

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 are then 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 develops 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 also assesses 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 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, guarantees that these cost reductions translate into an increased share of European production.

This overall objective is 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 serves 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 identifies 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.

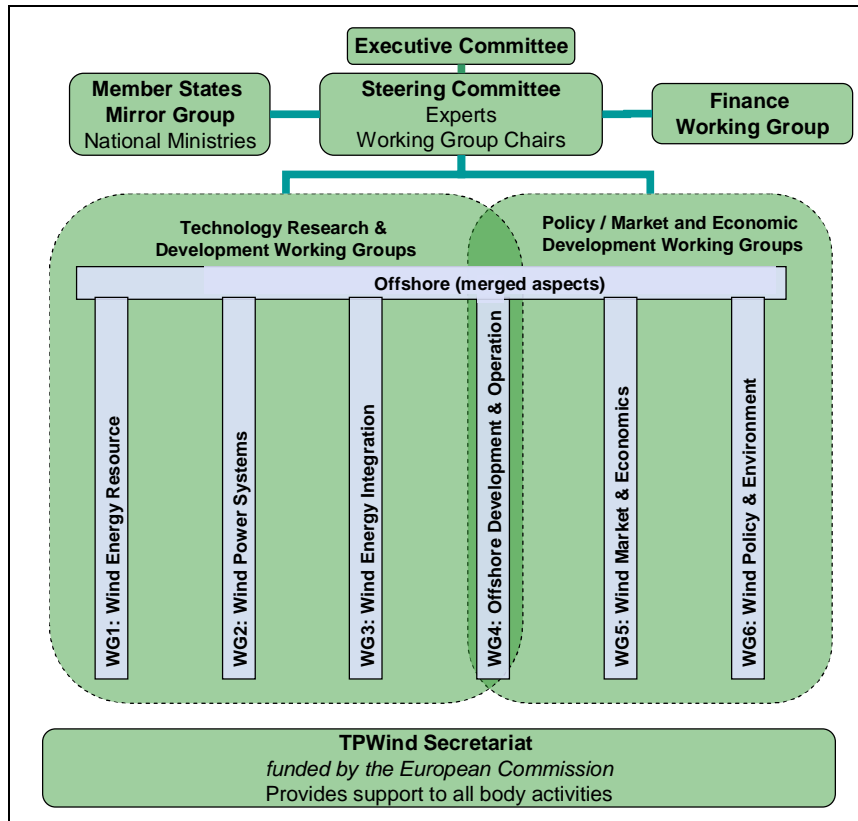


Figure 1: Structure of TPWind

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 25 members (64% from industry and 36% from academic institutions)

- Wind turbine manufacturers (5)
- Major sub-suppliers: component manufacturers, installation companies (4)
- Wind farm developers and operators (5)
- R&D and academic institutions (8)
- Consultancy and engineering companies (1)
- Service providers: certification, testing, data services (1)
- Energy association (1)

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.

3.2.3.1. Executive Committee

A Chairperson, a maximum of two Vice-chairpersons and two additional members are 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 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 were elected during the first SC meeting, in March 2007. SC membership and ExCo positions are voluntary and not subject to remuneration.

3.2.3.2. Observers

Additional stakeholders may be invited to attend SC meetings as observers. Observer nominations are approved 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. The number of observers should not exceed 15% of the total number of members. This 15% limit does not include representatives from the European Commission, or other Technology Platforms.

3.2.3.3. Voting

SC decisions are taken by consensus whenever possible. Each SC member has one vote and a decision is 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.

On ExCo decision, and for matters of urgency, written voting is accepted, including electronic format. Voting is under supervision of the Secretariat. The Secretariat must be able to produce the evidences related to the voting on demand of the Steering Committee.

Majority is based on the number of attendants to the meetings, or number of electronic responses. Voting with 2/3 majority is confidential; voting with simple majority is open.

3.2.3.4. Meetings, outcomes, dissemination

SC meetings are held periodically, at least twice a year. Meetings are organised by the ExCo with support of the Secretariat. 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 are made available on the internal website of the platform. Official decisions extracted from the minutes are made available to other bodies upon request. After validation by the ExCo, these decisions are 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 comprises the relevant ministries or Member State energy agencies that wish to participate. The MSMG is expected to carry out work in two areas. It provides 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

3.3.3.1. Chairpersons and Vice-chairpersons

A Chairperson and a maximum of two Vice-chairpersons are elected by the MSMG members. These representatives are elected from existing Members and are selected on the basis of their individual abilities and to reflect a sound stakeholder representation. These representatives shall serve for an 18-months period and may be reappointed. The first representatives are 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.

3.3.3.2. Meetings, outcomes, dissemination

The Chairperson is responsible for organising MSMG meetings, with the support of the Secretariat. Such meetings 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 are made available on the internal website of the platform. It is also made available to other bodies upon request. After validation by the Chairperson and Vice-Chairpersons of the MSMG these documents are 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. Description

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 explores 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 is 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 is 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, proposed by the Secretariat and 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.

The composition of the FWoG can evolve, or new stakeholders may be added. New stakeholders shall be acknowledged by the Group Chairperson and Vice-chairpersons, and proposed to the Executive Committee for approval.

The Group size shall not exceed 20 members. Exceptions shall be approved by the Executive Committee.

3.4.3. General Rules

3.4.3.1. Chairpersons and Vice-chairpersons

A Chairperson is proposed by the ExCo. This proposal is subject to acknowledgement by the Steering Committee.

A maximum of two Vice-chairpersons are elected by the FWoG members. These representatives 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 serve for an 18-months period and may be reappointed. The first officers were 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.

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

3.4.3.2. Voting

FWoG decisions are taken by consensus whenever possible. Each member has one vote and a decision is taken on the basis of a majority vote, should consensus not be achieved. Voting rules are under supervision of the Chairperson and the Vice-Chairpersons, and depends on the type of decision to be taken:

- For decisions concerning the structure of the Group (proposition and revocation of Vice-Chairpersons), a two-third majority is needed,
- For decisions concerning the day-to-day activities of the Group, a simple majority is needed.

On decision of the Chairperson and the Vice-Chairpersons, and for matters of urgency, written voting is accepted, including electronic format. Voting is under supervision of the Secretariat. The Secretariat must be able to produce the evidences related to the voting, on demand of the Group Chairperson.

Majority is based on the number of attendants to the meetings, or number of electronic responses. Voting with 2/3 majority is confidential; voting with simple majority is open.

3.4.3.3. Meetings, outcomes, dissemination

The Chairperson and Vice-Chairpersons are responsible for organising the WG meetings, with the support of the Secretariat. Such meetings take place at least once 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. This is a key step in the efficient communication of information between the Platform and its Secretariat.

Documents are made available on the internal website of the platform. It is also made available to other bodies upon request. After validation by the Chairperson and Vice-chairpersons of the FWoG, these documents are 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) are established to handle particular facets related to accelerated and innovative wind energy R&D.

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

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

3.5.2. Working Groups definition

WG numbers and themes are proposed by the Executive Committee (ExCo). This proposal is acknowledged by the Steering Committee (SC).

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

1. Wind resource and site assessment, micro-siting, 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 necessitates 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. Composition

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

A WG is composed of a small number of high-level persons willing to participate to the work of the Technology Platform.

The composition of the WG can evolve, or new stakeholders may be added. New stakeholders shall be acknowledged by the Group Chairperson and Vice-chairpersons, and proposed to the Executive Committee for approval.

The Group size shall not exceed 20 members. Exceptions shall be approved by the Executive Committee.

3.5.4. General Rules

3.5.4.1. Chairpersons and Vice-chairpersons

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

A maximum of two Vice-chairpersons are elected by WG members. These representatives 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 serve for an 18-months period and may be reappointed. The first officers were elected during the first WG meetings. 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 WG 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.

3.5.4.2. Voting

WG decisions are taken by consensus whenever possible. Each member has one vote and a decision is taken on the basis of a majority vote, should consensus not be achieved. Voting rules are under supervision of the Chairperson and the Vice-Chairpersons, and depends on the type of decision to be taken:

- For decisions concerning the structure of the WG (proposition and revocation of Vice-Chairpersons), a two-third majority is needed,
- For decisions concerning the day-to-day activities of the WG, a simple majority is needed.

On decision of the Chairperson and the Vice-Chairpersons, and for matters of urgency, written voting is accepted, including electronic format. Voting is under supervision of the Secretariat. The Secretariat must be able to produce the evidences related to the voting, on demand of the WG.

Majority is based on the number of attendants to the meetings, or number of electronic responses. Voting with 2/3 majority is confidential; voting with simple majority is open.

3.5.4.3. Meetings, outcomes, dissemination

The Chairperson and Vice-Chairpersons are responsible for organising the WG meetings, with the support of the Secretariat. Such meetings 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 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 are made available on the internal website of the platform. It is also made available to other bodies upon request. After validation by the Chairperson and Vice-chairpersons of the WG, these documents are 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, provides 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. Composition

The Secretariat comprises EWEA, Garrad Hassan and Risoe/DTU. 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 are 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 shall be hired directly by the Secretariat, 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) is organised, wherein all Platform members sit together. It is expected that approximately fifteen meetings in total are held annually. To maximise the opportunity to interact, meetings are grouped around bi-annual sessions. The schedule is developed in collaboration with the Steering Committee. Bi-annual sessions last 2 days. Examples are provided Table 1 & 2.

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

Table 1: Indicative schedule of first biannual session

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

Table 2: Indicative schedule of second biannual session