

Environmental Impacts and Responsibilities - How to foster cohabitation between Offshore Wind Farms and the Marine Environment

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Abstract

Wind power is the fastest growing energy source in Europe and plays a key role in the achievement of the European Union's climate goals. Vattenfall operates over 1000 turbines in Onshore and Offshore locations of Sweden, Denmark, Germany, the Netherlands and the UK. Together, these turbines generated almost 6 TWh of renewable electricity in 2016. Being involved in over 12 Offshore windfarms from 60 to > 300 MW, Vattenfall has gained a wide range of experience throughout the full life cycle of a windfarm from development, construction, generation to decommissioning. This includes the assessment and monitoring of environmental aspects and impacts. In the presentation we will present our gained experience and knowledge of monitoring schemes and challenges during development, construction and generation of offshore windfarms in our different countries. Further we will give an overview about our R&D work we conduct at operating windfarms which aims to improve the evidence base on environmental impacts of windfarms on different species and populations, and the mitigation of such impacts to support decision making processes for offshore windfarm environmental regulations and ensure offshore wind energy construction in an environmental responsible but also cost effective manner.