

## NEWS RELEASE

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### **Aston University behind the move from biofuels to fossil fuels**

Researchers at Aston University are developing bio-oil, a liquid fuel from biomass, by a process called fast pyrolysis. Bio-oil is a renewable, carbon-neutral liquid made from organic materials, such as straw or wood waste, which can help to meet Britain's unshakeable appetite for transport fuels and power securely and sustainably.

Fast pyrolysis heats up biomass to a high temperature for a few seconds in the absence of oxygen, and converts it into a liquid fuel. This liquid bio-oil is much easier to store and transport than solid biomass, such as bales of straw or grass, and can be used as a fuel itself or converted to electricity, transport fuels or chemicals.

Compared to bioethanol produced from straw or wood, or biodiesel from rapeseed, bio-oil from fast pyrolysis can produce up to three times the amount of renewable liquid fuel from the same area of land using energy crops such as miscanthus (elephant grass), or short rotation willow.

Replacing fossil fuels with biofuels will help to mitigate global warming and create a secure energy supply in the UK in the face of declining North Sea oil and gas production.

Bio-oil has been slow to take-off in the UK because of the limited amount of available land to produce biomass and relatively high production costs. However, rising oil prices, a greater political commitment to bioenergy combined with a focussed R&D effort should make bio-oil a competitive option in the future.

"We see fast pyrolysis as satisfying the short term needs for producing heat and power and in the medium to long-term as being the heart of a biorefinery process that produces transport fuels and chemicals as well as heat and power. If you build a biorefinery large enough, maybe millions of tons per year of biomass you can reduce the costs to a much more acceptable level," said Professor Tony Bridgwater, head of Aston University's Bio-Energy Research Group.

**Free to air broadcast quality footage of story:** Broadcast quality footage of the fast pyrolysis process, biomass footage and interviews with the researchers is available from Research-TV. For more information call: 44 (0) 207 004 7130 or visit <http://www.research-tv.co.uk/>.

## NOTES

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