

**TITLE TO BE CONFIRMED**

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This paper will consider the forces driving change in the transport sector, and the challenge of providing sustainable mobility solutions in the next 30 - 50 year timescale. The key drivers for vehicle and fuel technologies will be presented, namely concerns around climate change and emissions of 'greenhouse gases' local pollutants and air quality security of energy supplies and diversification of energy resources. The need for solutions that address diverse aspects such as vehicle and fuel design and technology, transport demand, the developed and developing world will be discussed. The importance of provision of mobility options that customers want to use and that represent sound economic choices will be emphasised. Proposed solutions for the short, medium and long-term timeframe will be discussed, with an emphasis on fuel technology. This will cover advances to conventional fuels, the role of gaseous fuels and biomass as a primary energy resource. Performance of this range of fuel options against the key drivers detailed above will be covered. The technical development needed to enable commercial application of these solutions and associated challenges will be outlined. A 'future fuels' pathway will be presented, showing a step-wise journey from conventional fuels of today to clean, low carbon sustainable fuels of the future.