



## SOLCYP+

### **DIMENSIONING AND DESIGNING ROBUST FOUNDATION SYSTEMS FOR WIND FARMS**

The SOLCYP+ is aimed at improving methods of dimensioning and designing impact-driven or drilled/cemented monopiles for constructing fixed wind farms.

As the power of individual turbine units continues to grow, so the investment linked to the foundations represents a significant proportion of up to 20% of the CapEx. The current methods applied to dimensioning cyclic lateral loads are based on conservative estimates resulting in over-dimensioning.

The project will notably test out the alternative methodology on little understood carbonate soils and on the very different geotechnical behaviours of sandy sea-beds. No fewer than four wind farms installed in France (St Nazaire, Courseulles, Fécamp and Le Tréport) are concerned, making this an issue of major national importance to France as well as offering the potential of internationally exporting the expertise associated with this type of soil.

The methodological research will lead to the creation of a working group with the aim of developing the standards and norms in force

#### **Partners**

##### **Companies**

Dong Energy, UK  
EDF Énergies Nouvelles  
EDF, Paris  
Fugro, Nanterre  
Innosea, Nantes

##### **Research centers**

Ecole des Ponts ParisTech (ENPC), Marne la vallée / France Energies Marines [\[Project Developer\]](#)  
Université de Lille, Laboratoire LGCgE, Villeneuve d'Asq  
Université Grenoble Alpes, Laboratoire 3SR, Saint-Martin d'Hères  
Université Gustave Eiffel, Marne la Vallée et Nantes

#### **Funder**

Conseil régional Normandie ; Conseil régional Pays de la Loire

#### **Labelisation**

17/02/2017

#### **Overall budget**

589 K€