

#### Tidal energy from the Thames



*A floating turbine is lowered into the Thames for trials to test how sustainable energy can be generated from tidal power*

#### **Research shows how floating turbines could generate sustainable electricity**

Feasibility work to test the prospects for sustainable energy derived from tidal flows in the River Thames aims to show that floating turbines could be successfully installed at a series of locations between central London and the river's estuary.

Special permission was obtained in 2011 from the Port of London Authority to test a pilot turbine alongside the historic HQS *Wellington*, moored near Cleopatra's Needle, and energy company Thames Tidal Ltd predicts that a tidal energy farm could ultimately generate enough electricity to power 35,000 homes. The pilot project has enabled a range of impacts to be assessed and, whilst typical turbines are moored to the sea or river bed and may resemble fixed underwater windmills, the model being tested uses a smaller mechanism attached to a float which allows it to operate in a range of depths and tidal flows.

The small pilot turbine, which is only a couple of metres wide, has been successfully generating electricity which feeds battery chargers on board the ship. In due course, and if research proceeds successfully, turbine blades up to five metres across could be potentially installed in deeper water downstream of the Thames Barrier.

Thames Tidal Ltd plans to allow for over 50MW of generating capacity – about an eighth of the output once supplied by Battersea Power Station. Installation work would proceed in a series of arrays subject to planning consent and availability of sites. Any work will be phased over a number of years and early work will focus on reassuring all stakeholders that the turbines are both viable and environmentally friendly to the valuable habitats in the river.

A Green Party member of the London Assembly expressed support for a potential tidal energy farm in the Thames and said: "If this works it could open up another clean energy source and give us another important reason to keep our rivers clean."