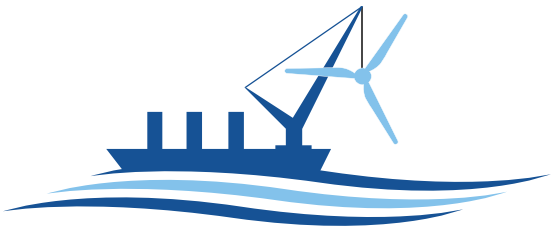

leanwind

Logistic Efficiencies And Naval architecture for Wind Installations with Novel Developments

Project acronym: **LEANWIND**
Grant agreement nº 614020
Collaborative project
Start date: 01st December 2013
Duration: 4 years

Substructure Selection Recommendation
Work Package 2 - Deliverable 2.6

Lead Beneficiary: GDG
Due date: 31st May 2017
Delivery date: 25h August 2017
Dissemination level: Restricted (RE)

This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No. 614020.

Disclaimer

The content of the publication herein is the sole responsibility of the authors and does not necessarily represent the views of the European Commission or its services.

While the information contained in the documents is believed to be accurate, the authors(s) or any other participant in the LEANWIND consortium make no warranty of any kind with regard to this material including, but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Neither the LEANWIND Consortium nor any of its members, their officers, employees or agents shall be responsible or liable in negligence or otherwise howsoever in respect of any inaccuracy or omission herein.

Without derogating from the generality of the foregoing neither the LEANWIND Consortium nor any of its members, their officers, employees or agents shall be liable for any direct or indirect or consequential loss or damage caused by or arising from any information advice or inaccuracy or omission herein.

Document Information

Version	Date	Description			
			Prepared by	**Reviewed by**	**Approved by**
1	30/06/2017	**First Draft**	Yeganeh Attari (GDG), Lin Zhang (GDG), Maria Pintor Escobar (ACCIONA), Louis-Marin Lapastoure-Gritcho (GDG)	David Igoe (GDG)	
2	09/08/2017	**Second Draft**	Yeganeh Attari (GDG)	David Bould (University of Edinburgh)	Paul Doherty (GDG)
3	25/08/2017	**Final Version**	Yeganeh Attari (GDG)	Jan Arthur Norbeck	Jan Arthur Norbeck

Author(s) information (alphabetical):	
Name	**Organisation**
Yeganeh Attari	GDG
Paul Doherty	GDG
Lin Zhang	GDG
Maria del Mar Pintor Escobar	ACCIONA
Louis-Marin Lapastoure-Gritcho	GDG

Support by:

Acknowledgements/Contributions:	
Name	**Organisation**
David Bould	University of Edinburgh

Definitions

GBF	Gravity Base Foundation		
HLV	Heavy Lift Vessel		
CFD	Contract for Difference		

Executive Summary

The “LEANWIND” (Logistic Efficiencies And Naval architecture for Wind Installations with Novel Developments) project has been developed in the 7th Framework Programme of the European Commission with the purpose of providing solutions & technologies that help to reduce costs across the offshore wind farm’s lifecycle and supply chain through the application of lean principles and the development of state of the art technologies and tools.

Deliverable 2.6 discusses “Foundation Concept Selection for Offshore Wind Turbines”. In this report, different foundation options applicable in the offshore wind sector have been summarised, with a focus on their merits and drawbacks. Each foundation type has been assessed and recommendations for applicable concepts for various site specifications were given. This deliverable aims at using the findings and conclusions from all the previous deliverables in this work package and summing them up so that they can efficiently be employed in selecting the most suitable foundation type in different circumstances.

This study has also incorporated a cost analysis to provide a basis for cost comparison of different substructure options with regards to water depth and distance to the offshore location.

Furthermore, a study on scour protection for the discussed foundation types has been attached to this deliverable, with references to novel mitigating measures to reduce scour around offshore substructures.

Support by: