

ice

Institution of Civil Engineers

# Road Pricing

A guide to public understanding



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# WHAT IS IT?

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Road Pricing, Road User Charging, or Congestion Charging as it is sometimes called, is simply a means of drivers paying directly to use roads as they use them.



Currently, we all pay to use roads indirectly through the vehicle licence and fuel taxes. Road Pricing transfers some or all of these costs into a price to be paid by the driver at the point and time of use. This approach informs drivers of the actual cost of driving, with the aim that some will change their travel behaviour i.e. transfer to less congested times, use public transport, walk, cycle, or not travel at all.



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**Drivers paying directly to use roads as they use them**

## HOW DOES IT WORK?



### Easy to pay

Charging for using a road can be done in a number of ways but there are basically two main types of system; manual collection of money at a toll booth or automatically using electronic means. Sometimes a combination of methods is used such as the one introduced in central London, where a pre-paid charge is recorded by automatically identifying the vehicle number plate. Toll booths are often used when drivers are charged for crossing a bridge or using a defined stretch of road, such as the M6 Toll road or the Dartford Crossing.



### Using the latest technology

Electronic tolling is more sophisticated and requires in-vehicle and external technology but it saves time and is more convenient. The latest system operates like a mobile phone. A signal from a satellite or beacon tells a receiver in the vehicle that it is using a particular stretch of road at a particular time. The appropriate charge is then either deducted from a pre-paid card or recorded on a bill (like a telephone bill) for payment by credit card or other means.



### Fair

The first trial of an electronic system will be used for recording road use by heavy lorries. This is being done because a significant number of these vehicles are registered outside the UK and may pay much less for their licence and fuel. Road Pricing attempts to make the cost of using a stretch of road fair for everybody. But while Road Pricing would reduce traffic, making conditions better for bus users and cyclists in particular, low-income households dependent on their car could lose out if alternatives are not provided.

**Road Pricing attempts to make the cost of using a stretch of road fair for everybody**

# WHY DO WE NEED IT?



## Scarce resource

Unfortunately, no-one has come up with a better method of allocating a scarce resource than paying a market price for it. If the supply of a commodity is insufficient to satisfy demand, the price will rise; if supply exceeds demand the price will fall. At certain times and in some places road space is in limited supply, but currently no direct charge is made to the user.



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## Fair choice for all

By varying the charge by time of day and amount of congestion, drivers are able to make a choice. They can pay more to use a car when a lot of other people want to do the same or pay less, or nothing at all, when the roads are relatively free of congestion.



© Highways Agency



## Environmental protection

For environmental reasons, most people accept that there is a limit to the amount of road space that can be provided. Consequently, with increased demand for car journeys congestion occurs. This is a very inefficient use of the road space and wastes people's time and fuel.



## Predictable journey times

Surveys of drivers over many years have shown that the most important feature of a journey, apart from getting there safely, is a reliable time of arrival. There is a lot of frustration in estimating that a journey will take an hour, allowing an hour and a half because of possible delays and actually getting there in three-quarters of an hour. Congestion also makes buses slow, unreliable and hence more costly both for operators (who need more vehicles and drivers to maintain a service) and users.



### Less congestion

Congestion also increases the costs of goods and services.

Freight companies have to allow for longer journey times. Even if they deliver goods at night, drivers must be paid more and vehicle noise can be very intrusive in residential areas.



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### True cost of travel

By making drivers more aware of the actual cost of a journey, there is more chance of an informed choice of the method of travel. Many more journeys could be made by walking, cycling or public transport. Not only would this reduce congestion but the first two options would also help to create a healthier population.



### Revenue raising

The income from Road Pricing is normally used to improve public transport services through bus priority schemes or more frequent and modern buses. It has the benefit of being a direct charge on drivers at the time of use.



# WHAT ARE THE ADVANTAGES?



## For the country

At the moment many people do not use a car because roads are too congested. However, that is a very inefficient way of controlling the amount of traffic. Congestion is estimated to cost the country more than £20 billion each year. By varying the charge at different times of the day, the amount of traffic can be controlled to minimise congestion.



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## For the motorist

One of the most frustrating things about a car journey is not knowing when you will arrive. If congestion can be controlled journeys will be much more reliable and predictable.

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### For the retailer

Road Pricing can be used to replace other charges such as parking. By minimising the number of car park spaces used by commuters (who do not spend much) space is freed up for genuine shoppers in the town centre, for example.



### For business

Delay due to congestion costs firms a lot; more vehicles are needed to carry the same amount of goods, more drivers have to be paid. Road Pricing that minimises congestion will help to keep down distribution costs.

**Cars in a queue  
emit up to 40 times  
more air pollution  
than a vehicle in  
free flowing traffic**



© Arup



### For communities

Cars in a queue emit up to 40 times more air pollution than a vehicle in free flowing traffic. Cleaner air means less asthma and healthier communities. If Road Pricing makes people think twice before jumping into a car and choose to walk or go by bike, we will all be healthier.

**Road Pricing  
is about  
reducing  
congestion.**







## The potential benefits of Road Pricing

- Minimise the need for new infrastructure through better use of the existing network
- Bus journeys will be more reliable
- Reduction in the costs of travelling by reducing congestion

## How can Road Pricing help?

### What Congestion Charging has done for London...

- Traffic delays inside the charging zone are down by 30%
- Lower congestion has led to a 60% reduction in disruption to bus services caused by traffic delays

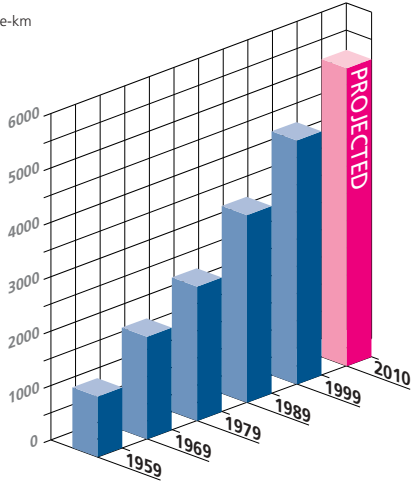
### Possible national benefits

- Estimated annual time savings could be £20 billion through reduced congestion



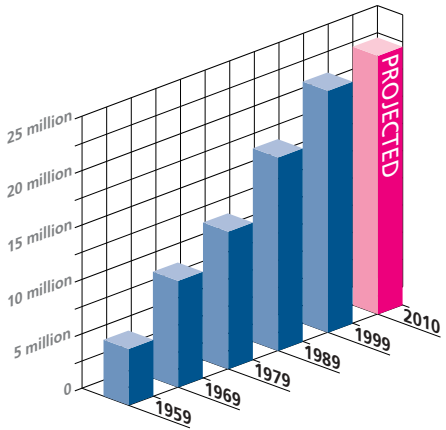
# How traffic has grown and is predicted to grow without restraint

Traffic, billion vehicle-km



# How car ownership has grown

Licensed vehicles



# [www.ice.org.uk/roadpricing](http://www.ice.org.uk/roadpricing)



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Supported by



Statistical data from the Department for Transport and Transport for London.

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