

## Firth 'could power half of Scotland'

Enough renewable energy to power about half of Scotland could be harnessed from the tides in a single stretch of water off the north coast of the country, research has suggested.

Some 1.9 gigawatts (GW) of clean energy could be generated by turbines placed in the Pentland Firth between mainland Scotland and Orkney, engineers from Oxford and Edinburgh Universities estimated.

The engineers said their study narrowed down earlier estimates that the firth could produce between 1GW and 18GW of power. They calculated that as much as 4.2GW could be harnessed but because tidal turbines are not 100 per cent efficient the estimate of 1.9GW was a more realistic target.

To fully exploit the tidal stream, turbines would need to be located across the entire width of the channel, they said. Sites which minimise the effect on sea life and shipping have been identified by the UK Crown Estate, which will lease them to tidal energy firms.

Professor Alastair Borthwick, of the University of Edinburgh, said: "This is a more accurate approach than was used in the early days."

Professor Guy Houlby, of the University of Oxford, who led the study, said: "The UK enjoys potentially some of the best tidal resources worldwide, and if we exploit them wisely they could make an important contribution to our energy supply."