

# Firth could be the power of Scotland

by **KIRSTEEN PATERSON**

TIDAL energy from a single stretch of water could be used to power half of Scotland, researchers claim.

The waters of the Pentland Firth, between the mainland and Orkney, are so strong they could capture even more power if technology improves.

The claims follow in-depth work by Edinburgh and Oxford universities.

Engineers said turbines placed in the firth could produce around 1.9gigawatts of clean energy.

Tidal currents there are amongst the fastest in the British Isles and improving the efficiency of the turbines could increase the electricity capacity to 4.2gigawatts.

However, turbines may have to be located across the entire width of the channel to maximise output.

The research was commissioned and funded as part of the Energy Technologies Institute's performance assessment of wave and tidal array systems project, PerAWAT. The study builds

on previous work which put the channel's capacity at one to 1.8gw.

Experts said these reports were 'too simplistic or based on inappropriate models'.

Prof Alistair Borthwick, of Edinburgh University, said: 'This is a more accurate approach than was used in the early days of tidal stream power assessment, and should be useful in calculating how much power might realistically be recoverable from the Pentland Firth.'

Prof Guy Houlsby, of Oxford University, added: '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.'

'These studies should move us closer towards the successful exploitation of the tides.'

