SET-PLAN IMPLEMENTATION

The Steering Group of the SET-Plan in its last meeting on October 28th, 2010 agreed to speed-up the execution of activities of the Implementation Plans(IPs) of the European Industrial Initiatives (EIIs). It was decided to collectively identify the possibilities for launching joint actions between Member States and/or Member States and the European Commission.

The mapping exercise carried out through this questionnaire builds upon this decision of the Steering Group. It aims to identify topics for leveraging best ongoing efforts with complementary joint actions, as prioritized by the Implementation Plans. In this phase the mapping will focus on projects and activities with a total budget higher than 0.5 M€.

We trust that you also consider the success of this exercise important for the immediate implementation of the SET-Plan.

MAPPING OF PROJECTS, ACTIVITIES, RESOURCES AND INVESTMENTS

To which EII(s) is your project, activity, resource or investment relevant? (multiple choices are possible)

WIND	SOLAR	GRIDS	CCS	NUCLEAR	BIOENERGY
X	☐	☐	☐	☐	☐

A. PROJECTS AND ACTIVITIES

GENERAL INFORMATION	
Name of project:	*WindFloat Pilot Project*
Acronym: *Give project acronym, if applicable*	*WindFloat Pilot Project*
Location: *Applicable only for demo/pilot project; enter specific location(s) and Member State(s)*	*5km offshore - Aguacadora, Portugal*

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Project partners: *List project partners; name coordinator first. For European & international projects mention the country affiliation of each partner*	*WindPlus S.A. - joint venture partners:* *EDP, (Portugal)* *Silva Matos (Portugal)* *Fundo de Apoio à Inovação (Portugal)* *Principle Power Portugal* *Vestas (Denmark)*
Project website:	*Under Construction*
Contact details: *Name, affiliation and contact details of the project coordinator*	*WindPlus S.A.* **Joao Goncalo Maciel** Board Member Av. Sidónio Pais, 28, R/C Esq. 1250-215 Lisboa, Portugal Tel: +351 21 001 8947 Fax: +351 21 001 8990 Tlm: +351 93 819 3039
Start date: *mm-yyyy*	*10-2009*
Duration: *in months*	*36 months*

SHORT PROJECT DESCRIPTION

Provide a short abstract of max. 100 words

The WindFloat Pilot project is a first of its kind full-scale deployment of a WindFloat Semi-Submersible Floating substructure supporting a 2MW turbine. The WindFloat will be deployed in the open Atlantic off the coast of Aguacadora in Portugal and will be grid connected. This project is currently in construction phase with commissioning and deployment scheduled for the third quarter of 2011. Once deployed, this installation will be the focus of significant collection of performance data along with the demonstration of best practices in O&M and H&S, in its aim to demonstrate commercial viability.

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PROJECT GOALS & OBJECTIVES	
Goals: *Indicate main qualitative goals*	*The successful demonstration of a Full-Scale Windfloat System showing demonstrating economic and commercial viability. The goals of this project can be broken down as follows:* ***Technological:*** *Validate operational performance of the WindFloat floating support structure with a 2 MW offshore turbine, enabling appropriate marine transportation and operation in deepwater. Develop new peripheral sub-systems, processes and procedures for maintenance of the turbine installed on the WindFloat. Develop and validate mass production methodology of offshore WindFloat systems. Establish parameters for multi unit installations and tie-in to national grids.* ***Economic and Social:*** *Validate the WindFloat design, fabrication and installation approach, a feasible and viable source of clean energy. Contribute towards the environment and improve social acceptance of alternative energy sources. Contribute to establishment of codes, standards and regulations for construction and operation.* ***Industrial****: Prove the feasibility of fast track development and installation and the economic operation of offshore wind farms in deepwater. Improve and commercialize the technology. Share knowledge and experience across Europe.*
Objectives: *Indicate quantitative objectives (similar to KPIs of the Implementation Plans of the EIIs). Also indicate intermediate milestones where applicable.*	*Consistent with the strategic objectives of the SET-Plan on Wind Energy. "To improve the competitiveness of wind energy technologies, to enable the exploitation of the offshore resources and deep waters potential, and to facilitate grid integration of wind power." The WindFloat pilot accelerates the time to market of this floating solution. This design and demonstration of a floating substructure is the main objective.*

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Assumed state-of-the-art: *Describe quantitatively the state-of-the-art that the project objectives are based upon*	*WindFloat semi-submersible floating platform* *-applicable in water deeper than 50m* *-fully integrated aero and hydro coupled model* *-turbine agnostic* *-assembled and commissioned quayside* *-catenary moored (minimal seabed disturbance)* *-patented stability characteristics* *-project integrates the WindFloat with a 2MW Turbine*
Achievements so far: *If intermediate results are available, please indicate the current achievements (qualitative and/or quantitative)*	*Design phase of the Pilot project completed* *Pre-Feed Study completed* *Feed Study completed* *Fabrication in progress*

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FUNDING & BUDGET	
Funding programme: *Give the name of funding programme*	*Currently there is no European Commission Funding mechanism associated with this project. Project partners – WindPlus S.A. and Vestas Offshore, and the Portuguese member state that has contributed 3mm Euro, have funded the project.* *Project partners a response to FP7-Energy-2011-2.3.1 was submitted to help defray future costs associated with:* • *Life-cycle testing of the WindFloat structure and the 2.0 MW turbine by incorporating extensive amount of instrumentation and measurement equipment;* • *Wind resources data correlation to reach an agreement with financial institutions that no mat-masts are required for deepwater offshore wind measurements. Instead, new methods, like LAIDER would be more that adequate to provide wind resource data;* • *Demonstration of the WindFloat performance with the wind turbine based on the modelled performance projections over an extended period of time – 36 months.* • *Develop mass production principle and processes* • *Develop LCOE methodology, demonstrate WindFloat LCOE*
Funding public entity: *Indicate which public entity is in charge of /manages the programme*	*Fundo de Apoio* à *Inovação (Portugal)*
Total (public & private) project budget (€):	*19 million*
Public funding (€):	*3 million (member state grant)*
Total effort (person months)	*N/A*

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DISSEMINATION OF PROJECT RESULTS

Publications, presentations in conferences and workshops, and other dissemination means:
Give highlights only
Current dissemination is being executed vis-à-vis participation i conferences:
The WindFloat project description and Poster were presented at the SET Plan meeting last year in Madrid through the Portuguese delegation.
EWEA 2011 (Brussels) Presentation on the cost and risk reduction of the WindFloat
Deeper Water Wind Conf. (London) Presentation on the Portuguese demonstration project.
Website is under construction

TOWARDS COMMERCIALISATION

Indicate (new) products and/or services expected from the project. Are new business models required for commercialisation of the project results?
Highlight expected commercialisation benefits, e.g. patents, spin-offs, new products, business partnerships
We expect the result of this project to have a critical impact on the way offshore wind is harvested. The introduction of an economically viable floating solution to Offshore wind deployment is significant. Placed directly at the confluence of two evolutions in the wind industry (turbines getting larger and developer's seeking higher quality wind resources) The WindFloat allows for the deployment of today's large and tomorrow's larger turbines unconstrained by water depth. Given the potential benefits, we would envision that this project furthers the commercialization of the WindFloat.

SYNERGIES WITH THE IMPLEMENTATION PLANS OF THE EUROPEAN INDUSTRIAL INITIATIVES – NETWORKING – KNOWLEDGE SHARING

Contribution to/Relevance with the IPs: To your opinion, to which activities of the IPs of the EIIs is this project related to? Indicate contributions/ complements.
Please note that reference here is made to the activities of the IPs as published in
http://setis.ec.europa.eu/activities/implementation-plans
Wind Industrial Initiative IP
The Development and Testing of New Structures (Direct contribution to IP)
Technology Transfer from oil and gas sector
The WindFloat solution successfully integrates two proven technologies. Semi-submersible floating platforms which have been in use by the oil and gas sector for decades and offshore marine turbines which are also and established technology

Potential synergies with other projects and activities: Can you identify any other project(s) in your country, another MS or at European level that could be synergetic with this project?

HiPRwind is one of the EC funded project that can be viewed as synergistic.

Networking: Would you be willing to share results with the projects identified above?
Indicate willingness to networking and also potential conditions

Potnetial cooperation can be arranged unser beneficial conditions.

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Knowledge sharing: Would the abovementioned Networking necessitates a formal knowledge sharing agreement? To your view would this be the preferred route? *Formal knowledge sharing agreement is in place between Project partners.*
Future steps: Are there any follow-up activities considered after the completion of your project? Is there a need to scale up activities in this topic at European level? *Given the importance and potential impact of the successful commercialization of Floating offshore wind continued focus is paramount. In the case of the WindFloat Technology which is fully assembled and commissioned quayside there is a significant reduction of cost and supply chain bottlenecks associated with heavy marine vessels and offshore assembly. Not to mention the absence of piling which carries with it potential ecological impacts and the ability to deploy with flexibility to water depth avoiding potential negative visual impact and other siting issues*

B. RESOURCES AND INVESTMENTS

RESOURCES AND INVESTMENTS
Describe in short any RD&D infrastructures that your project relies on. Are these available or do they need to be developed? *Existing European RD&D infrastructure is adequate to support any future developmnet of the technology.* If these are to be developed, what is the corresponding investment required? What is the allocated budget (€) for this investment in your project? *As any new technology future public funding is absolutely necessary. Project partners will be looking to source approximately Euro 25 mm to 30 mm to help offset the high costs of pre-commercial projects.*

OTHER INFORMATION	
Date: 14 April, 2011 *when the questionnaire was completed*	

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Information provider: *Give the name and affiliation of the contact person for the questionnaire. If you are the project coordinator, check the box* project coordinator	☒

Please send the completed form to set-plan-secretariat@ec.europa.eu
Thank you for your cooperation!

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