



## » Foundations for a better climate

### We know how to build foundations for offshore wind turbines

Denmark leads the world in wind turbine production. And when it comes to constructing foundations for offshore wind turbines, MT Højgaard is the world's most experienced and knowledgeable contractor.

It was MT Højgaard that designed, built and installed the foundations for the 80 wind turbines on Horn's Reef in the Danish sector of the North Sea. Since then we have supplied and installed foundations for nearly 350 offshore wind turbines with a total capacity of more than 1000 MW. That covers the electricity demand of one million households, and collectively the wind turbines save the environment three million tons of CO<sub>2</sub> emissions annually.

Since 1992 MT Højgaard has constructed nearly 350 foundations for a total of nine wind farms, mainly in the North Sea and the Irish Sea. Foundations for offshore wind turbines are based on the well-established monopile principle, where a single pile, consisting of a steel pipe, is driven into the seabed with a hydraulic hammer.

Over the years, MT Højgaard has had a major hand in the development of the technology and equipment required to hammer monopiles weighing 200-500 tons down into the seabed.

Despite the fact that wind turbines always look the same, it is never a routine matter to build foundations for large offshore wind turbines. No two projects out at sea are the same since wind, weather, tides, currents and seabed conditions vary from one location to the next. After many years of experience, we know that the best response is thorough planning, which often operates with a plan A, plan B and plan C, so that progress never gets stalled.

Read more about MT Højgaard and our offshore wind turbine projects on [mthojgaard.com](http://mthojgaard.com)



Logistics were streamlined by using a vessel that fulfilled both transport and installation roles. Five sets of monopiles, including transition pieces and ancillary equipment, were taken on each trip to the installation site.

### Offshore foundations

The foundations for offshore wind turbines must be built with a precision that ensures that the turbine tower deviates no more than 0.25 degrees from the vertical. Seen here is the Lynn and Inner Dowsing project off the east coast of England, where MT Højgaard installed 54 offshore foundations in 2007.