoing research activities. The overview in turn will help external stakeholders to get access to the required information. This information is either publically available or not. Publically available information can be accessed through websites and other channels, such as conferences and dedicated press.
Restricted data requires an application to access. For example, the foreground owner may ask for a Non-Disclosure Agreement (NDA), a licensing fee or can decide to sell the Intellectual Property (IP)/Technology.
In order to create a single point of access for both data types an online technology transfer platform is initiated; it includes a Sharepoint-like environment that supports the network of TTE's and holds a repository that can showcase the IP and technology developed by the research institutes within the context of EERA JP Wind. This platform will also work as a forum for discussion between the industry and the research community on themes of general interest.

A first version of this platform was launched in the second quarter of 2016. Involvement of the SP coordinators (especially for the definition of foreground) and TTE's (exploitation of foreground) is essential in rendering this joint effort a success. Continued effort is taken to keep the conversation ongoing and shape the platform such to better match the needs of the project partners.

The Plan for the Use and Dissemination of the Foreground (PUDF) is considered a living document and will be updated at different stages when more information is provided. This is the first revision since the initial version of February 2016.

1. Introduction

Collaborative research leads to collaborative results. The basis for these results is knowledge, experience and existing intellectual property (IP). This is called background and will differ from partner to partner in the project. The data and IP resulting from the collaborative research effort is called foreground and is subject of discussion in this document.
Ownership of foreground has its roots in the background discussion. We must carefully consider which IP is brought to the project by each partner, then what IP is generated within the project and finally how the IP is further developed and dealt with after the project has ended (postground). Moreover, we should ask the question "how can the consortium and each partner in it ensure the foreground is used and disseminated as swiftly as possible during and after the project's life?".
To be able to plan the activities that secure the intentions of dissemination and communication of project results, a Plan for the Use and Dissemination of the Foreground (PUDF) has been developed.

As rightly pointed out by the European IPR Helpdesk [1], the PUDF *"then describes the activities that beneficiaries have already carried out during the project implementation and still expect to develop with the purpose of allowing the dissemination and use of the foreground at the end of the project in support of an optimal exploitation. Within this document beneficiaries should also envisage the strategy for the management of intellectual property rights, an essential step for an effective exploitation of foreground."*

And [1]: "*The PUDF may be strategically used by participants for purposes other than simply reporting measures and plans to the EC at the end of the project. Indeed, participants may use the PUDF as a tool for monitoring their strategies for dissemination and exploitation during the course of the project. The PUDF is then taken as a broader management tool, allowing the consortium to implement the strategy during the project, updating it as well as reviewing and aligning it with the progress of the work. In this scenario, participants often submit the updated version of the PUDF in conjunction with all the periodic reports presented or as deliverables during the project.*"

To develop the PUDF for the IRPWind project, the various technology transfer offices (TTOs) of the research partners involved have been consulted. The technology transfer experts (TTEs) representing these offices will – or have already - provide(d) the input for section 0 of this document, that deals with exploitation measures. The data provided in section 0 ("Dissemination measures") will be or has already been gathered by the 7 sub-programme coordinators of EERA JP Wind.
The names and organisations are listed in Appendix B.

2. Dissemination measures

2.1 Plans for dissemination

The IRPWind project has the following communication channels through which news, research results and other relevant information are shared with the public:

Conferences and events
- Annual IRPWind conference
- Annual dissemination events for the industry
- EERA annual congress
- Two in-depth workshops

The internet
- Dedicated website
- Bi-annual newsletter
- Online technology transfer network
- Specific programme identity
- Mailing list
- Social media

Press
- Presentations and publications
- Publication of dedicated articles in specialised press
- Leaflet
- Press releases

Word of mouth
- Network of TTEs
- The mobility plan for researchers (IRPWind WP5)

2.2 Scientific publications

After being peer-reviewed, the articles that are published in scientific publications are made available in the dedicated press. All publications are listed in a comprehensive, living document that is compiled not only for the IRPWind project but also for the EERA Joint Programme Wind as a whole. In the past year, IRPWind beneficiaries, and EERA JP Wind members have been contacted to update this list. New publications will be added in a continuous updating effort for the remainder of the project. The latest version of the PUDF, will be accessible through the IRPWind website (www.irpwind.eu), under the section dedicated to “knowledge transfer”.
Please find the current list of scientific publications in Appendix C.

2.3 Other dissemination activities

IRPWind partners keep track of all the dissemination activities with the aim to promote the project from its preliminary findings to more mature results. As for the scientific publications mentioned in the section above, the list of other dissemination efforts is updated regularly and will be available on the IRPWind website as well.
Please find the current list of other dissemination activities in Appendix D.

2.4 Network of TTEs

Technology Transfer Experts deal with transferring IP or technology to the market after being developed either within the IRPWind framework, in a national project or international collaboration. The vast majority of research institutes in Europe already works with internal TTEs, often accommodated in an ad-hoc Technology Transfer Office (TTO). The amounts of TTEs per institute vary and thus the size of the TTO. As previously mentioned, a network of several Technology Transfer Experts is created under the IRPWind project.

The effectivity of the IP and technology transfer process shows large differences between the institutes. This gap in effectivity can be largely reduced by exchanging experience among the TTEs of the EERA JP Wind members. Lessons learned will be shared, as well as standardized documents and other information that can support this integration step. Hence, the exploitability of the research results will improve. The resulting network of TTEs is supported by an online technology transfer platform that can, amongst other things, facilitate document exchange. This is explained in more detail in section 0.

The conditions under which information is exchanged and the potential remuneration for using valuable experience is currently being discussed. Other aspects suitable for further discussion are:

- How to make results more appealing to industry?
- The idea of a “mobility exchange scheme with the industry”
- How to overcome hurdles/issues deriving from the joint ownership of a result?
- Joint licensing of results owned by different organization
- Fund raising for result demonstration
- Spin-offs: is it a valuable route for technology transfer in the wind sector?
- Exploitation manager in a collaborative project (in charge of fostering the exploitation of results)
- IP Body in a collaborative project, in charge of solving any IP conflict that may arise within the consortium
- Does the protection of results need to reach the consensus of any party that may have an interest in it? Should the principle “the one that develops, also owns rights and decides” be somehow modified?
- How can we reach out and disseminate the foreground of our projects and our IP to small and medium sized enterprises?

The network currently consists of 13 active TTEs out of a total of 24 IRPWind members. The remaining 11 TTE’s need to be identified and activated. The challenge lies in the fact that impact is maximized if all members participate in the network. It will therefore be important to prove the added benefit to share the aforementioned experience with other European research centres.

3. Exploitation measures

3.1 Plans for exploitation

The sub-programme coordinators, together with the TTE's of their respective institutes have a clear overview of the back- and foreground of the projects they are involved in. Each institute currently has its own plans for exploiting the IP or technology results it owns, such as the results of national projects. Sharing experience and lessons learned will significantly help EERA JP Wind to write a detailed, comprehensive and useful-for-all exploitation plan, which will then form the basis for the PUDFs of other European research projects and beyond.

To start this effort, the TTE's have been requested to provide input in order to create two tables that show an overview of "applications" and "exploitable foreground" respectively.
The application status for patents, trademarks, registered designs may give an indication of the foreground's pipeline and its level of advancement.
The table of exploitable foreground shows which IP and technology have already passed the application process and are (or will be) in the institute's repository for commercial use.

3.2 Applications

The list of applications is compiled for both the IRPWind project and EERA JP Wind as a whole and is fed by the IRPWind beneficiaries, followed by all EERA JP Wind members. This document will be accessible through the IRPWind.eu website, under the "knowledge transfer" section as well as through the online technology transfer network (explained in section 0)..
Please find the current list of applications in Appendix E.

3.3 Exploitable foreground

As mentioned for the 'Applications' list, the 'Exploitable Foreground' section is compiled for IRPWind and EERA JP Wind. All partners and members should contribute to update it. The document will be accessible through the 'knowledge transfer' section of the IRPWind website, as well as through the online technology transfer network (explained in section 0).

Per topic that is listed, the owner of the relevant foreground will provide a text that explains its exploitability. As suggested by [2], this text shall elaborate on:

- Its purpose
- How the foreground might be exploited, when and by whom
- IPR exploitable measures taken or intended
- Further research necessary, if any
- Potential/expected impact (quantify where possible)

3.4 Online technology transfer platform

The effort of setting up a network of TTEs (see section 2.4) was broadened after the EERA JP Wind Advisory Board meeting took place in 2015; there, the idea of having a "online market place" was discussed. This finally led to the idea of an online technology transfer platform that hosts both the network of TTEs, the "market place" where the industry meets the research community that will also serve as a repository for showcasing IP/Technology.

Figure 1 shows a first attempt to provide the platform (and network) with a structure. The Italian National Agency for New Technology, Energy and sustainable Economic Development, (ENEA) has developed an online repository for EERA, which forms a very usable tool for the online TT platform. The network of TTEs can be set up as a Sharepoint-type of environment that is linked to the repository.

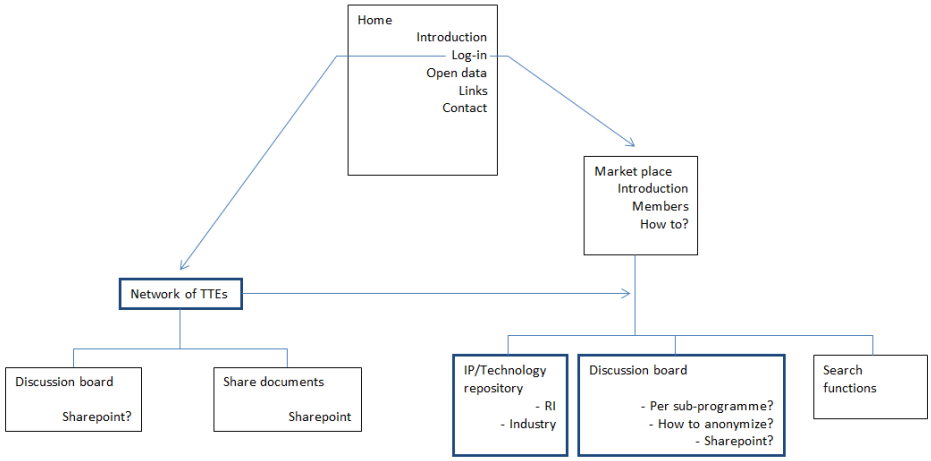

Figure 1. Structure of the online TT platform

This idea was pitched at the Deepwind conference 2016 in Trondheim to a number of TTE's from the consortium. It was then introduced to the industry in September 2016 at the WindEurope summit in Hamburg. EERA JP Wind was support by ETIP's chair, Aidan Cronin from Siemens Wind Power.

The advantages of the platform are plentiful: on one hand, research community representatives can universally showcase their own IP and technology, while on the other IRPWind and other (national and international) project results can be broadly disseminated (as a "foreground" of research).

As discussed during the "EERA JP Wind and the industry"-workshop at the IRPWind conference in Amsterdam, rendering research results and IPRs so reachable by all stakeholders, will result in helping Small and Medium-sized enterprises in accessing a field that sometimes is reserved to bigger corporations. The platform will thus tackle a very timely issue for the TTE's and possibly open a section of the market that has so far been hard to cover. A first version of the platform is was launched in 2016 and currently efforts are taken to fill the platform with high quality entries of IP assets.

4. Access conditions

We can distinguish between 2 types of information streams: public and non-public. The first one is accessible by any stakeholder and can be used as long as reference is made to the source(s). A fee might still be applicable before access to the research results is granted. For example when the information is presented in a scientific article in dedicated press access requires a paid subscription. Other examples of publicly accessible information coming from European wind research institutes are:

- Publications made available through reports (download per website)
- Presentations on conferences (often downloadable through conference site)
- Posters at conferences
- Newsletters to stakeholders
- Websites of a research project (either national or European)
- LinkedIn through project group or EERA JP Wind group

The information request, if required, will always be granted for these cases. Generally, institutes keep track of the amount of downloads and ask the requesting party to register for analytical purposes.

The non-public information include research results, IP or technology that is not freely accessible and requires either an NDA, formal data request or licensing fee to use. Examples of non-public data are:

- Background of a research or organization
- Foreground of a research project that includes commercial partners
- Results from national projects that include and EERA JP Wind partner and a commercial partner

The access conditions for this type of information depends on the status. Accessing information that has a patent pending requires different measures than information that can be provided under a licensing fee. On top of this, access conditions may vary per institute and per profile of the requesting party too.

Within the network of TTE's a general overview was made on the access conditions that should accompany the various foreground types.

5. Conclusions

To be able to provide a clear overview of the IRP Wind and EERA JP Wind foreground that can be publicly used and disseminated, IRPWind is creating a set of comprehensive lists per topic, that will be regularly updated by EERA JP Wind members and project partners. The development of these lists as presented in the Appendices of this document will form the basic input for the Key Performance Indicators that measure the success of EERA JP Wind or specific projects.

The third year of the IRPWind project (March 2016 – March 2017), has shown an increase of communication activities not only within the network of TTE's, but also from the sub-programme coordinators. The list of scientific publications has grown considerably, but the overview of other dissemination activities, exploitable foreground, and applications needs updating. The EERA JP Wind's management board meetings, the IRPWind conference and some dedicated workshops will keep this topic on the agenda.

The online technology transfer platform is now running and represents an incentive for all EERA JP Wind members to once again focus on exploiting the foreground or making the foreground exploitable. The platform gives all TTE's the opportunity to refer to an exhaustive library of IP and developed technology. The increased attention from industry can be the required spark that lights the foreground fire. It will therefore be essential to continue to inform the industrial stakeholders about the idea, the progress and their role, once sufficient content is brought together. The side event planned for WindEurope 2017 in London will provide a platform for EERA JP Wind to do just that. Right now, the highest priority lies in the collection of high quality IP assets in the platform and activating all TTE's to play a part in this process. The feedback from the stakeholders will be included in future versions of the platform.

In parallel, the creation of a concrete exploitation plan for IRPWind is foreseen; this plan will input the PUDF and can afterwards be used for other EU and national projects. The PUDF will be continuously updated and made available through the IRPWind (Sharepoint) site.

Appendix A. References

1. https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/PUDF_0.pdf
2. http://ec.europa.eu/research/participants/data/ref/fp7/89692/project-reporting_en.pdf, page 24 to 28

Appendix B. IRPWind TTEs and SP-Coordinators

	Name	Role	Remarks
DTU	Lars Stengaard	TTE	
CRES			Not identified
ECN	Sjoerd Wittkampf	TTE	
Fraunhofer IWES	Marcel Maximilian Wiggert Sebastian Stock Antje Wagenknecht	TTE	
SINTEF	Anders Lian	TTE	
CENER			Not identified
CNR	Alberto Silvani	TTE	
WindEurope			Not identified
TUBITAK			Not identified
VTT	Geert-Jan Bleumink	TTE	No need
NTNU	Suzanne Øverlie	TTE	No need
UoS			Not identified
TECNALIA	German Perez Moran	TTE	
ForWind-OL			Not identified
ForWind-H			Not identified
UoA			Not identified
CIRCE			Not identified
IREC	Manel Sanmartí	TTE	
LNEG	Maria João Marcelo Curto	TTE	
CTC			Not identified
AAU	Peter Rasmussen	TTE	
WMC	Rogier Nijssen	TTE	
CIEMAT	Maria Teresa Gutierrez García	TTE	
MARINTEK			Not identified
SP1	Hans Ejsing Jørgensen	SP coordinator	DTU
SP2	Peter Eecen	SP coordinator	ECN
SP3	Arno van Wingerde	SP coordinator	Fraunhofer IWES
SP4	Kurt Rohrig	SP coordinator	Fraunhofer IWES
SP5	John Olav Tande	SP coordinator	SINTEF
SP6	Antonio Ugarte	SP coordinator	CENER
SP7	Klaus Skytte	SP coordinator	DTU

Appendix C. Scientific publications

List of scientific (peer reviewed) publications, starting with the most important ones

No.	Project/ Institute	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers (if available)	Is/Will open access provided to this publication?
1	ECN	Economical reactive power provision for an offshore transmission technology	Soleimanzadeh, M.	Renewable Power Generation		IET	Naples	2014	p. 1-6		Yes
2	TUDelft	Wake losses optimization of offshore wind farms with moveable floating wind turbines	Rodrigues, S.F.	Energy Conversion and Management	Volume 89, 1 Jan 2015	Elzevier		2015	P. 933–941		Yes
3	NORCOWE	Proof of concept for turbulence measurements with the RPAS SUMO during the BLLAST campaign	Reuder, J.	Athmospheric Measurement Techniques	01-Feb-16	EGU		2016	p.1-26		Yes
4	University of Colorado	Characterization of wind velocities in the upstream induction zone of a wind turbine using scanning continuous-wave lidars	Simley, Eric	Journal of Renewable and Sustainable Energy	vol 8, issue 1	AIP		2016		http://dx.doi.org/10.1063/1.4940025	yes
5	ForWind	Demonstration of synchronised scanning Lidar measurements of 2D velocity fields in a boundary-layer wind tunnel	van Dooren, M F	Journal of Physics	vol 753	IOPscience		2016		http://dx.doi.org/10.1088/1742-6596/753/7/072032	yes
6	DTU	Characterization of wind velocities in the wake of a full scale wind turbine using three ground-based synchronized WindScanners	Yazicioglu, Hasan	Journal of Physics	vol 753	IOPscience		2016		http://dx.doi.org/10.1088/1742-6596/753/3/032032	yes
7	NREL	Detailed field test of yaw-based wake steering	Fleming, P.	Journal of Physics	vol 753	IOPscience		2016		http://dx.doi.org/10.1088/1742-6596/753/5/052003	yes
8	NREL	Using High-Fidelity Computational Fluid Dynamics to Help Design a Wind Turbine Wake	Churchfield, Matthew J.	Journal of Physics	vol 753	IOPscience		2016		http://dx.doi.org/10.1088/1742-6596/753/3/032009	yes
9	DTU	Investigation of wake interaction using full-scale lidar measurements and large eddy simulation	Machefaux, Ewan	Wind Energy	vol 19, issue 8	Wiley		2015	1535-1551	http://dx.doi.org/10.1002/we.1936	yes
10	DTU	Variations of the Wake Height over the Bolund Escarpment Measured by a Scanning Lidar	Lange, Julia	Boundary-Layer Meteorology	vol 159, issue 1	Springer		2016	147-159	http://dx.doi.org/10.1007/s10546-015-0107-8	yes
11	DTU	Long-Range Windscanner System	Vsiljevic, Nikola	Remote Sensing	vol 8, number 11	MDPI		2016	896	http://dx.doi.org/10.3390/rs8110896	yes
12	University of Stavanger	Application of lidars for assessment of wind conditions on a bridge site	Jakobsen, J.B.	Proceedings of the 14th International Conference on Wind Engineering				2015			yes
13	DTU	High Resolution Vertical Wind Profile Measurements	Pedersen, Anders Tegtmeier	Book of Abstracts - WindTech 2015		WindEEE Research Institute		2015	21-22		yes
14	DTU	3D Measurements and Modelling of Wake Flow Around a Full-Scale Vertical Axis Wind Turbine (Nenuphar)	Sjöholm, Mikael	Book of Abstracts - WindTech 2015				2015	71-72		yes
15	DTU	Lidar-based Research and Innovation at DTU Wind Energy – a Review	Mikkelsen, Torben	Journal of Physics	vol 524, no 1	IOPscience		2014		10.1088/1742-6596/524/1/012007	yes
16	DTU	Two-Dimensional Rotorcraft Downwash Flow Field Measurements by Lidar-Based Wind Scanners with Agile Beam Steering	Sjöholm, Mikael	Journal of Atmospheric and Oceanic Technology	vol 31	AMS		2014	930-937	10.1175/JTECH-D-13-00010.1	yes
17	DTU	Laser scanning of a recirculation zone on the Bolund escarpment	Mann, J.	Journal of Physics	vol 555, no 1	IOPscience		2012		10.1088/1742-6596/555/1/012066	yes
18	DTU	Full two-dimensional rotor plane inflow measurements by a spinner-integrated wind lidar	Sjöholm, Mikael	EWEA 2013				2013			
19	DTU	Full-Scale Field Test of a Blade-Integrated Dual-Telescope Wind Lidar	Anders Tegtmeier Pedersen	EWEA 2013				2013			
20	DTU	A spinner-integrated wind lidar for enhanced wind turbine control	Mikkelsen, Torben	Wind Energy	Vol 16	Wiley		2013	625-643	10.1002/we.1564	yes

Formatted: Normal;LEANwind Normaal

List of scientific (peer reviewed) publications, starting with the most important ones

No.	Project/ Institute	Title	Main author	Title of the periodical or the series	Number, date or frequency	Publisher	Place of publication	Year of publication	Relevant pages	Permanent identifiers (if available)	Is/Will open access provided to this publication?
21	WMC	Hydrothermal ageing of glass/epoxy composites for wind turbine blades	Rocha, I., Raijmaekers, S., Nijssen, R	ICCM 20: 20th International Conference on Composite Materials				2015		http://iccm20.org/fullpapers/file?f=dRpeDO2aRz	yes
22	CRES	Probabilistic analysis of wind turbine blades considering stiffness, strength and stability under extreme and fatigue loading	K. Bacharoudis, D. Lekou, T. Philippidis,,	ICCM 20: 20th International Conference on Composite Materials				2015		http://iccm20.org/fullpapers/file?f=q4WKDOdanJ	yes
23	CRES	Measurement uncertainty of fatigue properties and its effect on the wind turbine blade reliability level	K. Bacharoudis, A. Antoniou, D. Lekou	EWEC Paris				2015		http://www.ewea.org/annual2015/conference/submit-an-abstract/pdf/304878457273.pdf	no
24	Leibniz University Hannover	An improved two-step soil-structure interaction modeling method for dynamical analyses of offshore wind turbines	Jan Häfele, C Hübler, CG Gebhardt, R Rolfes	Applied Ocean Research	55	Elsevier		2016	141-150	http://dx.doi.org/10.1016/j.apor.2015.12.001	no
25	Leibniz University Hannover	Effective consideration of soil characteristics in time domain simulations of bottom fixed offshore wind turbines	Clemens Hübler, J Häfele, A Ehrmann, R Rolfes	The 26th International Ocean and Polar Engineering Conference		International Society of Offshore and Polar Engineers		2016		https://www.onepetro.org/conference-paper/ISOPE-I-16-591	no
26	WMC	Relation between temperature and physical ageing of wind turbine blade matrix material	Rogier Nijssen, S. Raijmaekers, I.B.C.M. Rocha	17th European Conference on Composite Materials		Eur. Conf. Compos. Mater	Munich	2016		https://www.wmc.eu/pdf/THUR-2_MUC_3.13-07.pdf	yes
27	WMC	Experimental/numerical study of anisotropic water diffusion in glass/epoxy composites', 37th RISOE International conference on materials	I.B.C.M. Rocha, S. Raijmaekers, R.P.L. Nijssen, F.P. van der Meer, L.J. Sluys	37th RISOE International conference on materials science	139	IOP Conf. Series: Materials Science and		2016		10.1088/1757-899X/139/1/012044	yes
28	WMC	Influence of internal temperature development during manufacturing on thick laminates compression fatigue properties	Lahuerta F, Nijssen RPL	37th RISOE International conference on materials science	139	IOP Conf. Series: Materials Science and		2016		10.1088/1757-899X/139/1/012028	yes
29	TUDelft	Evaluating delamination growth in composites under dynamic loading using infrared thermography	Narayana-Swamya JK, Lahuerta F, Anisimov A, Nijssen R, Groves R.	17th European Conference on Composite Materials (ECCM17)		Eur. Conf. Compos. Mater	Munich	2016	1-9		no
30	Leibniz University Hannover	Experimentally supported consideration of operating point dependent soil properties in coupled dynamics of offshore wind turbines	Hübler, C., Häfele, J., Gebhardt, C. G., & Rolfes, R	Marine Structures (submitted)							
31	Leibniz University Hannover	Hierarchical four-step global sensitivity analysis of offshore wind turbines based on aerodynamic time-domain simulations	Hübler, C., Gebhardt, C. G., & Rolfes, R	Renewable Energy (submitted)							
32	Leibniz University Hannover	Efficient fatigue limit state design load sets for jacket substructures considering probabilistic distributions of environmental conditions	Häfele, J., Hübler, C., Gebhardt, C. G., & Rolfes, R	27th International Ocean and Polar Engineering Conference (submitted)							

Appendix D. Other dissemination activities

List of dissemination activities

No.	Type of activities	Main leader	Title	Date/Period	Place	Type of Audience	Size of Audience	Countries addressed
1	Workshops	REC	RT1: Kick-off and workshop on component and system cost development and related research needs	mei-15	Barcelona	Scientific community	14	EU
2	Workshops	DTU	Workshop on public acceptance issues of onshore wind energy	mrt-15	Roskilde	Scientific community	30	EU
3	Conferences	NTNU	Session at EERA DeepWind conference	feb-15	Trondheim	Scientific community		EU
4	Workshops	DTU/ECN	Workshop on future policy support options for offshore wind energy in Europe	sep-15	Amsterdam	Scientific community	30	EU
5	Workshops	DTU	SP meeting	sep-15	Amsterdam	Scientific community	30	EU
6	Publications	DTU	White book on social science approaches of wind energy deployment	jan-16		Scientific community		EU
7	Publications	IREC	Review document: State of the art of existing tools for wind energy economic asssessment	okt-16		Scientific community		EU
8	Publications	ECN, Soleimanzadeh, M.	Optimizing offshore wind farms electrical system design and reactive power provision	Mar-2015	Website	Scientific community		Global
9	Workshops	ECN, van Roermund, M.	Online technology transfer network for wind energy research	jan-16	Trondheim	Scientific community	30	EU
10	Posters	NORCOWE	Proof of concept for wind turbine wake investigations with the RPAS SUMO	jan-16	Trondheim	Scientific community	200	EU
11	Presentations	ECN, Schepers, G.	Latest results from the EU project AVATAR: How to model large wind turbines aerodynamically?	jan-16	Trondheim	Scientific community	100	EU
12	Presentations	ECN, Schepers, G.	A parametric investigation into the effect of low induction rotor (LIR) wind turbines on the LCoE of a 1GW offshore wind farm in a North Sea wind climate	jan-16	Trondheim	Scientific community	100	EU
13								

Appendix E. Applications

List of applications for patents, trademarks, registered designs etc.

No.	Type of IP rights	Confidential	Foreseen embargo date dd/mm/yyy	Application reference(s) (e.g. EP123456)	Subject or title of application	Applicant (s) (as on the application)
1	Patents	No		WO2015044370	Polarization Diversity Image-Reject Homodyne Receiver for Directional Radial Velocity Measurements in Light Detection and Ranging (LIDAR) Instruments	Abri, Farzad Cyrus Foroughi
2						
3						
4						
5						
6						
7						

List of applications for patents, trademarks, registered designs etc.

No.	Type of IP rights	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Application reference(s) (e.g. EP123456)	Subject or title of application	Applicant (s) (as on the application)
1						
2						
3						
4						
5						
6						
7						

Appendix F. Exploitable foreground

List of exploitable foreground									
No.	Type of Exploitable Foreground	Description of exploitable foreground	Confidential Click on YES/NO	Foreseen embargo date dd/mm/yyyy	Exploitable product(s) or measure(s)	Sector(s) of application	Timetable, commercial or any other use	Patents or other IPR exploitation (licences)	Owner & Other Beneficiary(s) involved
1						Pick from list			
2						Pick from list			
3						Pick from list			
4						Pick from list			
5						Pick from list			
6						Pick from list			