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Aviation

Virgin Atlantic to fly on low-carbon fuel made from steel mill gas waste

- by: Philip Pank
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Sir Richard Branson, who has announced his entry into the recycling business with a project to make jet fuel from the waste gases from steel mills. Picture: Nikki Short

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SIR RICHARD Branson has announced his entry into the recycling business with a project to make jet fuel from the waste gases from steel mills.

Within three years, he said, half his Virgin Atlantic fleet would be powered by the low-carbon fuel, which uses a bacterium found in rabbit guts to ferment waste carbon monoxide.

Sir Richard challenged the Government to provide financial incentives to airlines that promote the green technology and said that passengers would eventually enjoy lower ticket prices as the reliance on oil was broken.

Green campaigners gave the initiative a cautious welcome but Sir Richard was characteristically ebullient as he unveiled the plan.

"This is a truly ground-breaking world first," he said, in recognition of the scepticism that has met previous attempts by airlines to promote green initiatives.

"What we have gone into is the recycling business." The Virgin President predicted that 20 per cent of all jet fuel could eventually be sourced from steel mill emissions.

The process, devised by a British biochemist, sees chimney stack emissions passed through water containing clostridium bacteria, which seize the carbon and turn it into ethanol.

The ethanol is then shipped to a factory in Sweden, where it is refined into jet fuel. A 50-50 blend with kerosene should power commercial aircraft, but certification is not expected for two years.

Sean Simpson, whose company, LanzaTech, has devised the technology, runs a test facility in New Zealand producing 15,000 gallons of ethanol a year, enough to power six flights from London to Shanghai.

It has signed an agreement with China's biggest steel producer, Baosteel, to build a pounds 50 million (A\$78.8 million) plant producing 30 million gallons a year by 2014.

Mr Simpson, whose PhD from the University of York made him a global expert on the ripening of tomatoes, said he wanted to devise a cheap biofuel that did not compete for land with food producers.

"Industrial off-gases tick all those boxes: they are here, no one can eat them and they are available in bloody large volume," he said.

So far only a few litres of jet fuel have been made using the process. The producer predicts that it will cost \$1100 per tonne, compared with \$1000 per tonne of kerosene.

Sir Richard called on ministers to give financial incentives to airlines that take up the fuel.

He said that air passenger duty should be cut for low-carbon flights.

"They need to encourage other airlines to invest in this," he said.

Virgin says that it will be the first customer for the fuel and is in talks to buy into its production.

Doug Parr, chief scientist at Greenpeace, said: "If, as it states, they are genuinely using waste gases from industrial processes, that is a good thing. The cynicism has to come from [the question], will it all be delivered?"

Aviation produces about 3 per cent of global emissions. Airlines have pledged to halve emissions by 2050.

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