REDWIN | Final workshop 8 November

The REDWIN research project (2015-2018) has developed numerical models for the foundations of offshore wind turbines, providing enhanced interaction between the structural and geotechnical disciplines to improve design optimization and reduce cost. In the final workshop, we will present the important results of this work and address the future research needs of the offshore wind industry.

REDWIN models and improvements

Integrated design analyses often suffer from poor accuracy and a lack of realistic geotechnical representation. The success of REDWIN and related projects demonstrates that geotechnical competence can significantly increase the required accuracy when state-of-the-art knowledge is properly implemented into the design process. The improved accuracy allows for optimized and cost-effective design. The workshop will present the main findings from REDWIN and explain how designers can use the freely-available REDWIN models to enhance their projects.

Continued focus on cost reduction

Over the last decade, the industry has successfully reduced the cost of energy from offshore wind. This success has established offshore wind as an economically-viable renewable energy source for the future. Nonetheless, the industry continues to push for further cost reductions whilst dealing with increasing turbine sizes, innovative foundation types and different environmental conditions around the world. In order to effectively contribute to future cost reductions, researchers and engineers must continually develop and improve technology and methods. Invited speakers from the offshore wind industry will participate in the workshop to share their views on future opportunities and challenges within the industry. This important workshop will bring practitioners and researchers together to stimulate discussions on the future needs on research and development in offshore wind energy technology.

The REDWIN project has been sponsored by The Norwegian Research Council, Equinor, Vattenfall and Statkraft. NGI is project coordinator together with our partners IFE, NTNU and Dr. Tech Olav Olsen.

The workshop will take place at SALT (www.salted.no) in Oslo 8 November, providing a unique forum in the heart of Oslo's maritime district.

The planned agenda will include the following speakers from across the industry:

- **Knut Norheim**
  Structural Principal Engineer, Equinor
- **Dariusz Eichler**
  Senior Structural Engineer, Vattenfall
- **Avi Schonberg**
  Lead Geotechncial Engineer, Ørsted
- **Jon Dugstad**
  Director Wind & Solar, Norwegian Energy Partners
- **Ana Page**
  Researcher, NTNU
- **Lars Andresen**
  Managing Director, NGI

The workshop starts 9:00 local time.
Participation in the workshop is free of charge.
Please register to the "REDWIN - Final workshop" by using the link in the e-mail.
Registration deadline 25 October.

REDWIN | Final workshop agenda

09.00 – 09.30	Registration and Coffee
09.30 – 09.45	**Welcome** *Thomas Langford, NGI*
09.45 – 10.15	**Offshore wind – a vital role in global energy supply** *Jon Dugstad, NORWEP*
10.15 – 10.45	**Cost reduction – are we on track?** *Rhodri James, Carbon Trust*
10.45 – 11.00	Refreshment break
11.00 – 12.15	**OWT foundation design – core themes and R&D focus areas** *Dariusz Eichler, Vattenfall*
	The importance of integrated analyses and where to improve *Arne Rekdal, Equinor*
	R&D impact on design practise *Henrik Bredmose, DTU*
12.15 – 13.15	Lunch
13.15 – 14.30	**The REDWIN projects and ongoing research** *Kristoffer S Skau and Amir M. Kaynia, NGI*
	REDWIN macro-element model for monopiles: development and benefits *Karin Norén-Cosgriff and Ana Page, NGI and NTNU*
	Sensitivity of integrated analyses to foundation models *Tor Anders Nygaard og Håkon Andersen, IFE and Dr. Tech Olav Olsen*
14.30 – 14.45	Refreshment break
14.45 – 15.45	**Borkum Riffgrund 2 Suction Bucket Jackets** *Avi Schonberg, Ørsted*
	The Aberdeen Bay project *Martina-Christina Sougle, Vattenfall*
	Challenges in foundation design *Managing Director Lars Andresen, NGI*
15.45 – 16.45	**Panel discussion – OWT foundations beyond 10 MW** *Discussion leader – Jacob K.F. Andersen, Offshore Wind Consulting*
16.45 – 17.00	**Closing address**
17.00 –	Reception