

Students take their positions on the starting line for Learn to Win event

Hydrogen has come top of a poll on future fuels carried out by the Institution of Mechanical Engineers' (IMechE) Formula Student team. The poll coincides with an event taking place at the IMechE in Birdcage Walk, London, this week called Learn to Win which will give students top tips on how to win the event and understand the appliance of science in areas such as alternative fuels.

Formula Student (FS) is Europe's biggest student motorsport event and run by IMechE each year at Silverstone Racing Circuit. Results out this week on the FS 'Future Fuels' survey shows that hydrogen is top with 34% of the votes, electricity coming in close second on 29% and 17% voted for fossil fuels. Students looking to enter FS 2011 will be provided with winning tips on all aspects of the competition including alternative powertrains at a Learn to Win event on the 15 October.

With the UK's transport sector accounting for almost 24% of the nation's CO2 emissions, of which 80% is from road vehicles, alternative fuels will have to be adopted if the UK is to meet its targets to reduce CO2 emissions by at least 80% of its 1990 levels by 2050.

Hydrogen powered cars have the potential to produce zero emissions depending on its source,

with vehicles being lightweight and compact. However, providing low-cost, efficient hydrogen storage and distribution is a large concern. The Institution launched its Low Carbon Vehicles report last year which highlighted a number of ways forward for vehicle fuels, including hybrid, advanced petrol and diesel, battery only electric and hydrogen.

Many car manufacturers have adopted electricity as an alternative energy source which is 100% emission free but along with infrastructure, the current weight, size and cost of electric batteries also poses a challenge.

FS challenges student teams from around the world to drive a single-seater racing car they have designed and built from scratch. For the competition's low carbon category students are tasked with developing new and novel powertrain technologies, and building the vehicle as sustainable as possible. These innovative solutions could be the future technologies which enable the UK to drive down carbon emissions.

FS Chief Judge, Richard Folkson, said: "Learn to Win is a fantastic opportunity to enable students to learn everything they can from how to make their vehicle more sustainable to controlling budgets and how to make the best business case for their team. With judges representing organisations such as Red Bull and McLaren, these young engineers will get first hand practical advice from the experts."