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WINDSEC

Wind Energy Technology Platform Secretariat

Instrument: Specific Support Action

Thematic Priority: Sustainable Energy Systems

**D2.7, D2.8, D2.9: Session management and output minutes for meetings of Steering Committee, Member States Mirror Group, Financing Group and Annual General Meetings**

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Revision 1

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PU	Public	X
PP	Restricted to other programme participants (including the Commission Services)	
RE	Restricted to a group specified by the consortium (including the Commission Services)	
CO	Confidential, only for members of the consortium (including the Commission Services)	

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## **Steering Committee meetings**

Agenda and minutes of:

- Meeting 1: 21 March 2007
- Meeting 2: 9 May 2007
- Meeting 3: 12 November 2007
- Meeting 4: 11 February 2008

## **Steering Committee Meeting n°1**

SDME 9E, Square de Meeus, 8 - 1050 Bruxelles  
March 21st, 2007 – 10:00 AM to 16:30 PM

### *Minutes*

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**Prepared by the TPWind Secretariat**

March, 23rd 2007

## 1. Participants list

### Steering Committee

Name	First Name	Institution	Comments
Beurskens	Jos	ECN	
Borri	Claudio	CRIACIV at Universita di Firenze	
Buddenberg	Joerg	EWE AG	
Chaviaropoulos	Takis	CRES	
Flamang	Peter	Hansen Transmissions International	
Gertmar	Lars	ABB (Core Wind Team/ Tech team)	
Hessel	Christoph	GE Wind	Represented by Jacob Nies
Kariniotakis	George	Ecole des Mines de Paris	
MacAskill	Allan	Talisman Energy (UK) Ltd	
Nath	Christian	Germanischer Lloyd Industrial Services, Wind	
Nielsen	Frank	LM	
Petersen	Erik Lundtang	Risoe National Laboratory	
Prats	Josep	Ecotecnia	
Quarton	David	Garrad Hassan	
Stroem Madsen	Finn	Vestas	Represented by Aidan Cronin
Thor	Sven-Erik	Vattenfall	
Villanueva-Monzon	Mauro	Gamesa	
Zervós	Arthouros	representing the whole industry	

### Not represented

Name	First Name	Institution
Hohmeyer	Olav	Flensburg University
Skarzynski	Grzegorz	Polish Wind Energy Association
Raferly	Peter	Airtricity
Santamaria	Angeles	Iberdrola

### Secretariat

Name	First Name	Institution	Comments
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Blanco	Isabel	EWEA	
Fichaux	Nicolas	EWEA	
Quarton	David	Garrad Hassan	Also member of the Steering Committee

### European Commission

Name	First Name	Institution	Comments
D'Estaintot	Thierry Langlois	DG Research	Hosting the meeting
Gambi	Roberto	DG TREN	
Sabater	Inigo	DG TREN	Presentation of the SET-Plan

## 2. Agenda

10:00	Introduction (Arthouros Zervos, EWEA)
10:15	Presentation of each steering committee member (each)
11:00	Presentation of TPWind (Isabel Blanco, EWEA)
11:45	Election of the Executive Committee (Arthouros Zervos, EWEA)
12:30	LUNCH
13:30	Presentation of the Secretariat (Isabel blanco, EWEA)
14:15	Constitution of the Working Groups (Nicolas Fichaux, EWEA)
15h	Hearing by the SET-Plan (Inigo Sabater, DG-TREN from EC)
15h30	Answers to be provided (Nicolas Fichaux, EWEA)
16h30	Closure and date for the next SC meeting

Due time constraints, the Steering Committee decided to focus on the main points of the agenda. The final agenda is:

10:15	Welcome by Thierry d'Estaintot ( <i>host of the meeting</i> )
10:20	Introduction (Arthouros Zervos, EWEA)
10:30	Presentation of each steering committee member (each)
11:15	Discussions on the terms of reference document (Isabel blanco, EWEA)
12:30	LUNCH
13:45	Election of the Executive Committee
15:15	Hearing by the SET-Plan (Inigo Sabater, DG-TREN)
15:45	Discussion on main issues
16:30	Closure and date for the next SC meeting

Presentations will be made available on the internal website of the project.

## 3. Main issues

### 3.1. Presentation of each steering committee member

Each steering committee member provided a 2-slides presentation. Participants were asked to explain their expectations on the platform. Main expectations are:

International dimension / Create synergies with other platforms / Answer to R&D needs
High-profile proposals / A place for dialog
Support Innovation & Technology development / Maintain leadership

Provide Strategic <b>R</b> esearch and <b>D</b> evelopment Agendas
Good Working Group structure / Good working methods / Communication between groups
High level results / Highly focused / A coherent R&D workplan / Training
Harmonization of R&D / Join efforts / Collaboration with Universities
Costs reduction / More places for wind (grid, acceptance)
An increased budget for wind R&D
Costs reduction / Market liberalisation
Costs reduction / Synergies with other technologies / Taking research to a next level
Accelerate Research / Move Industries / Cost Reduction / Focus on R&D – not market
Focus on offshore and Grid integration / Transfer of technology & knowledge
Focus on drive trains and link with grid codes
Address technology challenges / Interface with oil and gas
Learning about industrial priorities / Develop cross-expertise / Mobilise resources / Energize research at national level

From these elements, the Platform is for the Steering Committee:

- **A place of exchange** (various synergies & collaboration - international, national, inside WG, research / industry ..) (10)
- **A place for research, innovation & technology** (8)
- **A place of excellence** (leadership, high profile, good work ..) (6)
- **An instrument for cost reduction** (4)
- **An instrument for developing adequate training and qualifications** (2)
- **An instrument for expanding European Research and Technology Development efforts** (2)

Specific topics have also been mentioned:

- Grid integration, grid codes...(3)
- Social acceptance (1)
- Market liberalization (1)
- Offshore (1)

### **3.2. Discussions on the terms of reference document**

A final version of the TOR document will be provided by the Secretariat during week 13. Main changes are:

- The Executive Committee is composed of 5 members (1 Chair, 2 Vice-Chairs, 2 additional members);
- the Working Group Chairs are appointed by the Steering Committee. Once they have been established, the WGs will have to vote for the Vice-Chairs of the Group (Mirror Group is an exception);
- Chairs and Vice-chairs are elected for a period of 18 months;
- Constitution of the WGs: at the next SC meeting, the Executive Committee will propose a list of Working Groups ready to be launched. The Steering Committee will have to accept them with a 2/3rd majority
- Composition of the WGs: the Working Groups are composed of a limited number of people (max. 20). The Secretariat will launch a call for expression of interest. The candidates will be selected on the basis of clear criteria. The Secretariat and the ExCo will make a pre-selection of the most suitable members that will be then sent to the whole SC for approval (together with the full list of applicants);
- The mirror group will be defined with the support of the European Commission. The Commission will approve the call for expressions of interest and recruit the members of this group.

- special emphasis has to be put on communication between the Working Groups. A specific task could be created for this purpose

### **3.3. Election of the Executive Committee**

The Executive Committee is composed of: 1 chairperson / 2 vice-chairpersons / 2 additional members

Results:

Chairperson of the Executive Committee: Mr. Henning Kruse (Siemens) (unanimity)

Vice-chairpersons:

Mr. Takis Chaviaropoulos (CRES)	(unanimity)
Ms. Angeles Santamaría (Iberdrola)	(unanimity)

Additional members:

Mr. Christian Nath (Germanischer Lloyd)  
Mr. Josep Prats (Ecotecnia)

Chairperson of the Finance Working Group:

Mr. Mauro Villanueva Monzón has been elected with unanimity.

### **3.4. Next meeting**

An event will be organized by the Secretariat during the EWEC conference. This event will take place on Wednesday 9<sup>th</sup> (16:00 to 17:30). The session will provide an overview of the platform objectives, structure and deliverables to invited delegates.

Prior to it, a second Steering Committee meeting will be organized, possible at the same date (to be confirmed in week 13).

## **Steering Committee Meeting n°2**

European Wind Energy Conference & Exhibition 2007, Milan, Italy.  
May 9th, 2007 – 16:00 AM to 17:30 PM

### *Minutes*

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**Prepared by the TPWind Secretariat**

May, 9th 2007

## 2. Participants list

### Steering Committee

Name	First Name	Institution	Comments
Beurskens	Jos	ECN	
Borri	Claudio	CRIACIV at Universita di Firenze	Represented by Prof. Gaetano Gaudiosi
Buddenberg	Joerg	EWE AG	
Chaviaropoulos	Takis	CRES	
Flamang	Peter	Hansen Transmissions International	
Gertmar	Lars	ABB (Core Wind Team/ Tech team)	
Hessel	Christoph	GE Wind	
Kariniotakis	George	Ecole des Mines de Paris	
Kruse	Henning	Siemens	
MacAskill	Allan	Talisman Energy (UK) Ltd	
Nath	Christian	Germanischer Lloyd Industrial Services, Wind	
Nielsen	Frank	LM	
Petersen	Erik Lundtang	Risoe National Laboratory	
Prats	Josep	Ecotecnia	
Quarton	David	Garrad Hassan	
Raftery	Peter	Airtricity	
Santamaria	Angeles	Iberdrola	
Stroem Madsen	Finn	Vestas	
Thor	Sven-Erik	Vattenfall	
Villanueva-Monzon	Mauro	Gamesa	
Zervós	Arthouros	representing the whole industry	

### Not represented

Name	First Name	Institution
Hohmeyer	Olav	Flensburg University
Skarzynski	Grzegorz	Polish Wind Energy Association

## Secretariat

Name	First Name	Institution	Comments
Blanco	Isabel	EWEA	
Fichaux	Nicolas	EWEA	
Jensen	Peter Hjuler	Risoe / DTU	
Andersen	Per Dannemand	Risoe / DTU	
Quarton	David	Garrad Hassan	Also member of the Steering Committee

Guest: Nigel Hall (European Investment Bank)

## 4. Agenda

- 13:30 Introduction and welcome of participants (*Henning Kruse*)  
13:40 European Investment Bank (*Nigel Hall*)  
EIB lending for RDI  
14:00 Working Groups (*Base document to be sent by Secretariat*)  
- The view of the ExCo (*Henning Kruse*)  
- Proposal for Working Groups (*Nicolas Fichaux*)  
- Discussions and voting (*all*)  
- Election of the Chairpersons  
15:30 Update on activities  
- TPWind: where are we now? (*Nicolas Fichaux*)  
- Discussion (agenda, overall functioning) (*all*)  
15:45 Next meeting – date & topics

Presentations will be made available on the internal website of the project.

## 5. Main issues

### 5.1. Introduction and welcome of participants

"

Thanks for your confidence during the elections, and for selecting me as Chairman of TPWind. I will do my best to make this project successful.

The objective of the platform is to analyze all aspects on and around the turbines, hopefully finding pathways for optimization and cost reductions. We have 3 years working.

The work is structured around Working Groups:

The Working Groups will be established this summer. Nicolas will say more about this. I hope that we will attract highly qualified experts in their field, representing the industry, universities and commercial world.

These Working Groups on the first instance report to the Steering Committee. The governments of the 27 EU countries are part of this. They are member of the mirror group, adding their comments and views. The daily tasks are taken care by the

Secretariat of TPWind, in Brussels, by Nicolas Fichaux. He on turn stays in close relationship with the ExCo which has monthly conferences.

#### Executive Committee (ExCo):

There have just been two ExCo meetings. The meetings for the next three years are planned. We have discussed the results of the meeting in Brussels in March and have used the conclusions for defining the Working Groups.

6 Working Groups are proposed:

- Grid & Energy Integration,
- Wind Turbine Technology,
- Wind Resource,
- Policy & Environment,
- Wind Market & Economics,
- Offshore Specific Aspects.

During this second Steering Committee meeting, our objective is to vote for the structure and titles of the Working Groups, and select the Chairperson for each group. "

## **5.2. European Investment Bank (EIB) – lending for RDI**

The EIB is the EU financing institution. It has been created by the Treaty of Rome in 1958, to provide long-term finance for projects implementing the EU policies. It is a non-profit organization owned by member-states.

The EIB operates in EU, Asian countries and Latin America. The annual lending in 2006 was 45.8 beuros. On the period 2003-2006, 14 beuros were spent in the energy sector, including:

- energy production,
- energy R&D,
- Carbon Funds.

The budget of the EIB for renewable energy for the next three years is scheduled to be 600-800 Meuros/y. For wind energy, it is expected to focus on: research, development & innovation (RDI), and demonstration projects with a focus on innovation.

The strategy of the EIB is to increase investments in more risky and high added-value initiatives. Support will be provided to pan-European R&D activities, and Technology Platforms, in collaboration with industry and associations.

Various support schemes are provided by the EIB, and instruments exists for any stage of the innovation process (fundamental research, definition stage, industrial research, pre-competitive research or pilot projects). The level of support usually represents 50% of eligible costs, and its specifications are a function of the budget of the project (> 2.5 meuros: intermediate loans; > 7.5 meuros: RSFF; > 25 meuros: on case-by-case evaluation). There is no specific application format for contacting the EIB (dossier nevertheless includes: project description, business plan, financial projections).

RSFF: the European Commission and the European Investment Bank have joined forces to set up the Risk Sharing Finance Facility (RSFF). RSFF is an innovative scheme to improve access to debt financing for private companies or public institutions promoting activities in the field of:

- § Research, Technological Development Demonstration

## § Innovation investments

RSFF is built on the principle of credit risk sharing between the European Community and the EIB, extending the ability of the Bank to provide loans or guarantees with a low and sub-investment grade risk profile. The scheme also provides a wealth of opportunities for new and innovative EIB financing solutions directed at the private sector and the research community as a whole. Further information on RSFF is available on the EIB website: [www.eib.org/rsff](http://www.eib.org/rsff). This program is funded by FP7 (1 beuros) and the EIB's own resources (1 beuros).

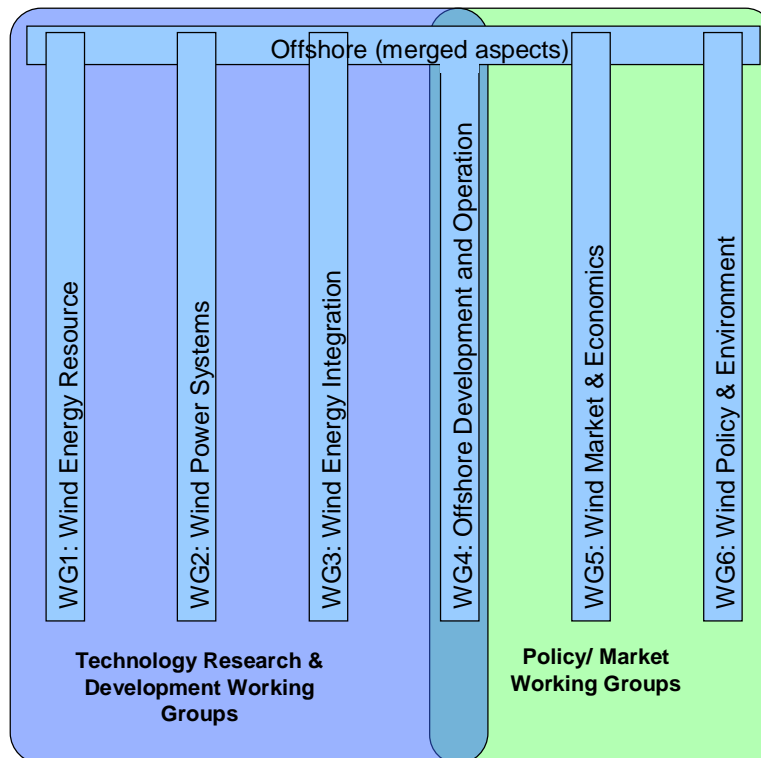
More information on [www.eib.org](http://www.eib.org)

### 5.3. Working Groups

The Working Group structure has been acknowledged by the Steering Committee under the following conditions:

- WG2 is named Wind Power Systems instead of Wind Turbine Technology,
- WG4 is named Offshore Development and Operation instead of Offshore (specific aspects),
- The Chairpersons of the Working Groups propose a short description of the main subjects addressed by their Working Group for assessment of the ExCo (before launching the calls for expression of interest, and with the support of the Secretariat).

The structure for the Working Groups of the platform is:



**Election of the Chairpersons of the Groups:** In case no Steering Committee member is available for chairing of one of the groups, the ExCo proposed to name a temporary Chairperson. Elections will be organized within these groups to elect the Chairperson. Elected Chairpersons for the Working Groups are:

- |   |   |                           |
|---|---|---------------------------|
| - | <u>WG1 : Wind Energy Resource</u>               | E. Petersen               |
| - | <u>WG2 : Wind Power Systems</u>                 | J. Beurskens              |
| - | <u>WG3 : Wind Energy Integration</u>            | J. Buddenberg (Temporary) |
| - | <u>WG4 : Offshore Development and Operation</u> | A. MacAskill              |
| - | <u>WG5: Wind Market &amp; Economics</u>         | A. Santamaria (Temporary) |
| - | <u>WG6: Wind Policy &amp; Environment</u>       | A. Zervos                 |

#### **5.4. Update on activities**

The Secretariat provided a presentation of the activities of the Platform for the period March-April 2007. The presentation will be made available on the website of the Platform. Next steps of the project are:

- |   |   |                        |
|---|---|------------------------|
| - | Launch calls for WG, FWoG, Mirror Group | <i>(June)</i>          |
| - | End calls                               | <i>(end of August)</i> |
| - | Members Selected                        | <i>(Oct./Nov.)</i>     |
| - | General Assembly                        | <i>(November)</i>      |
| - | Steering Committee meeting 3            | <i>(December)</i>      |
| - | First SRA & MDS                         | <i>(April 08)</i>      |
| - | Other:                                  |                        |
|   | § First Newsletter                      | <i>(September)</i>     |
|   | § Website                               | <i>(October)</i>       |

#### **5.5. Next meeting – date & topics**

Next Steering Committee meeting will take place during the European Offshore Wind Conference (4-6 December, Berlin).

Topics will include:

- the main conclusions from the General Assembly (to be held in Oct. 2007),
- update on activities for each Working Group (presentations by Chairpersons),
- Drafts of the first Strategic Research Agenda & Market Development Strategy documents (expected in April 08).

## Steering Committee Meeting n°3

Renewable Energy House, 63-65 rue d'Arlon 1000 Brussels.  
Nov. 12th, 2007 – 12:30 AM to 17:30 PM

### *Minutes*

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Prepared by the TPWind Secretariat

November, 23rd 2007

### 3. Participants list

#### Steering Committee

Name	First Name	Company/Institute	Alternate
Beurskens	Jos	ECN	
Borri	Claudio	CRIACIV at Universita di Firenze	Mr. Giovine
Buddenberg	Joerg	EWE AG	
Chaviaropoulos	Takis	CRES	
Flamang	Peter	Hansen Transmissions International	Koen Hoedemaekers
Gertmar	Lars	ABB	
Hessel	Christoph	GE Wind	
Kariniotakis	George	Ecole des Mines de Paris	
Kruse	Henning	Siemens	
MacAskill	Allan	Talisman Energy (UK) Ltd	
Nath	Christian	Germanischer Lloyd Industrial Services, Wind Energy	
Petersen	Erik Lundtang	Risoe National Laboratory	Peter Hjuler Jensen
Prats	Josep	Ecotecnia	
Quarton	David	Garrad Hassan	
Rafferty	Peter	Airtricity	Conall Bolger
Santamaria	Angeles	Iberdrola	
Stroem Madsen	Finn	Vestas	Lise Backer
Thor	Sven-Erik	Vattenfall	
Villanueva-Monzon	Mauro	Gamesa	

Steering Committee - not represented

Name	First Name	Company/Institute
Hohmeyer	Olav	Flensburg University
Nielsen	Frank	LM
Skarzynski	Grzegorz	Polish Wind Energy Association
Zervós	Arthouros	NTUA

Observers

Name	First Name	Company/Institute
Anderson	Mike	RES
Botting	Duncan	Vice-Chair SmartGrids
Charbonnier	Jean-Claude	Steel Technology Platform
Dionisio	Mario	European Commission
Falzetti	Marco	EUMAT Platform
Gambi	Roberto	European Commission

Secretariat

Name	First Name	Company/Institute
Fichaux	Nicolas	EWEA

## 6. Agenda

Time	Monday November 12 <sup>th</sup> , 2007
12:30	DG Tren update on FP7 ( <i>R. Gambi</i> )
	<b>Executive Committee</b>
13:00	Introduction and welcome of participants ( <i>H. Kruse</i> )
13:30	Presentation of main decisions since May 2007 ( <i>T. Chaviaropoulos</i> )
14:00	Welcome of observers ( <i>H. Kruse</i> )
14:15	Presentation and vote on updated Terms of Reference ( <i>A. Santamaria</i> )
14:45	Proposal for WG5 group Chairman ( <i>H. Kruse</i> )
15:00	Presentation of the Group Members selection process ( <i>N. Fichaux</i> )
15:15	<b>Coffee Break</b>
	<b>Secretariat</b>

15:45	Presentation of activities since May 2007 ( <i>N. Fichaux</i> )
16:15	Presentation of the General Assembly (applications / agenda / expected results) – (speaker <i>tbc</i> )
16:30	Open discussion ( <i>H. Kruse / N. Fichaux</i> )
17:30	Closing and next meeting ( <i>H. Kruse</i> )

## **7. Main decisions**

### **7.1. DG Tren update on FP7**

The Commission presented the results of the last FP7 call. For Wind energy, 2 proposals out of 10 were recommended for funding. The Commission was disappointed by the low number of proposals for this call.

3 questions were asked:

- Early next year, the Commission will have to prepare the next FP7 call. Which are the possibilities for the Working Groups to propose the industry priorities early next year?
- Does the Industry consider more suitable to launch a call every 2 years with a bigger budget focused on 1-2 projects, or to continue with the current procedures?
- Does the Industry need a specific initiative on offshore, with a specific topic on large-scale offshore?

These questions are still open.

### **7.2. Updated Terms of Reference**

The objective of this update of the Terms of Reference is:

- to include observers,
- to enable fast interactions through electronic voting,
- to limit Group size for maximizing efficiency,
- to set Voting process for the Working Groups,
- to enable Groups to evolve.

Main decisions regarding the Secretariat proposal were:

- confidential voting shall apply only for 2/3 majority voting,
- 2/3 shall apply to people present to the meeting, or who responded (electronic voting),
- 2/3 majority does not apply to membership in the Group.

The Secretariat shall provide an updated electronic version of the Terms of Reference.

### **7.3. Chairpersons elections for WG3 and WG5**

During the second Steering Committee meeting, Mr. Buddenberg and Mrs. Santamaria were elected temporarily chairpersons respectively for WG3 (Wind energy integration), and WG5 (Wind market and economics). Their temporary mandate ended with the Group member selection process.

For Working Group 3, candidates were:

- Hannele Holttinen (VTT Research Centre, Finland),

- Kurt Rohrig (ISET, Germany).

Mrs. Holttinen was elected with 2/3 majority.

For Working Group 5, candidates were:

- Carlos Gasco (Iberdrola, Spain),
- Bernard Chabot (Ademe, France).

Mr Gasco was elected with unanimity.

As Group Chairmen, Mrs. Holttinen and Mr Gasco become members of the Steering Committee.

## **8. Presentations**

Main documents are available online at: <http://www.windplatform.eu/75.0.html>

On demand, the Secretariat can provide the PowerPoint presentations.

## **9. Next meeting**

Next Steering Committee meeting will take place 1 day before the Second TPWind General Assembly on February 11<sup>th</sup>, 2008 in Brussels.

***Executive Committee meeting n°12 (11 February 2008)***

***Steering Committee meeting n°4 (11 February 2008)***

***General Assembly n°2 (12-13 February 2008)***

***ExCo / Chairmen meeting (13 February 2008)***

**Main decisions and deadlines**

***SRA&MDS documents***

**Key deadlines**

The time schedule for elaborating the SRA&MDS documents is the following:

22 February 2008	<b>GH &amp; Risoe</b> provide the 2 <sup>nd</sup> GA group outcomes enabling <b>EWEA</b> to update the SRA&MDS documents.
29 February 2008	The SRA & MDS documents are updated with the Second General Assembly outcomes. <b>EWEA</b> sends the document back to the Group members for comments with recommendations (version 8).
14 March 2008	The Group Chairpersons and Vice-Chairpersons send the updated text to <b>EWEA</b> (version 9). <b>EWEA, GH &amp; Risoe</b> coordinates to build a consolidated version of the document (version 10).
1 April 2008	The final editorial process begins.
1 April 2008	TPWind side-event in EWEC (Brussels). The TPWind outcomes are publicly announced.
April/May 2008	SRA & MDS official publication and first Mirror Group meeting.

Additional decisions of the Executive Committee and Steering Committee imply actions from the Secretariat. The table below provides the list of decisions, actions and corresponding deadlines.

Decision	Action	Deadline
The quality level of the document shall be improved. A global vision of the main priorities in line with the market deployment shall be provided. This will take the form of a detailed roadmap with milestones and corresponding research priorities. This implies to develop part 1.2.2.2, with a clear timeline and corresponding priorities.	<b>EWEA</b> makes a proposal to ExCo, for inclusion in version 8.	25 February 2008
All references to training shall move to WG6 or a separate part if possible	<b>EWEA</b> includes this part in version 8.	29 February 2008
WG5 – WG6: change “impact” into “recommendations” and “research actions” into “studies”	<b>GH</b> includes these changes for version 8.	
Clear lines shall be provided on demonstration activities.	To be included in recommendations for version 8 ( <b>EWEA</b> ), and answers integrated in version 9. ( <b>GH, Risoe</b> )	
WG5 shall do studies, and WG6 shall focus on policies.	To be included in recommendations for version 8 ( <b>EWEA</b> ), and answers integrated in version 9. ( <b>GH</b> )	
Can WG3&5 parts on market be merged?	To be included in recommendations for version 8, and answers integrated in version 9. ( <b>EWEA</b> )	
Relationship between groups shall be transcript in the document.	<b>EWEA</b> includes this part in version 8 (part II)	
Group shall be asked on what they wish to bring to higher level.	To be included in recommendations for version 8, and answers integrated in version 9. ( <b>EWEA</b> )	
For budgets, a top-down approach shall be provided. Total budget need can be split into: <ul style="list-style-type: none"> <li>- 70% for Wind turbine, from which 40% offshore and 30% onshore,</li> <li>- 10% Wind Farm,</li> <li>- 10% on Grid integration,</li> <li>- 5% for resource,</li> <li>- 3-4% on environment and impact studies,</li> <li>- 1-2% on socio-economic and strategic studies.</li> </ul>	To be included in recommendations for version 8, and answers integrated in version 9. ( <b>EWEA</b> )	
Finance working group shall take care of Intellectual property rights and public funding.	To be included in recommendations for version 8, and answers integrated in version 9. ( <b>EWEA</b> )	

WG3 add references to hydrogen for linking the electricity and transport sector.	To be included in recommendations for version 8, and answers integrated in version 9. <b>(Risoë)</b>	
DG Tren and Research shall be invited to provide first comments on SRA&MDS.	EWEA to send informally version 9 of document. In order to integrate possible comments in version 10.	

## **Executive Summary**

On Executive Committee proposal, and Steering Committee decision, an executive summary shall be distributed during the TPWind workshop in EWEA. This document shall include a table classifying the research actions regarding the risk. This document shall be elaborated in parallel of the ongoing SRA&MDS elaboration process. The time schedule is the following:

19 February 2008	The Secretariat proposes to the ExCo a plan of the Executive Summary for discussions and approval.
22 February 2008	The ExCo validates the plan.
29 February 2008	From the updated SRA&MDS, EWEA proposes a text to the ExCo, Risoë, GH and Group chairs. The Group chairs are asked to review their respective part of the executive summary. The ExCo, Garrad Hassan & Risoë are invited to propose changes.
7 March 2008	EWEA received all contributions, and elaborates the final version.
11 March 2008	The final version is sent to ExCo for approval.
14 March 2008	After last ExCo remarks, the document is edited and printed.
31 March 2008	The document is available.

## **European Wind Initiative** *(From Stefan Tostmann presentation):*

The European Industrial Initiatives as complementary to the FP7 instruments. The resources are coming from a better use of available resources, and doubling the EU effort. A proposal for the wind initiative should:

- coordinate the research efforts,
- organise public-private partnerships at EU level,
- demonstrate clear added-value at EU level,
- focus on key actions,
- be supported by a substantial long-term commitment of the industry.

To design it, the Technology Platform shall issue its SRA. From the SRA; TPWind should prioritize the objectives regarding the risk:

- high risk can be carried at EU level,

- medium risk can be carried at national level,
- and low risk can be carried by the industry.

The European Wind Initiative should focus on 1-2 relevant actions. For its implementation, a JTI is an example, but is not mandatory. Dialogue shall begin with the EC for concretely take implement the initiative (*see meetings*).

The Commission proposes to build the following table. This should be provided in the Executive Summary document.

Problems	Possible solutions	Needs	EU level	National	Industry
Reduce kWh cost	Multi-MW machines,...	New materials,...			
Bring electricity to city	Large scale grid integration,...	Cooperation TSOs, TEN-e,...			
Match supply/demand	Grid management, forecasting, storage,...	Combined integration (Concerto,...)			
Comply with Environment and social acceptance	Far off-shore,...	Cooperation with other sectors/key-actors,...			
.....					

### **Group activities**

On Executive Committee decision, additional elements shall be provided to the Group Chairpersons. Decisions are summarized in the table below:

Decision	Action	Deadline
Chairmen can invite other ETP in their Groups. List of contacts with other ETP to be provided to Group chairmen.	EWEA send list by email	18 February 2008
How can we take advantage of existing EC instruments (EIF, regions)?	EWEA ask Finance Group chairman on needed actions.	Done

### **Meetings**

Decision	Action	Deadline
Henning kruse accepted to go to IEA meeting in Aalborg (April 22-24, 2008).	EWEA send confirmation to IEA	18 February 2008
A meeting shall be organized with the European Commission before the EWEC workshop to present the executive summary and investigate the European Wind Initiative (proposed date is on March 31 <sup>st</sup> ).	EWEA organise meeting. Invitation to be sent to Stefan Tostmann.	18 February 2008

Next Steering Committee meeting scheduled on October 7 <sup>th</sup>	EWEA to recall the date to SC members	18 February 2008
The Finance Working Group requests a meeting with top EU officials.	EWEA to confirm with FWoG chairman.	Done

Next Executive Committee meetings are scheduled on Feb. 29<sup>th</sup>, and March 14<sup>th</sup>.

### ***Miscellaneous***

<b>Decision</b>	<b>Action</b>	<b>Deadline</b>
Christian Dahlke didn't receive emails	EWEA send email to Mr Dahlke for confirmation	Done
Electronic voting: a procedure shall be sent by Secretariat	EWEA to send procedure	Week 10
Peter Hjuler sends reference to US document edited by DOE.	EWEA contact Risoe	Done
The Presentations shall be made available	EWEA to update website	Week 10
Secretariat shall investigate Aeronautics JTI structure	EWEA to investigate	Week 10

## **Member States Mirror Group**

Agenda and minutes of the First Mirror Group meeting, on 2 June 2008.

**Mirror Group Meeting n°1**

***Minutes***

***June 2nd, 2008 – 10:00 AM to 16:00 PM***

***European Commission - Borchette Conference Centre***

***Room 1 C, Rue Froissart 36, 1040 Bruxelles, Belgium***

***Agenda***

10:00	Welcome of participants ( <i>Stefan Tostmann, European Commission</i> )
10:10	Meeting introduction ( <i>Henning Kruse, TPWind chairman</i> )
10:20	Introduction of TPWind structure, activities, and Strategic Research Agenda ( <i>Nicolas Fichaux, TPWind Secretariat</i> )
10:45	Structure and role of the Mirror Group ( <i>Angeles Santamaria, TPWind Executive Committee</i> )
11:00	Open discussion
11:15	Election of Mirror Group chairperson and vice-chairpersons
12:00	Lunch break
13:00	National wind energy research programmes and budgets ( <i>5-mn presentations by Member States representatives</i> )
15:00	Open discussion: interactions between TPWind priorities and national research programmes
16:00	End and next meeting

## **Main information<sup>1</sup>**

### **Welcome of participants**

The Mirror Group identifies activities complementing EU activities. It shall be used to avoid duplication in actions between Member States and therefore saving time. It promotes collaboration and pushes operational issues.

The recently adopted Strategic Research Agenda needs support of Members States to fulfil its objectives. It is needed to discuss practical issues, and general policies to foster development of wind energy. This group is essential for the success of TPWind.

More generally, there are many Mirror Groups of different Technology Platforms today. The number of meetings of the various Mirror Groups is increasing. The European Commission proposes to group the meetings, in order to save time and avoid duplication.

### **Meeting introduction**

TPWind was established after the SET-Plan was proposed by the European Commission. The Executive Committee was elected in May 2007. TPWind was publicly presented for the first time during the 2007 European Wind Energy Conference, in Milan.

For recruiting TPWind members, a public call for expression of interest was launched, and closed in October 2007. 300 applications were received for filling the 140 positions opened for the seven TPWind working groups.

The first TPWind general assembly was organised in October 2007, to start working on the TPWind Strategic Research Agenda and Market Deployment Strategy documents.

The second General Assembly was organised in February 2008. The *Synopsis* document, summarising main TPWind outcomes, was published and presented during the 2008 European Wind Energy Conference, in Brussels. This publication was welcomed by Research Commissioner J. Potocnik.

The Strategic Research Agenda and Market Deployment Strategy will be published in the coming weeks.

The preparation of the European Wind Initiative announced by the Strategic energy Technology Plan resulted in the launch of an internal working group to build a draft document.

In summary, TPWind has been extremely active until now. These are good indications that the industry is very dedicated to TPWind.

The Mirror Group will be our contact channel, our sparring partner. The Mirror group will work in parallel to the other working groups, and will be invited to meet during the third TPWind General Assembly, in October 2008.

In the meantime, the TPWind Steering Committee proposes to the Mirror Group to bring the following message to the governments: the industry is full speed ahead in preparing

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<sup>1</sup> The minutes do not transcript literally the oral exchanges. The aim is to provide the general meaning, and main information.

2020, and each EU Member State has a role to play. Support of the Member States is needed, or EU will not be able to reach 2020 objectives.

## **Introduction of TPWind structure, activities, and Strategic Research Agenda**

*Presentation by TPWind Secretariat can be found on TPWind internal website, on the 'Mirror Group webpage'.*

## **Structure and role of the Mirror Group**

*Presentation by TPWind Executive Committee can be found on TPWind internal website, on the 'Mirror Group webpage'.*

## **Open discussion**

Sweden: The TPWind Strategic Research Agenda is ambitious. Is TPWind collaborating with other Technology Platforms?

*Secretariat: A representative of Smartgrids is member of TPWind working group on grid integration. TPWind meets regularly with other European Technology Platforms, and invites relevant representatives to the Steering Committee meetings.*

Malta: Is the secretariat available for designing and setting up European projects?

*Secretariat: The Secretariat does not have the budget, nor the human resources to do so.*

The Netherlands: The 2020 objective is a real challenge for new technologies. Most of the countries are implementing similar research actions. Duplication should be avoided between research projects. One of the roles of the Mirror Group could be to ensure transparency on the ongoing actions at Member States level, and come up with recommendations. Moreover, the Mirror group shall assist EC to define the specific space assigned to R&D under FP7.

Germany: Coordination shall be ensured not only between Member States, but also between the Member States and the European Commission. The Mirror Group shall be involved in the discussions on the calls for proposals. The Mirror Group shall be updated on ongoing programmes and projects at EU and Member States level.

European Commission: The European Commission welcomes contributions as input for calls of the FP7 programme. For the whole programme, this is the role of the Programme Committee. For wind energy priorities, the Mirror Group can assist the TP Wind, namely through the preparation/updating of the SRA. Regarding possible proposals, the European Commission services are available to advise. The next FP7 information day will take place in Brussels on 20 June 2008. The possible applicants are also invited to get relevant info from the National Contact Points.

Portugal: If the Mirror Group is asked to coordinate TPWind strategic priorities with national programmes, will the Member States priorities be included into the Strategic Research Agenda?

*Secretariat: TPWind consulted the whole industry to define the priorities. Support is needed to implement them. At first stage, the Mirror Group should come with a separate report.*

Austria: Is there an ERA-Net ongoing, or is it the intention to build one? Is the European Wind Initiative the one mentioned in the SET-Plan?

European Commission: *An ERA-Net in energy would probably be more relevant for 2009 activities. The possible applicants should contact the services of DG RTD as they are in charge of the ERA-NET Programme.*

Secretariat: *A working group was specifically set up for the European Wind Initiative. This group will meet on 18 June to finalise a draft for the European Commission.*

Steering Committee: The objective is to achieve 2020 targets. The Strategic Research Agenda traduces the point of view of the industry and research institutes. The Agenda should be complemented by Member States. It shall include advices from the Member States on how to finance the research priorities through FP7, and how to streamline budgets to make a coherent plan.

## **Election of Mirror Group chairperson and vice-chairpersons**

Elected with unanimity:

- Chairperson: S. Widstrand, Swedish Energy Agency, Sweden).
- Vice-Chairpersons: Mrs M. Ferre (Ministerio de Education y Ciencia, Spain), Mr I.O. Doornbos (Ministry of Economic Affairs, The Netherlands), Mr J. Nick Leptin (BMU, Germany).

## **National wind energy research programmes and budgets**

*Presentations provided by Member States can be found on TPWind internal website, on the 'Mirror Group webpage'.*

## **Open discussion: interactions between TPWind priorities and national research programmes**

### Discussion on ERA-Net

An ERA-Net could be proposed to gather data on research programmes and budgets at Member States level.

Actions can be envisaged under the Intelligent Energy Europe programme. ERA-Net shall be proposed at program committee level. It could concentrate under the form of a catalogue some crucial information: who funds, which are the research priorities...

IEA is already providing this information, collecting data on a systematic way, and providing annual reports (see <http://www.iea.org/rdd>). The opportunity of setting up an ERA-Net shall be further investigated.

European Commission: *It is important also to examine properly the content of a possible proposal a a valuable info database on R&D is already available in the IEA reporting, and one of the tasks of TP Wind is precisely (through the Mirror Group) to complement EU activities and to develop and follow up synergies....Overlaps and duplication should be avoided.*

*As concerns collection of data at the level of the MS (beyond the sole research and technological field), the Intelligent Energy Agency Programme could also be an appropriate instrument. There is for instance a very interesting project (about to start), "WINDBARRIERS" which aims at gathering precise and up-to-date information on the*

*administrative and grid access barriers that obstruct the development of wind energy projects in the EU27*

### Strategic Research Agenda

As a general remark, the SRA reflects concerns of countries more advanced in wind energy development. Specific mechanisms are needed to help less advanced countries to catch up. Discussed priorities:

- Siting: Member States currently work on siting. Physical planning procedures are needed if offshore electricity grids are to be developed. Today, focus is given to near shore, but development will have to happen further away.
- Environmental monitoring: Environmental Impact Assessment programs were launched at large-scale, a common form is needed for all Nord Sea.
- Operation and Maintenance: Offshore, the O&M cost is much higher than foreseen. More strategic O&M concerns shall be included. FP7 calls may be focused on offshore issues.
- Grid integration: The most important action is policy. There are ongoing studies (EWIS and TradeWind), but the results will not be available on short notice, and planning procedures will also take time (2015). How to reach 2020 objectives in these conditions?
- Priority access and transport: Priority access to connect wind projects. This is possible, but transport will not happen if the grid infrastructure is not developed. A recommendation to the European Commission is to build on top of EWIS and TradeWind.

*European Commission: A FP7 call for proposals should be launched in July 2008 on wind and grid integration, with a deadline planned in January 2009. Postponement of the call is under discussion. A substantial budget will be allocated for one large project including grid integration. The TSOs should be involved in this project. Some results of TradeWind are expected in 2009. First EWIS reporting is expected in 2008. The offshore action plan shall be finalised rapidly (end 2008). Next calls topics could be focused on offshore.*

Additional proposal:

- Promote public ownership of projects.

### Proposed actions by the TPWind Secretariat:

*Presentation by TPWind Secretariat can be found on TPWind internal website, on the 'Mirror Group webpage'.*

Proposals:

- Join declaration and Council proposal to prioritise wind energy in FP7
- Report on:
  - o National priorities and their interface with the SRA priorities
  - o Open structural funds (grid, harbours, large-scale test facilities..)
  - o Spatial and grid planning
  - o National targets for wind, in partnership with industry when needed
  - o Publication for the European Energy Summit (Spring 2009)
- Follow-up of Egmond-Copenhagen-Berlin process, open to onshore wind and electricity grids
- Participation to TPWind General Assembly Oct. 8-9
- Presentation of first thoughts
- Next Working Group meeting
- Explore art. 171 feasibility with the Finance Working group (Vice-chairs)
- Group chairman is member of the Steering Committee (meeting Oct. 7th)

## End and next meeting

Next meeting is scheduled during the third TPWind General Assembly, on October 8 and 9<sup>th</sup>, in Brussels. Invitation and agenda will be provided by the Secretariat.

## List of participants

Country / Body	Name	Surname	Ministry
Belgium	Jade	Charouk	APERe
Denmark	Hanne	Thomassen	Danish Energy Agency
Germany	Joachim	Nick-Leptin	BMU
Estonia	Sigrid	Vesiallik	Ministry of Economic Affairs and Communication
Greece	Maria	Giannetsou	Directorate of Renewables and Energy Savings of the Ministry for Development
Spain	Joaquin	Serrano	Spanish Representative in the Energy programme committee
Spain	Ana	Lancha	Ministerio de Educacion y Ciencia, DG de Politica Tecnologia, S.G. de Programas de Fomento de la Investigacion Tecnica Sectorial
Spain	Marian	Ferre	Ministerio de Educacion y Ciencia, DG de Politica Tecnologia, S.G. de Programas de Fomento de la Investigacion Tecnica Sectorial
France	Thierry	Chrupek	Ministry of Industry
Italy	Luciano	Pirazzi	ENEA Casaccia
Latvia	Lisa	Stage	Energy policy implementation division, Department of Energy, Construction, Energy and Housing agency
Luxembourg	Guy	Lentz	Ministère de l'economie et du Commerce Extérieur. Représentation Permanente du Luxembourg auprès de l'Union européenne
Malta	Antoine	Riolo	Malta Resources Authority
Netherlands	Mr	I.O. Doornbos	Ministry of Economic Affairs
Austria	Gerald	Vones	Federal Ministry of Economics and Labour

Portugal	Ana	Estanqueiro	INETI - Departamento de Energias Renovaveis
Finland	Mika	Anttonen	Ministry of employment and the economy
Sweden	Susanna	Widstrand	Swedish Energy Agency
European Commission	Stefan	Tostman	DG Tren - Head of Unit D2
European Commission	Roberto	Gambi	DG Tren - Scientific Officer
European Commission	Mario	Dionisio	DG Tren - Assistant programme manager
TPWind Executive Committee	Henning	Kruse	TPWind chairman
TPWind Executive Committee	Takis	Chaviaropoulos	TPWind vice-chairperson
TPWind Executive Committee	Angeles	Santamaria	TPWind vice-chairperson
TPWind Steering Committee	Jos	Beurskens	TPWind Working Group chairman 'wind turbine technology'
TPWind Steering Committee	Arthouros	Zervos	TPWind Working Group chairman 'wind policy and environment'
TPWind Secretariat	Nicolas	Fichaux	EWEA project manager TPWind General Secretary
TPWind Secretariat	Justin	Wilkes	EWEA Public Affairs Director
TPWind Secretariat	Laurence	Blondeau	EWEA assistant to the Policy Department

## **Financing Group**

Minutes of:

- Meeting 1: 14 November 2007
- Meeting 2: 13 February 2008

The minutes were presented as PowerPoint presentations during plenary sessions of the General Assemblies.

TPWind General Assembly 13 & 14th November 2007  
Finance Working Group (FWG)

## Conclusions of the Finance Working Group (FWG)

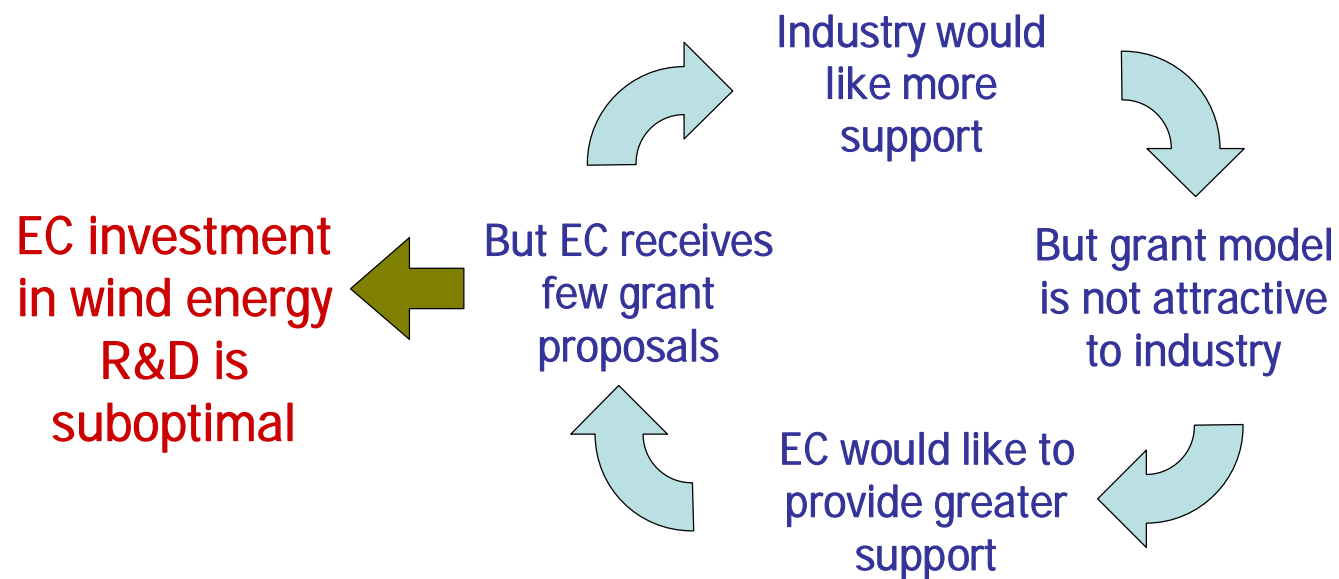
Mauro Villanueva-Monzón  
GAMESA  
FWG chairman, Steering Committee member  
14th November 2007

14/11/2007

1

## 0. Current situation

“The vicious circle of EC grant funding”



## 1. Challenges

- q Need to increment available R&D funds to the desired (Lisbon) level, mainly at the EC (not EU) scenario. This implies a tenfold
- q Need to use public funding to gradually leverage private funding (Barcelona & Lisbon objectives)
- q Need to migrate towards more streamlined, agile, simpler, private type funding management.
- q Need to maximize the R&D results utilisation, helping to disminsh European paradox.
- q Need to follow EC guidelines (outsourcing, JTI?, etc.)

## 2. Means (I)

1) Request EC for:

- § OK with current grant scheme, but additional funding for Wind R&D
- § More streamlined procedures.
- § Incorporating best practice from member state schemes (e.g. Denmark, Germany)

2) Propose additional instrument that comply with previous requirements, for the endorsement of:

- § EC
- § Wind Energy stakeholders.

Not necessarily aiming at the JTI model, due to its complex approval procedures and operational restrictions, but to a model compatible with general EC guidelines.

## 2. Means (II)

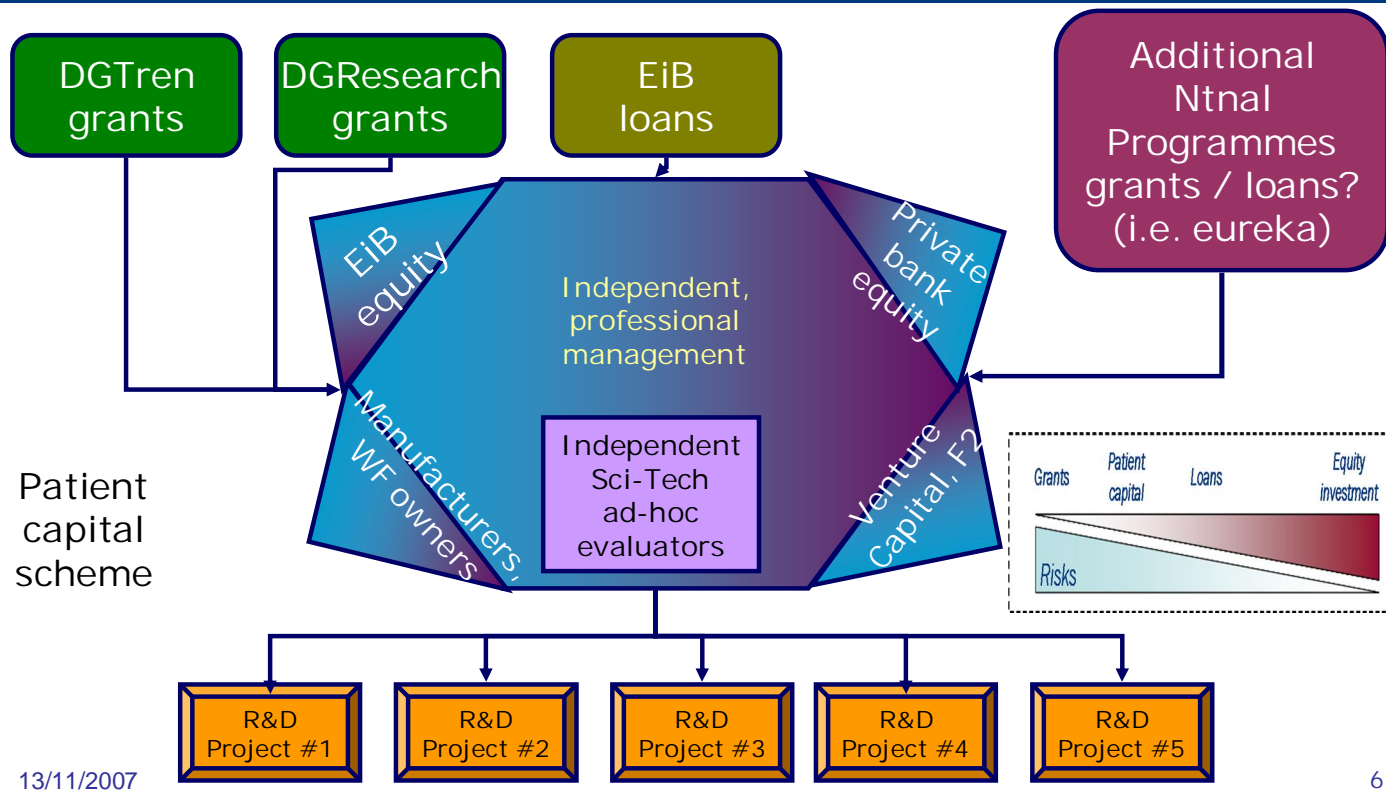
Based on European "Best practises":



The Carbon Trust (<http://www.carbontrust.co.uk>)

- § Launched by UK government in 2001: mission to move to low carbon economy
- § Range of funding mechanisms to fit needs of different technologies (e.g. academic research grants, public/private corporate ventures)
- § Annual funding c. 125 million euros.

### 3. European Wind Energy R&D Fund (WUND)



## 4. WUND functions

- q Call for WE R&D project proposals (based on SRA)
- q Independent ad-hoc Sci-Tech proposal evaluation
- q Project management supervision
- q R&D results validation & added value assessment.
- q R&D results exploitation assurance.
- q Fund management (need for guarantee minimal returns for sustainable activity)
- q R&D project & results management support (on demand).

## 5. R&D performers

Consortiums are freely arranged by project proposers:

- q Universities
- q Public Research organisations
- q Technological Centers
- q Manufacturers (for additional funding for marginal developments)
- q Leading edge technology intensive SME ´s (unable for access other grants due to size).

## Finance Working Group (FWG)

Mauro Villanueva-Monzón  
FWG chairman, Steering Committee member  
13th February 2008

## 1. Inspirational principles from the SET-Plan

- q “mobilising additional financial resources...increased energy research and innovation investment, to at least double the current levels, will deliver substantial benefits. Deployment incentives may also need to increase by two to five times” “..industry should be prepared to increase investment and take greater risks”.
- q “Some technology challenges..cannot be met by..the current model of European collaborative research....evolving towards a new one of focussed cooperation..will require a fundamental departure from current practice throughout the innovation system.
- q “European Industrial Initiatives will be implemented in different ways, depending on the nature and needs of the sector and the technologies”
- q “Opportunity of a new European mechanism / fund for the industrial-scale demonstration”...“providing a tighter coupling between research and innovation”

## 2. UNEP-SEFI Report on Renewable Energy R&D

- q “..because manufacturers are tending to buy out VC-funded technologies, rather than developing them in-house. This trend is emerging as the industry matures, resulting in established players with manufacturing expertise and a good flow of new technology”.
- q “Experience from other industries has shown that the rate of innovation and speed of commercialisation are dramatically accelerated by the presence of a healthy population of earlier- stage companies”.
- q “EU-27 lags behind the US and, increasingly, Asia in terms of VC investment. EU also has a less commercial R&D model and fewer clean energy incubators”.
- q “...incubators tend to proliferate where there is a strong venture capital presence, as in the US and Israel. ...incubatees have a better chance of being financed than other early stage businesses”.

Figure 19. Number of Clean Energy Incubators by Country, May 2007



Note: Excludes China

Source: New Energy Finance

Figure 20. Clean Energy Incubatees by Sector, May 2007



Note: Excludes China

Source: New Energy Finance

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### 3. Estimated Wind Energy R&D funding

- q According to MW sales and Lisbon objectives, accumulated R&D investment needs 2006-2020 is est. at 6,7 bn Eur.
- q Total EC financing accumulated gap 2006-2020 is est. at 1 bn Eur.
- q Total EC financing accumulated gap in the FP7 period (2007-2013) is est. at 450 MEur.

## 4. The need of Wind Energy R&D

Additional funding mechanisms characterised by:

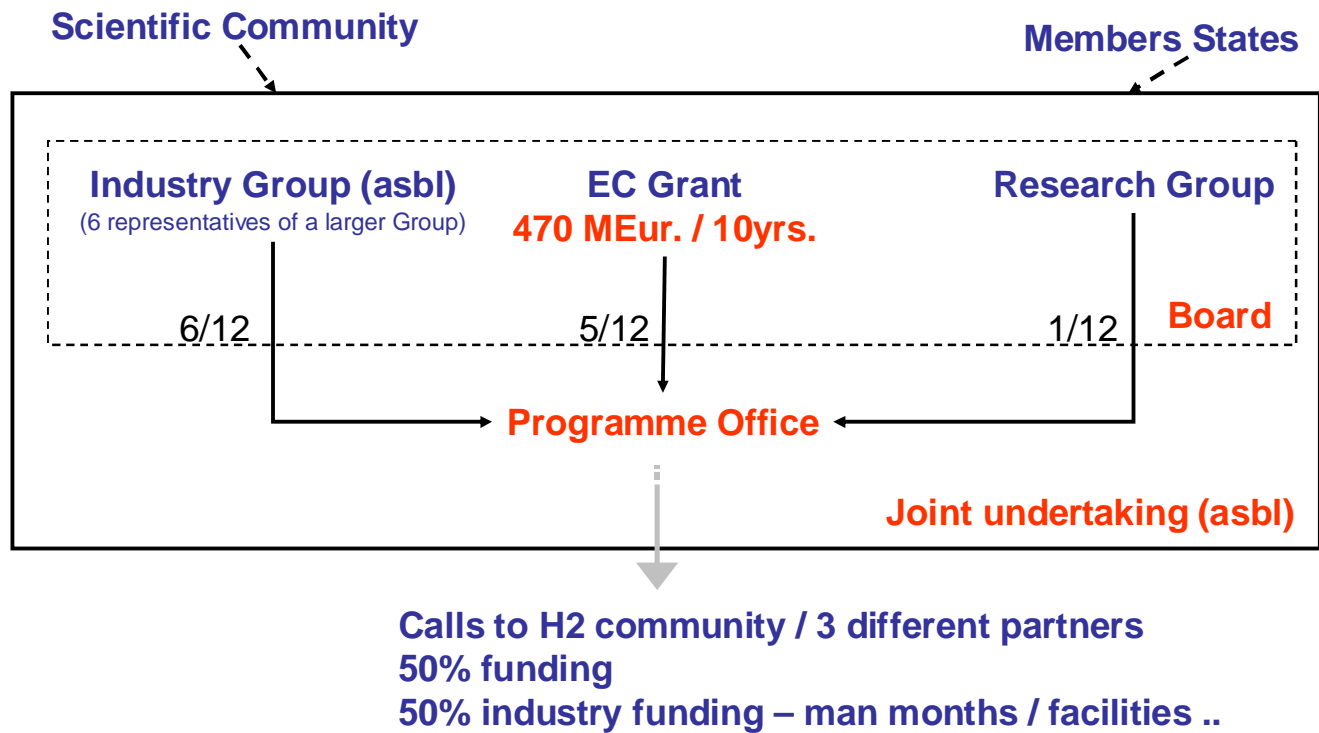
- Able to provide solutions to a wide variety of stakeholders.
- Aiming at closing the financing gap.
- Independent, open to public-private financing schemes.
- Professionally managed by private criteria (streamlined, flexible, agile, simple).
- Industry led.
- Fostering IP creation and bridging the gap between research and innovation.

## 5. Essence of the JTI opportunity

### Key features:

- Public private partnership, with a minimum of 50 % private funding (latter could be “in kind”)
- Similar share in governing body.
- Adaptable to every sector´s specific needs.
- Focussing RD&D efforts on critical areas.
- Open to various forms of RD&D initiatives, consortia, etc.
- Grant based mechanisms.
- Legally implemented by the EU Administration (Directive).
- Requested by the sector, industry commitment mandatory.
- Arises from the work of the ETPs.

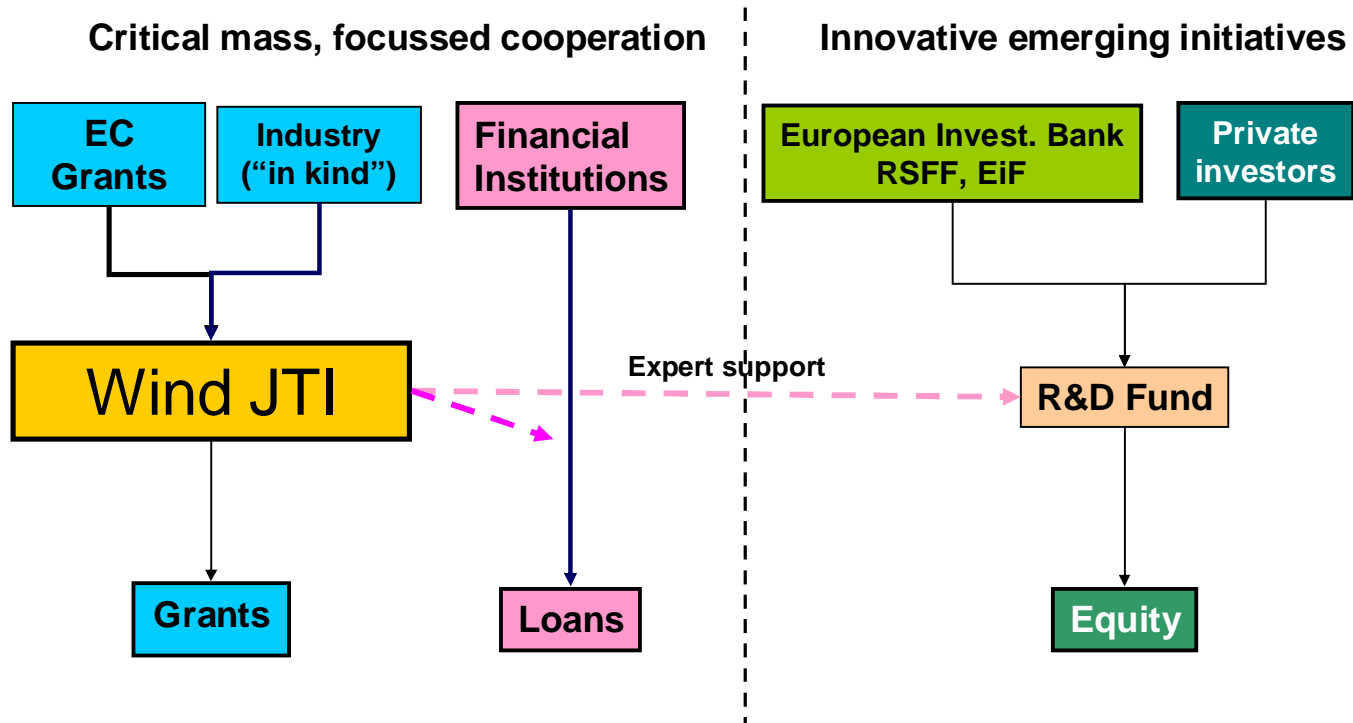
## 6. The H&FC JTI example



13/02/2008

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## 7. Towards a Wind JTI



13/02/2008

8

## 8. Next steps

- Preliminary conversations with European Investment Bank (EiB) and other private investors have been held.
- A Wind JTI detailed design should be undertaken.
- Presentations on the concept should be held with top officials of the following:
  - DG Tren
  - DG Research
  - Intelligent Energy Europe
  - DG Competitiveness
  - Other private R&D funding organisations
  - Manufacturers.
- Initiative could be launched at the “European Energy Technology Summit”.

## 9. Acknowledgments

- To all Finance Working Group members for their valuable contributions, tireless dedication and passion on the quest for bringing together the worlds of Financers and RD&D projects.
- To TPWind members for their patience and openmindedness, allowing us to develop an ambitious proposal for improving the European Wind Energy R&D funding paradigm.

## **Annual General Meetings**

Agenda and conclusions of the annual general meetings:

- Meeting 1: 13-14 November 2007
- Meeting 2: 12-13 February 2008

The minutes were presented as PowerPoint presentations during plenary sessions of the General Assemblies.

**Management Centre Europe**  
Rue de l'Aqueduc 118, B-1050 Brussels

Time	Tuesday November 13 <sup>th</sup> , 2007
8:00	Welcome of participants and registration
9:00	<b>Plenary Session – Room A</b>
	<b>Executive Committee: Introduction</b>
9:00	Platform objectives and Global Vision ( <i>H. Kruse, Chairman</i> )
9:15	TPWind impact on European Research Area ( <i>T. Chaviaropoulos, Vice-Chairman</i> )
	<b>European Commission: Update on Framework Programmes</b>
9:30	Update on Calls ( <i>R. Gambi, DG-Tren</i> )
	<b>Secretariat: TPWind Structure and Outcomes</b>
9:45	Agenda / TPWind: Structure, Calendar and rules ( <i>N. Fichaux, EWEA</i> )
10:00	TPWind outcomes: The Strategic Research Agenda ( <i>P. Hjuler, Risoe/DTU</i> )
10:15	TPWind outcomes: The Market Deployment Strategy ( <i>D. Quarton, Garrad Hassan</i> )
10:30	<b>Coffee Break</b>
	<b>Chairmen: Objectives and Visions</b>
11:00	WG1: Wind Energy Resource ( <i>E. L. Petersen, Risoe</i> )
11:10	WG2: Wind Power Systems ( <i>J. Beurskens, ECN</i> )
11:20	WG3: Wind Energy Integration ( <i>J. Buddenberg, EWE</i> )
11:30	WG4: Offshore Development & Operations ( <i>A. MacAskill, Talisman</i> )
11:40	WG5: Wind Market & Economics ( <i>A. Santamaria, Iberdrola</i> )
11:50	WG6: Wind Policy & Environment ( <i>A. Zervos, NTUA</i> )
12:00	Finance Working Group ( <i>M. Villanueva Monzon, Gamesa</i> )
12:10	<b>Lunch</b>
13:30	<b>Working Group Meetings – Parallel sessions (rooms C,D,E,F,G,H,I) (*<sup>1</sup>)</b>
	Round table: presentation of members and personal expectations
	Election of Vice-Chairmen
15:00	<b>Coffee Break</b>
15:30	Discussions on the background document (* <sup>2</sup> )
18:00	<b>End of First Day</b>

Time	Wednesday November 14 <sup>th</sup> , 2007
8:30	Working Group Meetings – Parallel sessions (rooms C,D,E,F,G,H,I) <sup>(*)</sup>
8:30	Discussions on the background document <sup>(**)</sup>
10:30	Coffee Break
11:00	Assessment of minutes and main decisions
12:00	Lunch
13:00	Plenary Session – Room A
	Executive Committee: Introduction
13:00	Welcome of participants and introduction (A. Santamaria, Vice Chairman)
	Chairmen: Meetings Summary
13:15	WG 1: Wind Energy Resource (E. L. Petersen, Risoe)
13:35	WG 2: Wind Power Systems (J. Beurskens, ECN)
13:55	WG 3: Wind Energy Integration (J. Buddenberg, EWE)
14:15	WG 4: Offshore Development & Operations (A. MacAskill, Talisman)
14:35	WG 5: Wind Market & Economics (A. Santamaria, Iberdrola)
14:55	WG 6: Wind Policy & Environment (A. Zervos, NTUA)
15:15	Finance Working Group (M. Villanueva Monzon, Gamesa)
	Executive Committee: Conclusions
15:35	Global summary (C. Nath & J. Prats, Alternate Members)
15:50	Open discussion (Moderator, H. Kruse)
16:35	Conclusion (H. Kruse, Chairman)
16:50	End of General Assembly

<b>(*) Parallel Working Group Meetings</b>	
Group	Room
WG1 – Wind Energy Resource	C
WG2 – Wind Power Systems	G
WG3 – Wind Energy Integration	H
WG4 – Offshore deployment & operations	I
WG5 – Wind Market & Economics	D
WG6 – Wind Policy & Environment	E
Finance Working Group	F

**(\*\*) Discussions on the framework document** imply to address a series of different issues. The collected elements will be used as content for the Strategic Research Agenda and Market Deployment Strategy documents. Draft Strategic Research Agenda and Market Development Strategy documents are provided in your welcome package. The foreseen discussion content is provided next page.

<b>Priority 1: Elements to build the SRA &amp; MDS documents</b>
For your Group thematic: objectives for 2030
For reaching these objectives, key areas for progress
For each key area, state of the art and current insufficiencies
For each key area, needed Research actions
For each Research action, classify it in long/medium/short term issues
For each Research action, foreseen budget, needed infrastructures (e.g. test facilities), education and training issues
Strategy for funding these Research actions (input for the Finance Group)
For each key area, what is the impact on the technical development
For each key area, what is the potential economic impact
Which input do you expect from the other Working Groups?
What input can you deliver to other Working Groups?
<b>Priority 2: Current Research Networks</b>
Current Research networks at EU or International level
Current Research networks at National level

Contact:

*European Wind Energy Technology Platform*  
 63-65 rue d'Arlon – 1040 Brussels  
 Phone: +32 (0) 2 400 1033  
 Fax: +32 (0) 2 546 1944  
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# Global Summary

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5 August 2008

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1. Overview
2. Main research / work areas of the WGs
3. Important interfaces
4. Milestones

## 1. Overview

- q WGs had structured discussions on last two days
- q Input for SRA & MDS has been formulated
- q Proposal towards the EC: WTs should produce power at lowest cost under given conditions, NOT: the bigger the better
- q High penetration wind energy
- q Training and education
- q Wind energy will become competitive soon

## 2. Main research areas of the WGs

- q WG 1: 3% Vision (annual power, design wind, forecast)  
Road map (targets, show stoppers, bottlenecks)  
Aim at new models, standardisation  
Continuation of Askervein, forecasting,...
- q WG 2: Improvements: uncertainties, availability, reliability  
System design approach, prolonged operation  
Verification & testing of complete units  
Verification of design tools (CFD), upscaling  
Advanced concepts, materials & possibilities

## 2. Main research areas of the WGs

- q WG 3: Vision – high penetration of wind power  
super grid, 100% renewables  
Impacts of grid codes (ancillary services)  
Grid planning, extension and operation  
Simulation, prediction, probability, regulations
- q WG 4: Core issue – safety  
New concepts for installation under hostile cond., in  
design, life cycle approach, accessibility Train work force  
(short term), developers and engineers (long term)

## 2. Main work areas of the WGs

- q WG 5: Cost drivers (investment, O&M, on- and offshore)  
Increase penetration(grid code, interconn, offshore)  
Competitiveness of on- and offshore (2020 & later)  
Harmonisation of market and regulations  
40% increase im kW -> 10% increase in kWh
- q WG 6: Vision – Wind is largest contributor in RE (electr.)  
Improved interconnection and cooperation in EU  
EU wind sector is global center of excellence  
Public support (noise, visual, acceptance)  
Cumulative impact

## 2. Main work areas of the WGs

- q FWG: More support is necessary, 5-10 times needed  
Streamlined procedures, incorporate other schemes  
Best practise: Carbon Trust  
EU Wind Energy R&D Fund (WUND) for  
Universities, public research orgs., Technological  
centers, manufacturers, leading technology SMEs

### 3. Important interfaces

- q WG 1: Met offices, CFD, operators, offshore (wind-wave)  
Information to WGs 2, 3, 4 and 5
- q WG 2: Interfaces with WGs 1, 2, 3 and 4; interactions  
with WG 5 + 6 not discussed yet
- q WG 3: Interface to WGs 2 (generator), 1 (prediction),  
5 (market operation) and 6 (harmonisation of GC)  
and power industry
- q WG 4: Grid, infrastructure, market, turbines  
WG 1, 2, 3, 5 and 6
- q WG 5: WG 2, 3, 4 and 6
- q WG 6: WG 2 (acceptance), 3 (grid), 4 (offshore) and  
5 (payment)

## 4. Milestones

- q December: SRA & MDS updated by Secretariat
- q January: Feed back from WG members to Chairs
- q Mid January: Distribution of updated documents & Agenda of 2nd General Assembly
- q 12/13 February: 2nd General Assembly and discussion of documents in WGs

**Management Centre Europe**  
Rue de l'Aqueduc 118, B-1050 Brussels

Time	Tuesday February 12 <sup>th</sup> , 2008
8:00	Welcome of participants and registration
<b>Plenary Session – Room A</b>	
9:00	Introduction ( <i>H. Kruse, TPWind Chairman</i> )
9:15	TPWind input to SET-Plan ( <i>S. Tostmann, European Commission</i> )
9:30	TPWind input to FP7 ( <i>to be confirmed, European Commission</i> )
9:45	Links with IEA activities ( <i>to be confirmed, International Energy Agency</i> )
10:00	Open questions to speakers
10:15	Secretariat introduction of working sessions ( <i>Nicolas Fichaux, EWEA</i> )
10:30	<b>Coffee Break</b>
<b>Working Group Meetings – Parallel sessions (rooms C,D,E,F,G,H,I) (*<sup>1</sup>)</b>	
11:00	Discussions on the SRA&MDS documents (* <sup>2</sup> )
12:30	<b>Lunch</b>
14:00	Discussions on the SRA&MDS documents (* <sup>2</sup> )
16:00	<b>Coffee Break</b>
16:30	Discussions on the SRA&MDS documents (* <sup>2</sup> )
18:00	<b>Networking Event: Cocktail at MCE</b>
<b>End of First Day</b>	

Time	Wednesday February 13 <sup>th</sup> , 2008
<b>Plenary Session – Room A</b>	
9:00	Welcome of participants and introduction ( <i>speaker to be confirmed</i> )
9:20	WG 1: Wind Energy Resource ( <i>E. L. Petersen, Risoe</i> )
9:40	WG 2: Wind Power Systems ( <i>J. Beurskens, ECN</i> )
10:00	WG 3: Wind Energy Integration ( <i>H. Holtinen, VTT</i> )
10:20	<b>Coffee Break</b>
11:00	WG 4: Offshore Development & Operations ( <i>A. MacAskill, Talisman</i> )
11:20	WG 5: Wind Market & Economics ( <i>C. Gasco, Iberdrola</i> )
11:40	WG 6: Wind Policy & Environment ( <i>A. Zervos, NTUA</i> )
12:00	Finance Working Group ( <i>M. Villanueva Monzon, Gamesa</i> )
12:20	Global summary ( <i>C. Nath &amp; J. Prats, Alternate Members</i> )
12:35	Open discussion ( <i>Moderator, H. Kruse</i> )
13:00	Conclusion ( <i>H. Kruse, Chairman</i> )
13:15	<b>Lunch</b>
<b>End of General Assembly</b>	

<b>(*) Parallel Working Group Meetings</b>	
<b>Group</b>	<b>Room</b>
WG1 – Wind Energy Resource	C
WG2 – Wind Power Systems	G
WG3 – Wind Energy Integration	H
WG4 – Offshore deployment & operations	I
WG5 – Wind Market & Economics	D
WG6 – Wind Policy & Environment	E
Finance Working Group	F

**(\*) Discussions on the framework document:** Draft Strategic Research Agenda and Market Development Strategy documents are provided in your welcome package. These sessions are aimed at upgrading this text and elaborating the missing parts. **A proposal for Group meeting agendas is included into your delegate package.**

Contact:

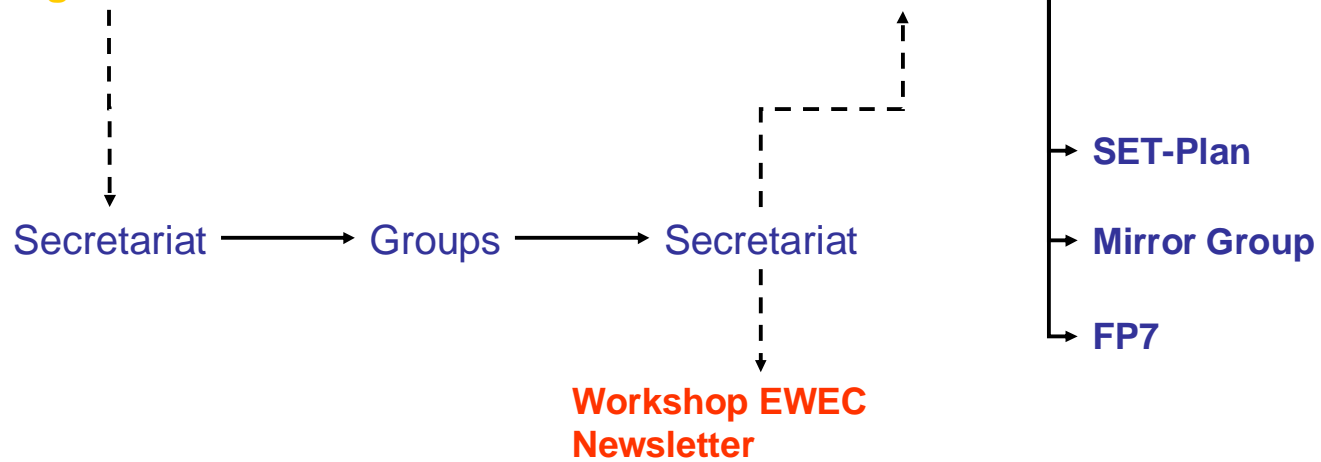
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## Global Summary

C. Nath, J. Prats  
Executive Committee

## SRA&MDS update

Shaping the vision...



## Parallel activities: European Wind Initiative

Strategic objectives identified in the Strategic Research Agenda



Key-actions prioritized and complying with the subsidiarity principle

High Risk	EU level
Medium risk	National
Low risk, competitive market	Industry



Commitment to assembling and coordinating at EU level a critical mass of research drawing on all sources of R&D investment, whether public or private, within one coherent, flexible and efficient **legal framework**

## Parallel activities: Mirror Group

- q The Mirror Group is one pillar of TPWind
- q It is composed of Member States Representatives
- q It interacts with the Steering Committee
- q It is aimed at:
  - § **Providing opinions and advices** on policies & programmes in Member States,
  - § **Enhancing co-operation** among Member States and EU,
  - § **Building a coherent EU strategy** on R&D; explore integration mechanisms,
  - § **Proposing actions** to SC relevant to Member States. Work with SC to set goals and targets,
  - § **Promoting understanding** and awareness on technology developments,
  - § **Representing interests and views** of Member States; provide responses to the recommendations and actions of the SC,
  - § **Assisting in dissemination** of results of Working Groups.

## Parallel activities: Mirror Group

- A letter was sent by the EC to Ambassadors of Permanent Representations in Brussels
- Answers are expected on February 15<sup>th</sup>
- First Mirror Group meeting shall take place in April/May 2008
  - § Presenting the SRA&MDS
  - § Collecting advices from Member States
  - § Discussing its implementation, in coordination with National Programmes
  - § Discussing implementation of a European Wind Initiative
  - § Other issues...

## Working Groups

## Common to all

- q Basis: Cost of energy per kWh
- q Aim for cost reduction (quicker, faster, cheaper)
- q Education
  - § Lack of engineers
  - § Shortages of skilled people
- q Lack of industrial capacity
  - § Turbines
  - § Vessels
  - § Grid
- q Reliability
- q Difficulty to define budgets
- q 2030: one quarter of electricity from wind

## Wind Energy Resource (WG1)

- q Three Research Areas
  - § Resource
  - § Design conditions
  - § Short-term forecasting
- q Six Research Priorities
  - § Complex terrain
  - § Offshore
  - § Extreme wind
  - § Wakes
  - § High profiles
  - § Short-term forecast

## Wind Energy Resource (WG1)

q New:

§ Getting common 'things' tailored for wind energy

q Time:

§ 2020 medium-term

§ 2030 long-term

q Budget:

§ 5 locations in Europe, 5 MEUR hardware, 5 Mio per experiment

## Wind Power Systems (WG2)

- q Consequences from EU Targets
  - § Manufacturing (4 turbines/hour -> 12 blades/h + 50 switches/hour + ..)
  - § Resource availability
  - § Reliability
  - § Grid connection speed
  - § Development of sites
- q Matrix of Research Priorities
  - § Risk: high (EU), medium (national), low (industry)
  - § Timing: long-, medium-, short-term
- q Cost-of-Energy Approach

## Wind Power Systems (WG2)

### q Infrastructure:

- § Test facilities (blades, drive trains, components, wind tunnels (keep existing), ..)
- § Research wind farm
- § Need for demonstration

### q Budget:

- § ?
- § Estimate number of people needed

## Wind Energy Integration (WG3)

### q Four Topics

- § Wind power plant capabilities
- § Grid planning & operation
- § Energy & power management
- § Energy markets

### q New:

- § Offshore transmission
- § Internal wind farm networks (>1000MW)

### q Infrastructure:

- § Test facilities for plant capabilities

## Wind Energy Integration (WG3)

### q Needs:

- § Wind integration experience -> TSOs
- § Lack of engineers
- § -> might jeopardize the SRA
- § Look for engineers in new member states

### q Budget

- § ?

## Offshore Development & Operations (WG4)

### q Objective (by 2030):

- § >13% electricity from offshore wind
- § Offshore to be a common industry
- § Technology for 50-60m water depth
- § Technology ready for offshore

### q Common Themes

- § Safety
- § Environment
- § Education

## Offshore Development & Operations (WG4)

### q Key Priorities:

- § Substructures
- § Working (assembly, installation, decommissioning)
- § Electrical infrastructure
- § Turbines (2-bladed for offshore?)
- § Operation & Maintenance

### q Listing of both Market Deployment & Research

- § short-term
- § long-term

### q Budget

- § ?

## Wind Market & Economics (WG5)

q There are 26 recommendations in the paper

q Objectives:

§ Wind to become major modern energy source

- Reliable
- Cost competitive

§ European industry to remain technology leader

- 25% wind penetration in 2030
- 12% in 2020 (from discussion)

q Needs:

§ E.g. targets, long-term plans (siting + grid), electricity market, permitting

## Wind Market & Economics (WG5)

- q Revenue Reliability
- q Costs (Investment, Operation, Capital)
- q Grid
  - § Harmonisation of access
  - § Fair and easy access
  - § New infrastructure
  - § Special considerations for offshore
  - § Consequences for large penetration
- q Budget
  - § ?

## Wind Policy & Environment (WG6)

- q Seven Objectives
- q Policy & Research Recommendations
- q 2030: one quarter of electricity from wind
- q Objectives and Research Topics for
  - § EU-GRID (market and grid)
  - § VALUE (cost competitive technology)
  - § EU-EXCELLENCE
  - § PUBLIC
  - § PROCEDURE
  - § NATURE

## Wind Policy & Environment (WG6)

### q Next steps:

- § Finalize policy recommendation
- § Coordinate with other WGs
- § WG meeting at EWEC 2008

### q Budget:

- § ?

## Financing (FWG)

- q Large Gap in EU-Funding (1bn EUR 2006-2020)
  - § List of additional funding mechanisms
- q The Strategic Energy Technology (SET)-Plan shows a partial solution to this
  - § Wind Joint Technology Initiative (JTI)
    - 50% private funding
    - Adaptable to needs
    - For critical areas
    - Grant based mechanism
  - § Example H2 community

## Financing (FWG)

- q Within this approach the JTI is not the 'silver bullet' to solve all problems, other complementary instruments should be explored
  - § Private path: Innovative Emerging Initiatives
    - (EIB + Private Investors)
    - -> R+D Funding unit is a unit of Wind JTI
    - -> Equity