



## The effect of non-neutral winds on wind power aerodynamics

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According to the UK government, offshore wind is intended to deliver 30GW of by 2030<sup>1</sup>. As our society becomes ever-more dependent on wind power, it is increasingly important to gain a deeper understanding and more accurate predictability of our wind power availability to guarantee a greener future. You will focus on the characterisation of wind turbines performance and wakes interaction in different atmospheric conditions through a series of wind tunnel experiments in the EnFlo facility at Surrey.



### Training opportunities:

Specialised MSc modules on various aspects of atmospheric fluid mechanics are available at both the Universities of Surrey and Reading. The student will also be encouraged to take part in the Summer School in “Fluid Dynamics of Sustainability and the Environment” offered by the University of Cambridge (UK) and “Introduction to Measurement Techniques” Lecture Series at VKI (Belgium).

### Student profile:

We are seeking candidates with a first-class degree or a good 2:1 in a relevant engineering field (aeronautics, environmental, civil, mechanical) or physical/environmental science (physics, meteorology), with excellent communications skills. Previous experience with experimental work would be beneficial.

### References:

<https://research.reading.ac.uk/scenario/>

<https://www.surrey.ac.uk/news/surrey-develop-tool-help-predict-efficiency-wind-farms>

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<sup>1</sup> NECP (2019). The UK’s draft integrated National Energy and Climate Plan, *Department for Business, Energy Industrial Strategy*.