



Marine energy and mining resources

## MOMENTA

### INCORPORATING DATA ON ATMOSPHERIC AND WAKE TURBULENCE BETWEEN WIND TURBINES IN UPSTREAM WIND FARM DESIGN

The MOMENTA project is looking to improve modelling and predicting of aeroelastic loads that result from wake turbulence between wind turbines, so that this data can be incorporated into wind-farm design from the outset.

The MOMENTA project initially proposes to deploy a drone to take an original measurement of wake turbulence in a wind turbine slipstream. The properties of the turbulence will be reproduced at the entrance to wind tunnels on the scale of a blade and rotor to assess the impact on the aerodynamic loads.

Once analysed, the results will be integrated into aeroelastic solvers to be used in rotor and wind farm design.

#### Partners

COM\_PROJECTS\_CATEGORIE\_PARTNER\_ENTREPRISES

Valemo, Bègles et Nantes

#### Research centers

École Centrale de Nantes, Laboratoire de recherche en Hydrodynamique, Énergétique et en Environnement Atmosphérique (LHEEA), Nantes [\[Project Developer\]](#)

IFP Énergies nouvelles, Rueil Malmaison  
Université de Toulouse - Laboratoire d'Aérodynamique, Toulouse  
Université d'Orléans, Laboratoire Pluridisciplinaire de Recherche en Ingénierie des Systèmes Mécanique et Énergétique (PRISME), Orléans

#### Funder

Agence Nationale de la Recherche

#### Labelisation

06/09/2019

#### Overall budget

2 089 k€