

# European Wind Energy Technology Platform (TPWind)



## Terms of Reference

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**Prepared by the TPWind Secretariat**

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## 1. Background

Europe currently leads the world wind energy market. It is also the centre of the manufacturing industry, as well as technology development and innovation in the wind energy field. This will continue to be the case, only with sustained, strong political commitment.

Such a view was endorsed in July 2004 by the Chairman of the Informal Competitiveness Council, Dutch Economy Minister Laurens Brinkhorst. He called for:

*"a limited number of platforms for precisely those areas in which Europe is successful, such as nanotechnology and wind power."*

Participants of the Dutch EU Presidency's Policy Workshop on the Development of Offshore Wind Energy, in Egmond, Holland agreed that:

*(offshore) "wind energy will contribute significantly to the Lisbon Strategy and EU objectives on technological development, exports, employment and regional development."*

*"Participants emphasise the need for setting up of a Wind Energy Technology Platform within the framework of FP7, as proposed by the Informal Competitiveness Council (Maastricht, July 2004)."*

At the follow up meeting in Copenhagen, in October of 2005, policy workshop participants reiterated this call.

*"There is enormous potential and benefits of enhanced, EU-wide and global collaboration in wind power related research and development. Participants recommend the establishment, under the 7th Framework programme, of a Technology Platform for Wind Energy, as proposed by the Informal Competitive Council in July 2004, and call on the European Commission to facilitate such a Platform (COM (2004)366) with the aim of a more extensive Joint Technology Initiative."*

And the Berlin declaration, in February 2007, indicated that:

*"Member States should encourage the full use of this Platform to further improve the coordination of national R&D programmes."*

The Green Paper "A European Strategy for Sustainable, Competitive and Secure energy Market" (COM(2006), 105 final) also states that:

*"The EU needs to ensure that its internal energy market guarantees security of supply and solidarity between Member States. Concrete measures should include:..a strategic energy technology plan, making best use of Europe's resources, building on European technology platforms and with the option of joint technology initiatives or joint undertakings to develop leading markets for energy innovation..."*

Moreover, Directive 2003/87/EC defines the European Trading Scheme (EU-ETS). In this framework, as a power technology which can cut carbon emissions and help to meet growing electricity demand, wind energy is a leading candidate.

It is not only the benefits of a strong European wind industry that are at stake here. The wind industry has depended to a large extent on technology transferred from other industry sectors, including aeronautics, shipping, steel and composites. Wind energy has, therefore, provided new markets for existing industries, and while it continues to do so today, this trend is reversing somewhat. Wind is placing ever greater demands on existing technologies, not only in manufacturing, but also in installation, and operation and control. In other words, wind energy has become a driver for development and generation of new knowledge in other industries.

## 2. Objectives

The objective of TPWind is to identify areas for increased innovation, new and existing research and development tasks. These will then be prioritised on the basis of “*must haves*” versus “*nice to haves*,” the primary objective being overall (social, environmental and technological) **cost reductions**. This will help to achieve EU objectives in terms of renewable electricity production. The platform will develop coherent recommendations, detailing specific tasks, approaches, participants and the necessary infrastructure, in the context of private R&D, as well as EU and Member State Programmes, such as FP7. TPWind will also assess the overall funding available to carry out this work, from public and private sources.

The Steering Committee, Market Development Working Groups and Member States Mirror Group will also identify opportunities for establishing and building international cooperation on shorter-term operational issues. This collaboration between EU Member States, which will continue throughout the cost reduction process in the form of shared and compatible policy and technology development, will ensure that these cost reductions translate into an increased share of European production.

This overall objective will be reached through:

- **Scoping sector innovation and R&D needs.** Ascertain wind energy R&D needs to be met through the Strategic Energy Technology Plan, the Seventh Framework Programme (FP7), other EU and National Programmes, and with the strong private sector collaboration.
- **A single, powerful voice for R&D.** Reinforcing the expertise that is needed for a successful R&D activity to take place. Reach out to all key stakeholders in the wind energy sector, including EU Institutions, Member States / energy authorities, the wind energy industry, other energy sector stakeholders, R&D institutions and financiers. Communicate the findings of the platform to research actors across the EU and internationally, to ensure maximum positive collaboration, with the objective of raising wind energy R&D to high priority status in national and EU research programmes and plans.
- **Maximal sector sensitivity.** Drive better communication:
  - within the wind sector, building interaction between public and private sector organisations, encouraging the rapid uptake of research findings and innovation;
  - externally, with other industry sectors and their technology platforms, exploring areas of technology transfer and resulting new markets.Assess and monitor ongoing and new research projects in wind energy to provide input for Steering Committee and Working Group discussions. Thus, it will serve as a “docking station” for ongoing European Commission funded and other EU and national initiatives and assist in the uptake of their findings, with a view to strengthening the European Research Area.
- **Effective Action Plans.** The Technology Platform will identify realistic pathways to the resolution of technology and policy hurdles to wind energy, with a **Strategic Research Agenda (SRA)** to cover technology issues and a socio-economic **Market Development Strategy (MDS)**, to cover policy R&D and market development, including short-term operational measures, in co-ordination with existing national technology platforms.

## 3. Organisation and operation

### 3.1. Structure

TPWind is made up of a Steering Committee (SC), Member States Mirror Group (MSMG), Finance Working Group (FWoG), Policy/Market and Technology Working Groups (WG) and a Secretariat. The structure is summarised in Figure 1. The share of Policy / Market Development and Technology / Research has still to be defined, such as the internal Working Groups structure.

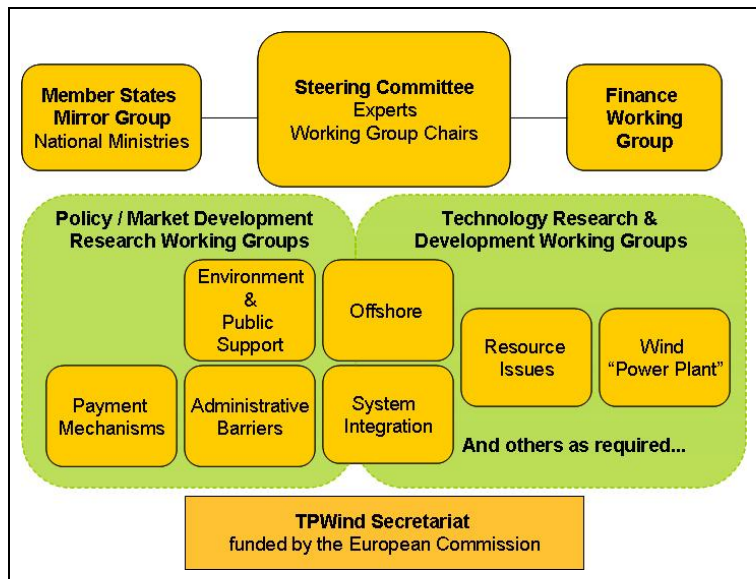


Figure 1: Structure of TPWind

## 3.2. Steering Committee (SC)

### 3.2.1. Description:

The SC is the decision-making body and executive arm of the Technology Platform. It directs all activities and is accountable for:

- defining roles and responsibilities within the platform and outlining operations;
- compliance with the Platform mission and related activities;
- the approval and launch of activities, including objectives, timing and scope;
- follow-up activities and approval of deliverables; and
- the final assessment of key deliverables (Strategic Research Agenda and Market Development Strategy) with support from the Secretariat based on Working group reports.

### 3.2.2. Composition:

In August 2006, the call for expressions of interest in membership of the SC was launched. The European Commission evaluated the applications, in collaboration with the Advisory Council. The TPWind Steering Committee was selected and its composition can be viewed on <http://www.windplatform.eu/>

It is currently composed of 22 members (75% from industry and 25% from academic institutions)

- Wind turbine manufacturers (4)
- Major sub-suppliers: component manufacturers, installation companies (3)
- Wind farm developers and operators (5)
- R&D and academic institutions (6)
- Consultancy and engineering companies (1)
- Service providers: certification, testing, data services (1)
- Energy association (1)
- Honorary Member: Arthouros Zervos (President of EWEA)

Chairpersons of the Working Groups and Member States Mirror Group automatically become members of the Steering Committee, providing an effective link for interaction between the different groups that make up TPWind.

### 3.2.3. General Rules:

Members of the SC are appointed for a 3-year term and may be reappointed. Members serve in a personal capacity; therefore the appointment of substitutes is generally not permitted. Each stakeholder may, however, nominate one single back-up to attend SC meetings on their behalf if they are unable to attend for justified reasons. Members should represent both the knowledge of their individual expertise and the collective view of their stakeholder group, not specifically their own company or institute. If necessary, the composition of the SC can evolve, or new stakeholders may be added with the agreement of a majority (two thirds) of the existing SC members, in order to achieve a balance that best suits its functions.

A Chairperson, a maximum of two Vice-chairpersons and two additional members will be elected by the SC members. The Chairperson does not have to be an SC member, whereas Vice-Chairpersons and additional members are elected from existing Members. These representatives are selected on the basis of their individual abilities and to reflect a sound stakeholder representation. This group constitutes the Executive Committee (ExCo) of the Platform. The ExCo is the primary link with the Secretariat, and will guide the Secretariat in the overall planning and coordination of Platform activities, and in taking ad-hoc decisions.

ExCo officers can serve for an 18-months period and may be reappointed. The first ExCo officers will be elected during the first SC meeting, in March 2007. SC membership and ExCo positions are voluntary and not subject to remuneration.

Additional stakeholders may be invited to attend SC meetings as observers. The number of observers should not exceed 15% of the total number of members. Observer nominations are proposed to the SC for approval by the ExCo. Observers may attend all SC meetings. They may intervene during these meetings at Chairperson's request. The European Commission may also participate as an SC observer.

SC decisions will be taken by consensus whenever possible. Each SC member has one vote and a decision will be taken on the basis of a majority vote, should consensus not be achieved. Voting rules are under supervision of the ExCo, and depends on the type of decision to be taken:

- For decisions concerning the members of the platform (proposition and revocation of Chairpersons of the Groups, membership in the SC), a two-third majority is needed,
- For decisions concerning the day-to-day activities of the Platform, a simple majority is needed.

SC meetings will be held periodically, at least twice a year. Meetings are organised by the ExCo with support of the Secretariat. For important issues, the SC will be consulted when there is sufficient time available. If not, ExCo will be consulted. Ad-hoc decisions will be approved at the next SC meeting.

The ExCo must provide Output Minutes of each meeting, in electronic format, prepared to the highest standard by the Secretariat. This is a key step in the efficient communication of information between the Platform and its Secretariat.

Minutes of the meetings will be made available on the internal website of the platform. Official decisions extracted from the minutes will be made available to other bodies upon request. After validation by the ExCo, these decisions will be disseminated to the community and to the general public through the Technology Platform website: <http://www.windplatform.eu/>

## **3.3. Member States Mirror Group (MSMG)**

### 3.3.1. Description:

This will comprise the relevant ministries or Member State energy agencies that wish to participate. The MSMG is expected to carry out work in two areas. It will provide an opportunity to tailor national

R&D activities to complement EU activities, and vice versa, and to develop synergies and reinforce basic research. It is also an opportunity for Member States to collaborate in pushing forward some of the short-term operational issues facing wind energy, such as those described in the Copenhagen Declaration.

#### 3.3.2. Composition:

Members of the MSMG are invited by the European Commission. The MSMG is composed of Member State representatives (incl. Candidates and Associates) at Senior and Director level, nominated by the appropriate body responsible for energy, industry, research and/or environment. Membership is subject to acknowledgement by the Steering Committee, and approval of the European Commission.

#### 3.3.3. General Rules:

A Chairperson and a maximum of two Vice-chairpersons will be elected by the MSMG members. These representatives are elected from exiting Members and are selected on the basis of their individual abilities and to reflect a sound stakeholder representation. These officers shall serve for an 18-months period and may be reappointed. The first officers will be elected during the first MSMG meeting. The MSMG membership and the positions of Chairperson and Vice-chairpersons are voluntary and are not subject to remuneration.

The Chairperson is a member of the Steering Committee. The Chairperson is responsible for organising MSMG meetings, with the support of the Secretariat. Such meetings will take place at least once a year.

The Chairperson and Vice-chairpersons must provide Output Minutes of each meeting, in electronic format, prepared to the highest standard by the Secretariat. This is a key step in the efficient communication of information between the Platform and its Secretariat.

Documents will be made available on the internal website of the platform. It will also be made available to other bodies upon request. After validation by the Chairperson and Vice-Chairpersons of the MSMG these documents will be disseminated to the community and to the general public through the Technology Platform website: <http://www.windplatform.eu/>

### **3.4. Finance Working Group (FWoG)**

#### 3.4.1. Missions:

One of the Platform's key concerns is the assessment and procurement of sufficient funds to pay for the identified innovation and R&D tasks. FWoG will explore opportunities for the funding of research infrastructures and demonstration activities and attempt to establish the approximate level of funding available from a complete range of sources, which can then be matched to the R&D priorities established by the Steering Committee.

The Platform's Finance Working Group will be dedicated to increasing the private sector's role in collaborative R&D, and in establishing new sources of funding in the public sector through, for example, Structural Funds, as well as the newly introduced Risk-Sharing Finance Facility, making use of EIB loan investments in large European R&D projects and infrastructures.

In the Declaration of the Copenhagen European Policy Seminar on Offshore Wind Power, participants called for the establishment of the technology platform "*with the aim of a more extensive Joint Technology Initiative*" (JTI). This mechanism, the use of which is described in Article 171 of the Treaty Establishing the European Community, is as yet a largely unknown quantity and may provide dramatically increased funding for wind energy R&D. A JTI can only be implemented through a technology platform. One of the key objectives of the Financing Group will be to establish, firstly, whether or not the implementation of such a mechanism is desirable and, secondly, to build understanding of how such a (relatively untried) mechanisms could benefit wind energy research and development.

#### 3.4.2. Composition:

Members of the FWoG are selected from a call of expression of interest launched by the Secretariat. Selection is based on objective criteria, to be proposed by the Secretariat and to be validated by the ExCo. The list of selected Working Group members is proposed by the ExCo to the SC for approval.

The FWoG is composed of representatives from public and private Research and Development funding bodies and high-level financial institutions at Senior and Director level. Membership is subject to validation by the Steering Committee.

#### 3.4.3. General Rules:

A Chairperson will be appointed by the SC. A maximum of two Vice-chairpersons will be elected by the FWoG members. These Vice-chairpersons are elected from existing Members and are selected on the basis of their individual abilities and to reflect a sound stakeholder representation. The Chairperson and Vice-chairpersons will serve for an 18-months period and may be reappointed. The first officers will be elected during the first FWoG meeting. The membership of the FWoG and the positions of Chairperson and Vice-chairpersons are voluntary and are not subject to remuneration.

If the Working Group is unable to provide suitable outcomes, the Chairperson of the WG can be revoked by the Steering Committee (vote with 2/3 majority), on proposal of the Executive Committee.

The Chairperson is member of the Steering Committee and is responsible for organising the FWoG meetings, with the support of the Secretariat. Meetings will take place at least once per year.

The Chairperson and Vice-chairpersons are responsible for the provision of Output Minutes of each meeting, as well as an annual report, in electronic format, prepared to the highest standard by the Secretariat. This is a key step in the efficient communication of information between the Platform and its Secretariat.

Documents will be made available on the internal website of the platform. It will also be made available to other bodies upon request. After validation by the Chairperson and Vice-chairpersons of the FWoG, these documents will be disseminated to the community and to the general public through the Technology Platform website: <http://www.windplatform.eu/>

### **3.5. Technology, Policy and Market Development Working Groups**

#### 3.5.1. Description:

The primary role of TPWind is to develop research pathways towards cost reductions. Working Groups (WG) will be established to handle particular facets related to accelerated and innovative wind energy R&D.

The Technology/ Research & Development Working Groups will develop the Strategic Research Agenda (SRA), which will provide a clear picture of priorities, tasks and actors in terms of technology development.

The Policy/ Market Development Working Groups will develop the Market Development Strategy (MDS), which will provide a clear picture of priorities, tasks and actors in terms of market development.

#### 3.5.2. Composition:

Working Group numbers and themes are proposed by the Executive Committee (ExCo). This proposal is subject to acknowledgement by the Steering Committee (SC).

A Working Group is composed of a small number (e.g. max. 20) of high-level persons willing to participate to the work of the Technology Platform. Working Groups members are selected from a call of expression of interest launched by the Secretariat. Selection is based on objective criteria, to be

proposed by the Secretariat and to be validated by the ExCo. The list of selected Working Group members is proposed by the ExCo to the SC for approval.

Themes of the Working Groups may include the following, with the inclusion of others, as needs arise:

1. Wind resource and site assessment, micro-sitting, measurement and prediction, including offshore, complex and extreme conditions, and also resource assessment for design and operational conditions.
2. Wind "Power Plants", including turbine components, turbines, new wind farm concepts, and small wind energy technology. Advanced wind turbine and component concepts and design tools, including the use of new materials with higher strength to mass ratios.
3. System Integration: the input into the European electricity system of maximum quality, highly reliable power. This will necessitate the involvement, at an early stage, of transmission system operators, and interaction with the "Smart grids" and Hydrogen technology platforms.
4. Innovation for dedicated offshore technology and the development of a European policy for offshore wind energy, as called for by participants of the European Policy Seminar on Offshore Wind Power in Copenhagen, 2005.
5. Environmental issues, focusing in particular on potential cumulative environmental impacts on marine, avian and terrestrial ecosystems, and public support.
6. Payment mechanisms for wind energy, taking into account the possibility of a harmonised European payment mechanism for renewable energy.
7. The identification and surmounting of administrative barriers to wind energy, including the "one stop shop approach" to streamlining planning issues as stipulated in the RES-E Directive, Article 6.

#### 3.5.3. General Rules:

For each WG, the ExCo will propose a Chairperson. This proposal is subject to acknowledgement by the Steering Committee.

A maximum of two Vice-chairpersons will be elected by WG members. These representatives are elected from exiting Members and are selected on the basis of their individual abilities and to reflect a sound stakeholder representation.

The Chairperson and Vice-chairpersons will serve for an 18-months period and may be reappointed. The membership of the WG and positions of Chairperson and Vice-chairpersons are voluntary and are not subject to remuneration.

The Chairperson is member of the Steering Committee. If the Working Group is unable to provide suitable outcomes, the Chairperson of the WG can be revoked by the Steering Committee (vote with 2/3 majority), on proposal of the Executive Committee.

The Chairperson and Vice-Chairpersons are responsible for organising the WG meetings, with the support of the Secretariat. Such meetings will take place at least twice a year.

The Chairperson and Vice-chairpersons are responsible for the provision of Output Minutes of each meeting, as well as an annual report, in electronic format, prepared to the highest standard by the Secretariat, which will provide the basis for development of the Market Development Strategy and Strategic Research Agenda. This is a key step in the efficient communication of information between the Platform and its Secretariat.

Documents will be made available on the internal website of the platform. It will also be made available to other bodies upon request. After validation by the Chairperson and Vice-chairpersons of the WG, these documents will be disseminated to the community and to the general public through the Technology Platform website: <http://www.windplatform.eu/>

## 3.6. Secretariat

### 3.6.1. Description:

The Secretariat of the Wind Energy Technology Platform optimises the activities of the Platform. It manages the calls for selecting the members of the high-level Member States Mirror Group, Working Groups and Financing Group. It also provides logistical, functional and organisational support to the Technology Platform groups, and, where appropriate, will provide intellectual input to their discussions, particularly with regard to the fine-tuning of its Action Plans: the Market Development Strategy and the Strategic Research Agenda.

### 3.6.2. Constitution and composition:

The Secretariat comprises EWEA, Garrad Hassan and Risoe. The Secretariat has been assigned for an initial period of 36 months. Under contract with the European Commission, the secretariat supports the technology platform's key objectives and helps to build an identity for the platform. It maintains a strictly neutral position as regards policy setting and orientation of final documents and deliverables of the Platform.

### 3.6.3. General Rules:

The Secretariat assists to Steering Committee, Member States Mirror Group, Working Groups and Financing Group meetings. It reports to the SC and the European Commission. It is responsible to provide the Commission a set of deliverables. These deliverables take inputs from the TPWind activities.

### 3.6.4. Costs covered by the Secretariat:

- Organisation of the Biannual Sessions (see 3.7)
- Rental of meeting rooms and related logistical costs
- Dedicated Website design, development and management
- Hiring Group Secretaries for the Steering Committee and Working Groups. Secretaries will be hired by the Secretariat on an *ad hoc* basis on provision of sufficient evidence of expertise
- Travel & Subsistence costs for two representatives of each partner of the Secretariat as well as the Chairpersons and Secretaries of the groups to attend all meetings
- External expertise on an *ad hoc* basis to brief the Steering Committee or Working Groups with new knowledge, and to provide training. External consultants will be hired directly by the Secretariat, hired for a maximum of two days
- Day to day activities of MSCs within the Secretariat are obtained with no attached personnel costs. More substantial input and expertise provided through the national ministry/energy authority and Transmission System Operator (TSO) contributors would however entail greater personnel costs, and these would be covered by a sub-contracting Budget.

## 3.7. Meeting and groups interactions

Considering points 2.2 to 2.5, the following meetings are foreseen annually:

- Two Steering Committee meetings
- One Member State Mirror Group meeting
- One meeting of the Financing Group
- Two meetings for each of the Market Development and Technology Working Groups

Moreover, one Annual General Meeting (AGM) will take place, wherein all Platform members sit together.

It is expected that approximately fifteen meetings in total will be held annually. To maximise the opportunity to interact, meetings will be grouped around bi-annual sessions. The schedule will be developed in collaboration with the Steering Committee. Bi-annual sessions last 2 days. Examples are provided Table 1 & 2.

	Day 1		Day 2	
<b>AM</b>	Secretariat Meeting	-	Member States Mirror Group	Financing Group
<b>PM</b>	Technology Groups	Market Development Groups	Steering Committee	-

**Table 1: Indicative schedule of first biannual session**

	Day 1		Day 2	
<b>AM</b>	WindSec Consortium Meeting	-	Annual General Meeting	-
<b>PM</b>	Technology Groups	Market Development Groups	Steering Committee	-

**Table 2: Indicative schedule of second biannual session**