

Long-Haul Road Freight: Hydrogen or Electricity?

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Bio: David Cebon, PhD, FEng, FIMechE is a Professor of Mechanical Engineering in Cambridge University Engineering Department, where he has been a member of staff since 1985. He leads the Department's Transport Research Group and the Department's research theme 'Energy, Transport and Urban Infrastructure'. He is the Director of the Centre for Sustainable Road Freight and the Cambridge Vehicle Dynamics Consortium. Professor Cebon has authored or co-authored many papers on dynamics, safety, manoeuvrability and decarbonisation of heavy vehicles. He has also published widely on road and bridge response and damage as well as asphalt micromechanics

Abstract: Long-haul road freight is said to be one of the 'difficult to decarbonise' sectors of the economy. Heavy vehicles require large amounts of power for long periods of time, making battery electric technologies challenging. There are two main alternatives to battery-electric vehicles: fuel-cell electric vehicles powered by hydrogen and battery electric vehicle technology, with various charging options. The heavy vehicle industry is currently divided over which technology to back. The government spending approx. £200m on demonstration trials to help it decide which way to go. This talk will consider the basic numbers associated with these issues and will show that one option makes sense, while the other doesn't