

The implementation of the EWI: achievements and next steps

Introduction

- ❑ TPWind is making progresses in the implementation of the EWI, which is ensured by the Wind European Industrial Initiative (EII) Team, composed of EU, national and TPWind representatives
- ❑ TPWind representatives in the Wind EII Team are Executive Committee members and selected Secretariat staff
- ❑ The Wind EII Team is supervised by the SET-Plan Steering Group, composed of high level EU and national representatives
- ❑ Last year the Wind EII Team developed the EWI 2011 Work Programme, finalized in October 2010

The EWI: the road so far (I)

- ❑ The EWI 2011 Work Programme, covering both 2010 and 2011, was finalised in October 2010. Following this step, TPWind contributed to its implementation by developing relevant FP7 topics for the EC, submitted in December 2010
- ❑ Seven FP7 topics were recommended by the EWI 2011 Work Programme:
 - New materials for large scale wind turbines (10 – 20 MW)
 - Reliability of large scale wind turbines
 - EU testing approaches and risks posed by upscaling
 - Development of offshore standards
 - Grid connection of offshore wind farms
 - HVDC grids and compatibility of grid components (this topic would also contribute to the implementation of the European Electricity Grid Initiative - EEGI)
 - Identification of sites and measurement techniques (which is now part of the new EU wind atlas ERANET+ topic – see below and Section III of this document)

The EWI: the road so far (II)

- ❑ The EWI 2011 Work Programme also recommended the inclusion of two priorities in the 2011 IEE call for proposals:
 - Integration of EU spatial planning projects (e.g. WINDSPEED, WINDBARRIERS and SEANERGY 2020) to develop EU standards for both onshore and offshore
 - Societal and economic value of wind power
- ❑ The EC followed TPWind's funding recommendations, although only partially (mainly because of budget constraints):
 - Two FP7 topics, out of the seven recommended, were included in the 2011 FP7 Energy call, published on 20 July (i.e. new materials for large scale turbines and reliability of large scale wind turbines). These topics will contribute to the implementation of the EWI
 - One IEE priority was partially addressed by the 2011 IEE call for proposal (social acceptance, but without the economic component), published on 18 January

The EWI: the road so far (III)

- ❑ As for the coordination of EU and national funds, which was supposed to facilitate the implementation of the EWI, it proved more complex than originally estimated for two reasons:
 - The differences between national Programmes
 - The fact that Member States joined SET-Plan EIs on a voluntary basis
- ❑ As a result, the implementation of the EWI could have been more effective in 2011
- ❑ On a more positive note, the Wind EI Team started working on the publication, in 2012, of an FP7 ERANET+ topic (i.e. funded by both Member States and the EC) to fund the development of a new EU Wind Atlas
- ❑ The Secretariat will keep the SC informed on this development: the publication of the ERANET+ topic should be secured towards the end of 2011 / beginning of 2012
- ❑ This result will be essential to stimulate further EU / national cooperation in the framework of the EWI and the SET-Plan

Funding the EWI (I)

- ❑ At EU level, the implementation of the EWI has been so far ensured by the following Programmes and calls for proposal (a full list of EWI projects is included in the EWI 2012 Work Programme):
 - The 2009 European Energy Programme for Recovery (EEPR), which allocated € 565m to innovative offshore wind farms
 - The 2009 Intelligent Energy Europe (IEE) call for proposals, which provided funding also for projects on offshore spatial planning
 - The 2011 IEE call for proposals, which will provide funding also to projects focusing on social acceptance of renewables.
 - The 2009 FP7 Energy call for proposals, which included a topic focusing on cross-sectoral approaches to the development of very large offshore wind turbines
 - The 2010 FP7 Energy call for proposals, which included several topics (see next slide)

Funding the EWI (II)

- ❑ Development of design tools for offshore wind farm clusters (i.e. wake effects and virtual power plants; relevant to EWI activities 1.1.2 – *Improved reliability of large turbines and wind farms* – and 3.2.1 – *Wind power plants requirements and solutions to wind farms supporting the system dynamics*)
- ❑ Demonstration of innovative offshore wind electricity generation structure (relevant to EWI activity 2.1.1 – *Deep offshore and site identification for demonstration of large-scale substructures*)
- ❑ Multi-use offshore platforms (relevant to EWI activity 2.1.1 – *Deep offshore and site identification for demonstration of large-scale substructures*)
- ❑ Innovative tools for the future coordinated and stable operation of the pan-European electricity transmission system (relevant to both the EEGI and EWI activity 3.3.2 – *Market integration*)
- ❑ Innovative strategies and tools for the reliability assessment of the pan-European electricity transmission network (relevant to both the EEGI and EWI activity 3.3.2 – *Market integration*)
- ❑ Network of projects developing the future European electricity networks (relevant to both the EEGI and EWI activity 3.3.2 – *Market integration*)

The EWI: latest achievements

- ❑ Notwithstanding the difficulties in coordinating EU and national funds, the implementation of the EWI is therefore advancing and TPWind funding recommendations are regularly taken onboard
- ❑ Further to this, the EWI's overarching KPIs have been finalised by TPWind in cooperation with the JRC: they are based on the EWEA's cost of energy model (<http://www.ewea.org/index.php?id=201>) and will be formally approved by the Wind EII Team and SET-Plan SG before the end of 2011
- ❑ Besides, TPWind is close to finalising the EWI 2012 Work Programme , based on the 2010 – 2012 Implementation Plan and was discussed at the last Wind EII Team meetings on 28 June and 27 September
- ❑ Moreover, an FP7 ERANET+ topic focusing on a new EU Wind Atlas should be published next year. This will be an ambitious project, likely to receive considerable EU / national funding (~ € 50 m): its launch will represent a key step in the implementation of the EWI. For this reason, the new EU Wind Atlas was discussed at an ad-hoc Wind EII Team meeting held on 1 February
- ❑ Finally, EU funding for the EWI should dramatically increase in the 2014 – 2020 period and facilitate its implementation (see Ms. Radvilaite's presentation)

The contents of the EWI 2012 Work Programme

- ❑ The EWI 2012 Work Programme includes funding indications for both EU Institutions and Member States, depending on the type and urgency of each R&D activity
- ❑ It clearly indicates how each of the EWI strands should be implemented in 2012, i.e.:
 - New turbines and components
 - Offshore technology
 - Grid integration
 - Resource assessment and spatial planning
- ❑ As always, implementing the EWI 2012 Work Programme should require a proper coordination of EU and national funds
- ❑ However, TPWind will focus its attention on the ERANET+ topic on the new EU Wind Atlas before promoting additional coordination initiatives, to ensure the achievement of this strategic goal in first place

The budget of the EWI 2012 Work Programme

EWI activity	Public resources allocated in 2011 (previous ones were included in the EWI 2011 Work Programme)	Suggested EU funding scheme(s) and budget in 2012	Suggested national funding scheme(s) and budget in 2012	Industry contribution in 2012	TOTAL (including resources already allocated in 2011)
GRAND TOTAL EWI 2012 Work Programme	€ 87.7m (18%)	€ 151m (31%)	€ 83m (17%)	€ 163m (34%)	€ 484.7 m The total of the EWI 2012 Work Programme is higher than the overall indicative annual funding target for the 2010 – 2012 period, because of missing allocations in 2011 (see EWI budget – Section I of the Work Programme). For detailed explanations on the difference, see the Work Programme's footnotes

Implementing the EWI 2012 Work Programme (I)

- ❑ Once the EWI 2012 Work Programme will be approved by both the Wind EII Team and the SET-Plan Steering Group (before the end of 2011), TPWind will support EU Institutions and Member States in its implementation
- ❑ TPWind will therefore submit relevant FP7 topics to the EC in December 2011, which would ensure the implementation of the EWI 2012 Work Programme at EU level
- ❑ Topics will be developed by the TPWind ExCo, Secretariat and relevant WG Chairs and Vice-Chairs, as in 2011
- ❑ The EWI 2012 Work Programme also includes recommendations concerning the next IEE call for proposals, to be published in January 2011:
 - Integration of EU projects on offshore spatial planning and development of EU standards
 - Societal and economic value of wind power

Implementing the EWI 2012 Work Programme (II)

- ❑ According to the current version of the EWI 2012 Work Programme, the recommendations in terms of 2012 FP7 topics are the following:
 - Advanced aerodynamic modelling, design and testing, including flow devices for distributed aerodynamic control of very large rotor blades and aero-tools for turbines on floating structures
 - Optimisation of wind turbines to complex terrains and extreme climates
 - Innovative and dedicated offshore wind turbines, with ad-hoc designs and solutions
 - Standardisation of offshore practices
 - Grid connection of offshore wind farms
 - DC power collection
 - HVDC grids and compatibility of components
 - New EU Wind Atlas – ERANET+

EWI pending issues

- ❑ On top of working on the implementation of the EWI, TPWind is also dealing with two pending issues concerning the structure and implementation mechanism of the Initiative:
 - TPWind is rewriting the EWI's Grid Integration strand in order to avoid overlaps with the European Electricity Grid Initiative (EEGI). This is the outcome of several meetings with EEGI representatives, which resulted in a Memorandum of Understanding defined at EWEA's Grid Conference in Berlin (November 2010): only wind-specific activities will remain in the EWI, while other grids-related R&D tasks will be moved to the EEGI
 - TPWind is currently in touch with the European Energy Research Alliance (EERA) to maximize the synergies between the EWI and the EERA's Joint Programme (JP) on wind energy. EERA's representatives have been involved in the Wind EII Team and a Memorandum of Understanding will define TPWind – EERA relationships

Conclusions and next steps

- ❑ The implementation of the EWI is ongoing and the first result are encouraging
- ❑ EU Institutions are particularly open to TPWind inputs and keen to implement the EWI (which is the most advanced of all SET-Plan EIs)
- ❑ In 2012 TPWind will:
 - Provide support in the implementation of the EWI 2012 Work Programme (which includes the ERANET+ topic on the new EU Wind Atlas)
 - Develop the EWI 2013 Work Programme as well as the relevant FP7 topics (the Secretariat and the SC will be in charge of this task, as in 2010 and 2011). The 2013 Work Programme will be based on the new EWI 2013 – 2015 Implementation Plan, currently being developed by TPWind WGs
 - Finalise and publish the EWI 2013 – 2015 Implementation Plan
- ❑ The EWI is a game-changer and its implementation will be much easier as from 2014, when EU funding will increase and cooperation with Member States will be easier (following the launch of Horizon 2020 and the publication of the ERANET+ on the new EU Wind Atlas)

Thank you for your attention!



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