



Road Pricing

“CONGESTION WILL COST AN EXTRA £22 BILLION IN TIME WASTED BY 2025”¹

Background

Congestion threatens the economic and social wellbeing of the nation. As a society both our population and our car dependency continue to grow. All indications are that unless action is taken congestion will increase.

Without action congestion will cost the economy of England and Wales an extra £22bn in time wasted by 2025. This will damage all sectors of the economy and could threaten the reliable delivery of essential goods and services. Worsening congestion will increase the numbers of work-hours lost to traffic and increase stress on drivers and passengers alike.

For a small, highly populated island such as the UK doing nothing is not an option.

Road pricing – requiring motorists to pay an amount reflecting the demand on key roads – is the solution.

The technology

The main technologies used for road pricing schemes are:

- DSRC: Direct short range communications, also known as ‘tag-and-beacon’
- ANPR: Automatic number plate recognition, using cameras to visually identify vehicles
- REP: Remote electronic positioning, using either satellites (GPS) or (more likely in the future) mobile phone systems (GSM)

DSRC involves roadside beacons detecting electronic tags on the windscreens of passing vehicles, and then charging the vehicle owner. It is most widely used on toll roads and bridges and other zonal schemes, but the roadside equipment can be expensive and intrusive, particularly in urban settings. However its reliability is high: consistently above 98%.

ANPR is the system used for the London congestion charge and also used in an enforcement role in schemes where charging is carried out via another technology. ANPR is around 90% reliable but, as with DSRC, the equipment is cumbersome and expensive.

REP is widely regarded as the best option since it can track vehicles continuously and make distance-based charging work. Its drawback is its drop in reliability in densely built-up areas, where tall buildings can temporarily sever the communications link between vehicle and satellite, although technological solutions are being developed.

The technology in practice

France, Italy, Spain and Portugal have used DSRC to toll motorways, and similar systems are in operation in Austria, Norway and Sweden.

In the UK, both the M6 Toll and Dartford River Crossing employ DSRC technology. Singapore’s road pricing system, which has operated since 1975, successfully adopted DSRC with in-car smartcards in 1998.

REP (using GPS) has been used to charge freight vehicles on German motorways. London has successfully used ANPR as the system behind the Congestion Charge zone.

¹ HM Treasury, 2006, The Eddington Transport Study, Her Majesty’s Stationary Office, Norwich



The principles of fair road pricing

- Charging must be fair and reflect actual road usage
- Users should be able to understand and use the system easily, and receive every assistance in making informed travel decisions both before and during their journeys
- Charges must be communicated to non-regular users
- The charging system should be visibly robust against both fraud and accidental evasion and must address reasonable needs for privacy
- The system needs to cope with vehicles visiting from abroad as well as those carrying faulty equipment; this would be crucial in ensuring a level playing field for freight carriers and other commercial road users

Benefits

The implementation of a targeted road pricing system, alongside a strategic programme of road improvements will deliver many benefits to both motorists and commuters:

- Road pricing has the potential to significantly reduce carbon emissions by attracting motorists to public transport
- Road pricing has the potential to save time and money spent travelling
- Road pricing will encourage more efficient use of our road networks
- Road pricing will help improve air quality and standards of health
- Revenues raised by road pricing will help improve transport networks and develop public transport
- Road pricing has the potential to make us travel differently if it is applied sensitively and in conjunction with other positive policy and investment decisions

Recommendations

ICE calls for government to:

- Promote the benefits of a nationwide system of road pricing to the general public
- Pave the way for local, inter-regional and national level road pricing schemes
- Forge a partnership with local government to develop consistent charging regimes that meet both national and local objectives

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