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NEWS

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Drive 10 more miles, darling, and we can heat a bath for two

Engines normally waste two-thirds of the energy in petrol or diesel as heat, but now engineers have found a way to recover it — and use it to warm your house.

The thermal energy storage system will be unveiled on Wednesday at the Nextgen environmental technology show

in Warwickshire. The device stores heat from the exhaust as the vehicle is driven. Once home, the driver pulls two hoses from the car and connects them to valves that link the system to a water tank. By running water between the two, the energy is transferred, heating 100 litres of water to 80C in four hours.

Atmos Heating Systems, a

West Midlands firm that sells boilers and solar hot water systems, is developing the technology. It claims driving 35 miles a day stores 27 megajoules, enough energy to cover the daily hot water use of two people.

Jaguar Land Rover is providing technical support for the project and exploring how it could be used in future vehicles.

One use could be to pre-heat engines to reduce wear, and to provide instant warmth inside the car on cold winter days.

InGear was shown a prototype of Atmos's system, which consists of a cylinder mounted in the back of a Land Rover Freelander. Exhaust gases, which can reach 500C, are piped through a salt nitrate compound.

This melts at 190C and has a boiling point above 500C, allowing it to store a large amount of heat without vaporising.

The same technology is used by Nasa on the International Space Station to absorb solar heat and keep experiments at a constant temperature.

Patrick Byrd, director of the project, said: "A production version would weigh around 50kg and be built into the car, close to the engine, with enough insulation so that heat generated on your way to work could be stored throughout the day.

"What we now need is government support."

Atmos plans to test the

system on a fleet of 200 cars.

However, the first versions of the device will cost about £2,500, so the energy bill savings would not justify the cost.

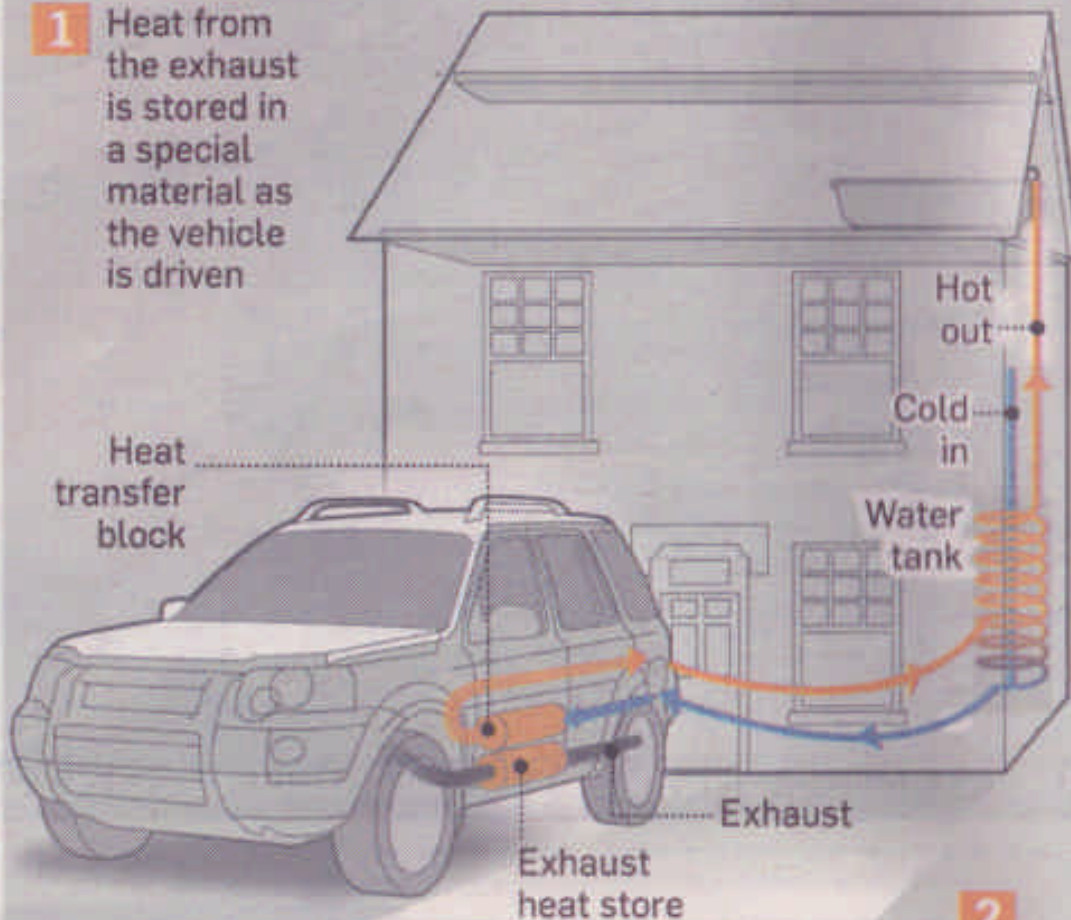
The company is lobbying for the thermal storage system to be included in government incentive schemes for green energy. These provide subsidies for the energy generated and would give car makers and homeowners a crucial incentive to install the devices.

John Thomason, the general manager of Atmos, admitted: "The concept does sound like a crazy idea but it is a clever way of recovering energy that would otherwise be wasted."

Dominic Tobin

The kettle on wheels

1 Heat from the exhaust is stored in a special material as the vehicle is driven



2 Water from the boiler is repeatedly pumped through the car, returning 10C warmer each time