

Modernising the taxation of the haulage industry: lorry road-user charge

Progress report 3

March 2004



HM TREASURY



HM Customs and Excise

Department for
Transport



HM TREASURY



HM Customs and Excise

Department for
Transport

Modernising the taxation of the haulage industry: lorry road-user charge

Progress report 3

March 2004

© Crown copyright 2004

Published with the permission of HM Treasury on behalf of the Controller of Her Majesty's Stationery Office.

The text in this document (excluding the Royal Coat of Arms and departmental logos) may be reproduced free of charge in any format or medium providing that it is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the document specified.

Any enquiries relating to the copyright in this document should be sent to:

HMSO
Licensing Division
St Clements House
2-16 Colegate
Norwich
NR3 1BQ

Fax: 01603 723000

E-mail: hmsolicensing@cabinet-office.x.gsi.gov.uk

HM Treasury contacts

This document can be accessed from the Treasury Internet site at:

www.hm-treasury.gov.uk

For further information on the Treasury and its work, contact:

Correspondence and Enquiry Unit
HM Treasury
1 Horse Guards Road
London
SW1A 2HQ

Tel: 020 7270 4558

Fax: 020 7270 4574

E-mail: public.enquiries@hm-treasury.gov.uk

HM Customs and Excise contacts

HM Customs & Excise Internet site: **www.hmce.gov.uk**

National Advice Service: 0845 010 9000

E-mail: lruc.enquiries@hmce.gsi.gov.uk

ISBN: 1-84532-005-0

Printed by The Stationery Office 03/04 942285

Department for Transport contacts

This document can also be accessed from the DfT Internet site at:

www.dft.gov.uk

For further information on the DfT and its work, contact:

Enquiry Service
Department for Transport
Great Minster House
76 Marsham Street
London SW1P 4DR

Tel: 020 7944 8300

Fax: 020 7944 6589

E-mail: lruc@dft.gsi.gov.uk

CONTENTS

		Page
Foreword	By John Healey MP, Economic Secretary to the Treasury and Dr Kim Howells MP, Minister of State for Transport	3
Chapter 1	Introduction	5
Chapter 2	Progress since the last report	7
Chapter 3	European developments	13
Chapter 4	Procurement process	15
Chapter 5	The way forward	17
Annex A	Hauliers' survey	19
Annex B	Overview of other European schemes	21
Annex C	References	25

FOREWORD BY JOHN HEALEY MP, ECONOMIC SECRETARY TO THE TREASURY AND DR KIM HOWELLS MP, MINISTER OF STATE FOR TRANSPORT

In Budget 2001, the Chancellor announced that the UK would become one of the leading countries in Europe in modernising taxation of the haulage industry. He committed Government to working with all sectors of the industry to produce plans for a lorry road-user charge which would meet our manifesto commitment to ensure that all lorry operators, regardless of nationality, pay towards the costs that they impose in the UK.

The first two progress reports mapped out possible solutions and gave detail about our policy aims. Today marks the beginning of a major new phase in the programme. The Chancellor has announced in the Budget that we will be pressing ahead into the procurement stage, with initial legislation in the Finance Bill. After careful planning, working closely with the industry, we are now in a position to ask the market to produce a solution that meets our objectives. We are mindful that the new system should work with the industry, not against it, so our plans aim to minimise administrative burdens for hauliers - for example by operating an automated fuel repayment scheme - while also minimising fraud risks to Government revenues.

We are learning lessons from experiences in other countries, including the postponement of the German charge and the successful implementation of the Austrian system. And we fully agree with the industry's view: the key aim is to get the charge right, not just get it in quickly. In light of experiences elsewhere, we have concluded that our project timetable must include a comprehensive testing phase with thorough monitoring of how the systems are operating and whether objectives are being met. These pilots will take place throughout 2006 and will mean that the roll out of technology occurs in 2007, with the charge coming into force in early 2008.

The launch of the procurement phase does not see the end of our close working with the haulage industry. We have learnt a great deal through discussion and consultation, especially through the Road Haulage Forum, and incorporated many of their views. This will continue. By working closely with the UK haulage industry, we can provide a tax that meets our manifesto commitments and satisfies the needs of the sector.



John Healey MP



Dr Kim Howells MP

INTRODUCTION

1.1 This document sets out progress on the Government's plans for the distance-based Lorry Road-User Charge (LRUC) and the way ahead as the programme moves into the procurement phase. It reaffirms Government's full commitment to introduce the scheme and sets out the key stages as we progress to the next phase.

1.2 The objective of the LRUC is to deliver the Government's manifesto commitment to ensure that all lorries using UK roads contribute on a fair and equal basis towards the costs that they impose. This will apply irrespective of their nationality. The Government recognises that UK operators already contribute towards these costs and so to ensure equality, we will introduce a fuel duty reduction for all lorries that buy fuel in the UK.

1.3 "*Modernising the taxation of the Haulage Industry: Progress Report Two*" (published May 2003) explained the scope and preliminary business model of the charge. Joint work with the industry has been an essential part of the planning stage, particularly through the regular meetings between Government and the Road Haulage Forum LRUC Sub-Group, made up of industry representatives who have an interest in the charge.

1.4 Chapters 2 and 3 report on the work done since the last progress report, including European developments and key decisions which will inform potential suppliers as they prepare to bid. Chapters 4 and 5 set out the proposed plans and indicative timetables for procurement and beyond. The basic timetable will be:

- Initial legislation in Finance Bill Spring 2004
- Issue Prior Information Notice (PIN) Spring 2004
- Official Journal of the European Union (OJEU) Advertisement Spring 2004
- Potential Supplier Open Day Summer 2004
- Issue Preliminary Invitation to Negotiate (ITN) Summer 2004

1.5 As the procurement process develops and contract terms are agreed with suppliers an exact timetable for final introduction will be published. The programme targets include:

- Target date for contract awards End 2005
- Design and build phase e.g. install roadside equipment 2006
- Recruitment & training of staff 2006
- Pilots and testing 2006-07
- Go live for pre-registration services End 2006
- Equipment installed in vehicles and start of revenue collection and fuel duty repayments From 2007-08

2

PROGRESS SINCE THE LAST REPORT

Business study 2.1 The Lorry Road-User Charge programme is subject to rigorous programme and project management, using well established techniques, which ensures that risks are identified and managed. The Treasury, Customs and Excise and the Department for Transport are working closely together on the development of the charge and all three departments are involved in the governance of the programme. In common with other major Government projects, it is divided into clear phases, and is being taken through the Office of Government Commerce Gateway process. Since the publication of the business model in Progress Report Two, the programme team in Customs and Excise has completed the “Business Study” phase of the programme. The objectives of the business study were to:

- identify the business needs that should be supported by a proposed solution;
- develop an outline business case to Treasury Green Book standards which refines the preliminary business case and includes benefits, risks, costs and sensitivity analyses, and is informed by further market research;
- develop ideas about which Government institutions could run and control the charge and plan our strategy for procurement of the necessary private sector elements;
- outline how the business processes of the charge will be supported by technical systems and what information requirements are needed;
- identify the different classes of road-users and the impact of the development and introduction of the proposed system;
- identify any existing Government business processes that need to change;
- develop a strategy for introducing legislation;
- identify all links with other organisations’ systems.

This work will be used to create the documents for the tendering process, primarily the Output-Based Specifications (OBSs).

2.2 The programme team has defined the user requirements of the charge based on the policy objectives set out by Ministers. These requirements are derived from the business model, which was published in Progress Report Two, and this model will be used to generate our requirements, service targets, volumetrics and standards that suppliers must meet. We have developed an “initial solution recommendation” that outlines a working solution for LRUC and this will be used as a benchmark against which to compare proposals from potential suppliers.

2.3 At the same time, the outline business case was developed, based on the designs of these requirements.

2.4 We have developed a strategy for procurement that reflects discussions with private and public sector operators and the experience of other European schemes. It identifies the systems and services we will seek to procure from the private sector, and the procurement route we intend to take. The details are set out in Chapter 4.

2.5 The outline business case presents a whole programme view of the estimated costs and benefits of the scheme. It reflects input from a range of public and private sector experts. It will be used to provide a benchmark for the range of expected costs and benefits of the scheme against which we can measure the affordability of the business and technical solutions proposed by the market.

Working with industry

2.6 Leading on from the formal consultation document: “*Modernising the taxation of the haulage Industry*” (November 2001), the Government has continued to work closely with representatives of the UK haulage and related industries. A sub-group of the Road Haulage Forum has been set up for this purpose and meets regularly to discuss the issues involved in Lorry Road-User Charging. Members of the sub-group include the Freight Transport Association (FTA), Road Haulage Association (RHA), British Vehicle Rental and Leasing Association (BVRLA), Society of Motor Manufacturers and Traders (SMMT), Transport and General Workers Union (TGWU) and representatives of some of the UK’s largest haulage operators. Their collective and individual contributions to our work since the last progress report has been invaluable.

2.7 Officials have held presentation and consultation events with members of some of these organisations, including regional consultation sessions in Northern Ireland and Scotland, and they have commissioned a survey of hauliers, which is reported in Annex A. Ministers also meet regularly with industry representatives. This joint working has been a core feature of the Government’s approach, and has underscored our awareness of the key issues involving Lorry Road-User Charging.

2.8 As well as regular meetings, the sub-group has also run workshops for members on specific issues including offsetting fuel duty schemes and occasional-user schemes. These sessions have been particularly useful in helping us to understand how businesses work and how the LRUC will affect users.

Key policy decisions

2.9 The Government can now announce some key policy decisions. These have been made after taking account of the industry views and will in themselves have a significant effect on the nature of the services that contractors to the LRUC will need to provide.

2.10 Progress Report Two identified one possibility of how the scheme for occasional users could operate. This was discussed with members of the Road Haulage Forum and with their input, we have developed a more user-friendly, fraud-resistant scheme.

Box 2.1: The Occasional User Scheme

The last progress report described a possible scheme for occasional users whereby drivers would book journeys on computer terminals located at key points or by using the Internet. Discussion with the Road Haulage Forum and further research into that ticketing option led to the conclusion that there might be problems with the usability of this option from the perspective of the operator.

So we held a workshop with industry representatives in which we examined other options, in particular the idea of a smaller “Low-Use On-Board Unit” that would better mirror the use of the main scheme unit. The “Low-Use On-Board Unit” would be self-contained and we would expect that it would not require any interface with the lorry’s own power or other systems. It would require some driver intervention from time to time, namely the inputting of the vehicle tachograph reading or other distance-measuring device. Roadside infrastructure would also be required to enable the “Low-Use On-Board Unit” to provide on-motorway charge differentiation.

We see a scheme involving a “Low-Use On-Board Unit” as being much simpler to use than the ticketing solution. It would provide synergies with the main scheme, and would also provide a base for a more robust enforcement system.

Of course, this is only an example of how an occasional user scheme might work; we will be looking to potential suppliers to arrive at the optimum solution to the outputs based specification referred to above. We will be aiming to ensure that the final scheme for occasional users is both useable from the haulage operators’ perspective, provides for a charge calculation that mirrors the main scheme and is enforceable, with minimal risks of fraud.

2.11 We have also taken on board the concerns of the haulage and oils industries in deciding on the way of delivering the fuel duty reductions. In the last progress report we confirmed that the offsetting tax cut will be a reduction in fuel duty, available on fuel used in lorries that fall within the scope of the LRUC.

Box 2.2: Fuel duty repayments

Two methods of delivering a tax cut on fuel used in lorries had been identified in the last progress report: a new chemically marked fuel that would be sold at a discounted rate to haulage operators and a repayment scheme, whereby operators declare how much fuel they have used in each chargeable vehicle. In the repayment scheme, the fuel cut would normally be expected to be netted-off against the charge in a single administrative process.

Consultation with the oil and haulage industry, as well as research undertaken within the LRUC programme, has identified the repayment scheme as the lead option. The main reasons for this are the predicted need for costly infrastructure to support a marked fuel and questions about the national availability of a marked fuel for haulage operators. We would expect that for a repayment scheme the bulk of repayment declarations would be made electronically through the use of cards at the point of sale. We believe the use of electronic declarations and other strong mitigating measures we intend to put in place will limit the potential for fraud in a repayment scheme.

We have looked at the issue of alternative fuels within the scheme. Because of the logistics involved we would see any fuel cuts for alternative fuels being achieved through a repayment mechanism. We recognise the importance of needing to maintain the incentive for alternative fuels, and will ensure that arrangements are put in place that will do this.

While a repayment scheme seems to be the right approach, we recognise that further work needs to be undertaken with industry to ensure that measures, such as the use of cards to make electronic declarations, can be put in place before any marked fuel scheme can be ruled out. We will be working with key stakeholders in the next phase of the programme to resolve issues about the working of a repayment scheme, particularly with regard to fraud mitigation and the need to ensure that as many claims as possible are made electronically.

2.12 The decision to deliver the fuel duty reductions through a repayment scheme will have a significant effect on the nature of the services that contractors to the LRUC will need to provide. We have also made two other key decisions that potential suppliers will need to bear in mind.

Mandatory on-board units above certain threshold

2.13 The Government believes that a requirement for lorries to install an on-board unit would make the charge easier to administer, more resistant to fraud, and would remove compliance burdens associated with an occasional user scheme.

2.14 At the same time, we have recognised that there will be a number of vehicles that will only drive on UK roads very occasionally. We have concluded that there should be a threshold above which users are required to have an on-board unit installed. Further work will be done to establish what the threshold will be and whether it will be based on factors such as distance travelled or time spent in the UK. In order to do this we need to get a greater understanding of lorry operators' driving patterns and what constitutes genuine "occasional use". The threshold will be set so that the requirement is proportionate to the objective pursued by it; that is, we will not be requiring people who are genuinely occasional users to install a fixed on-board unit.

2.15 This decision should give potential suppliers some certainty over the number of on-board units that they will be required to supply. In the next few months, the Government will conduct further research to investigate the most appropriate method of defining and operating this threshold.

Charge to be administered by HM Customs and Excise **2.16** We have also decided that HM Customs and Excise will continue to be responsible for LRUC, both developing and procuring systems now and administering the charge in the future, but continuing to work closely with the Treasury and the Department for Transport. Customs is a delivery department and is used to dealing with businesses when collecting the wide range of other indirect taxes for which it is responsible. It is therefore experienced and well suited to the task. We envisage that the charge will be run by a stand-alone "LRUC Management Authority" within Customs.

Box 2.3: Proposed functions of the LRUC Management Authority

The proposed functions of the LRUC Management Authority fall broadly into three streams:

- **Policy:** Strategic and policy issues including supplier management and development, ongoing EU legislation issues, directional and change management;
- **Commercial Management:** Contract and Operational including contract negotiation and management, management of the Service Level Agreement(s), performance measurement, ongoing operational LRUC policy, resource (including budget) management and user management;
- **Operation:** Direct management of a range of activities including assurance, enforcement management and communications and marketing.

3

EUROPEAN DEVELOPMENTS

3.1 Since the last progress report there have been extensive developments in Europe on the subject of road-user charging.

3.2 The proposal for a Directive on the Interoperability of Road-Charging Schemes in the EU was issued on 23 April 2003, shortly before the last progress report. Since then it has been discussed extensively in the European Parliament and the Council. In addition the Commission has proposed some amendments to the Directive governing the rates and structures of road charging schemes in the EU - the "Eurovignette Directive". The Government is working to ensure that both these Directives are compatible with the UK's intentions for Lorry Road-User Charging.

3.3 On 1 January 2004, Austria's toll for heavy vehicles on motorways came into operation. This seems to be running smoothly, although there have been press reports that lorries are diverting onto other roads to which the toll does not apply. Some local authorities have apparently recorded increases in heavy goods traffic of 60 per cent on their trunk roads. The media have put this down to drivers being keen to avoid the road-user charge and therefore switching from the motorways to the minor roads. The UK scheme will apply to all roads.

3.4 Germany planned to introduce a toll for lorries on motorways from August 2003. Those plans have not yet come to fruition, and the situation at the time of going to press is highly uncertain. On 17 February 2004, the German Government gave notice to the consortium contracted to deliver the toll. However, we understand that a deal has been reached with the consortium under which the toll will be fully functional by 1 January 2006. We are gathering information about the German experiences and will be taking these into account when pushing ahead with our procurement and implementation.

3.5 It is important that the UK learns from the experience elsewhere in Europe. For example, the programme team is making use of industry experts including those with experience of introducing the Swiss Lorry Road-User Charge, and advising on the Austrian scheme to help to ensure development of an effective solution for the UK. Experience in other countries points to the need to build sufficient time into procurement (specification, tendering and negotiation), development, building, prototyping, testing and phasing and also to the role for a strong public sector authority, which will manage a variety of contracts rather than rely on a single supplier with multiple sub-contractors.

3.6 Further details of other European schemes are included in Annex B.

4

PROCUREMENT PROCESS

4.1 The implementation of LRUC, like all major Government projects, is being assured through the Office for Government Commerce (OGC) Gateway process. The procurement process will start directly after the programme has passed the Gateway 2 stage. At this stage, the OGC will satisfy itself of the method of procurement and the future management of the services procured. The supporting business case analysis will need to provide assurance that the proposed solution provides value for money.

Procurement strategy

4.2 The business model is complex and our research into relevant schemes elsewhere indicates that we need a robust and clear procurement strategy to deliver the potential solution successfully. The aim of our strategy is to identify the most effective means of delivering a value-for-money solution that in each case allocates risk to the most appropriate party.

4.3 The procurement for the LRUC programme will be in line with EU procurement directives. The procedure will include Prior Information Notice (PIN), Official Journal of the European Union (OJEU) advert, supplier open day, supplier evaluation, preliminary and final invitations to negotiate and, finally, contract award.

4.4 Three contract packages (“bundles”) have been designed at a high level following consultation with industry experts, external commercial, financial and legal advisors and internal business managers. Each of the bundles constitutes a contract package that will comprise a number of complementary business functions. The exact scope of each bundle has yet to be fully finalised but in general terms the bundles are likely to be split as:

- central services: customer account management, billing and finance;
- roadside equipment: roadside infrastructure and maintenance, enforcement equipment and maintenance;
- on-board equipment: design, build, distribution and installation of equipment and management of data transfer from on-board equipment to the central service function.

Open day & prospectus

4.5 The Government plans to launch the procurement at a suppliers' open day. The PIN will announce where and when the open day will be held and invitations will be made to all suppliers who indicate their interest in the procurement. The aim of the open day is to inform attendees of:

- the number of contracts we intend to award;
- the nature and length of the contracts;
- the Government's aims and objectives for the charge.

4.6 A detailed prospectus will be issued to attendees and interested parties and an electronic version of this will be made available on the Customs and Excise website. The prospectus will cover:

- objectives and scope of the charge;
- an overview of the service requirement including the structure of the proposed contract bundles;

- key points from the procurement strategy;
- the proposed timetable for procurement;
- baseline service and commercial models;
- procurement principles.

4.7 We expect the procurement timetable to be as follows:

Issue a Prior Information Notice (PIN)	Spring 2004
Publish an Official Journal of the European Union (OJEU) Advertisement and accompanying Pre-Qualification Questionnaire (PQQ)	Spring 2004
Potential Supplier Open Day	Summer 2004
Preliminary Invitation To Negotiate (ITN) issued to short-listed suppliers	Summer 2004
Contracts to be awarded by	End 2005

4.8 However, we are conscious that the procurement of such a complex project cannot be rushed and this timetable will be kept under review.

5

THE WAY FORWARD

Timetable 5.1 The industry has consistently stressed to Government from the outset that the important thing is to get the charge right and not just get it in quickly. We fully agree with this view, and have consistently stated that the implementation date for LRUC would depend on experience as the project developed, particularly the market's response to the tender.

5.2 In light of experiences elsewhere - particularly in Germany and Austria - we have concluded that our project timetable must include a comprehensive testing phase with thorough monitoring of how the systems are operating and whether the objectives of minimising compliance burdens on operators and administrative burdens for Government are being met.

5.3 This means that the design and build phase will begin in 2006 with on-board equipment fitting and charge collection beginning in 2007-08.

5.4 As the procurement process develops and contact terms are agreed with suppliers an exact timetable for final introduction will be published. Our current indicative timetable includes:

Initial legislation in Finance Bill	Spring 2004
Legislation on structure, collection and administration of charge and key definitions	Spring 2005
Target date for contract awards	End 2005
Design and build phase e.g. install roadside equipment	2006
Secondary legislation including regulations	2006
Recruitment & training of staff	2006
Pilots and testing	2006-07
Go live for pre-registration services	End 2006
Equipment installed in vehicles and start of revenue collection and fuel duty repayments	From 2007-08

5.5 Full implementation will involve the Government continuing its close co-operation with the haulage sector and new relations with our primary partners, who will be selected during the procurement phase and will then build and supply the equipment, and carry out much of the day-to-day operation of the charge. We remain fully committed to modernising the taxation of the haulage industry by implementing a lorry road-user charge and believe that this charge has the potential to deliver significant benefits to the haulage industry and the Government alike.

A

HAULIERS' SURVEY

Overview To provide information on the likely take-up of On-Board Units (OBUs) under different conditions, the Government commissioned a research agency to carry out interviews with UK lorry operators in late summer 2003. The survey also provided useful data regarding the haulage sector. In addition, a small-scale survey of overseas operators provided an indication of their reaction to the scheme.

Face-to-face interviews (comprising a pen and paper questionnaire, and a computer-based preference modelling exercise) obtained responses from 951 operators in Great Britain, and 88 in Northern Ireland. Telephone interviews were conducted with a total of 114 operators, in France, Spain and Holland.

The computer-based exercise required respondents to choose between different options for the LRUC scheme. They were shown combinations of three scenarios, the third of which was always opting for the Occasional User Scheme, and the first two of which outlined different ways in which the Main Scheme could operate, in terms of:

- amount paid for OBU purchase and installation by lorry operator;
- amount contributed by government (if any) and whether this is a direct payment to the installer or a credit against future LRUC bills;
- OBU functionality.

Headline results The headline messages from this research include:

- 16% of UK lorries visit other EU countries, and just 1% travel outside the EU;
- 9% of lorries do not travel on UK motorways at all. The average proportion of the total annual UK mileage done on motorways was 41%;
- 55% of lorries are part of a fleet with no electronic (telematics) devices currently installed;
- 54% of the lorries are operated by an organisation that is aware of the Lorry Road-User Charge plans prior to the research. Awareness is higher amongst the larger operators.

The general pattern of findings from the computer-based exercise revealed that:

- the scenarios where the operator has a lower initial outlay are more attractive than those where they have to pay the full cost up-front and wait to receive credit from the Government (even when the net cost is the same and sometimes when it is actually lower);
- attractiveness falls as the overall cost to the operator rises (both when Government contributes at source and when the operator receives credit);
- it is more attractive to include added value services rather than compatibility with other EU road user charging schemes;
- small operators and those travelling fewer miles per year in the UK are least likely to be interested in installing an OBU.

B

OVERVIEW OF OTHER EUROPEAN SCHEMES

To improve understanding of the following charging projects the LRUC programme team has researched the following schemes:

Switzerland

Purpose The Swiss heavy vehicle distance based charging system was introduced as a result of predicted increases in Heavy Goods Vehicles traffic passing through Switzerland, particularly on the German-Italy and Italy-France corridors. One objective was to limit the increase in traffic when the national limit was increased from 28 tonnes to 40 tonnes. A further objective was to encourage a modal shift from road to rail for alpine crossing goods transport. Money raised from the scheme will finance new railway tunnels through the Alps.

The principles of the scheme are that:

- the vehicle is charged by distance travelled (in Switzerland);
- the charge is based on the maximum gross laden weight of the total vehicle train (including any trailers being pulled on the journey in question), not actual weight.

Scope The charge involves all goods vehicles over 3.5 tonnes subject to a few exemptions, and applies to all distance driven within Switzerland (large passenger vehicles are subject to a flat fee). The charge called HVF is levied according to a number of criteria including the number of kilometres travelled (not just on motorways) in Switzerland, the maximum permissible laden weight and the emission category of the HGV.

The rates vary from 1.42 to 2.00 Rappen per km per tonne of lorry weight (approx €0.27 to €0.38 per km for a 30 tonne truck), depending on the lorry's emissions class. The owner of the vehicle and (with foreign vehicles) the driver of the vehicle, are liable to the tax.

The scheme is operated by the Swiss Customs Authority and started on 1 January 2001. For 2003 the gross revenue was 843 million Swiss Francs. The collection costs are 59 million Swiss Francs (7%).

Technology For domestic vehicles, the installation of the OBU is mandatory. Foreign operators may choose to have their vehicle equipped. Alternatively, there is a semi-automatic solution involving the use of chip cards. The OBU is provided free of charge although the installation costs must be borne by the vehicle owner.

The Swiss OBU system records trip data automatically. The kilometres driven on Swiss territory are recorded by means of an electrical connection to the tachograph. The distance recording is verified using a satellite positioning system (GPS) and a movement sensor, to ensure the tachograph is not intentionally interrupted. A Dedicated Short-Range Communication (DSRC) link is used to switch the recording of the kilometres on and off when passing the border. The stations at the Swiss borders have been equipped with DSRC beacons in accordance with the European standards for the 5.8 GHz microwave dedicated airlink for traffic telematics applications. The DSRC transaction over the airlink is designed with European inter-operability in mind. The automatic enforcement stations also have licence plate reading (LPR) systems.

The technology also includes the capacity to introduce an Alpine Transit Tax at a later date. The Alpine Transit Tax would charge a specific fee for crossing one of the principal Alpine passes.

User perspective Foreign drivers must get an identification card at a Swiss customs desk before using the special terminals for HVF clearance.

Upon entering Switzerland for the first time, data relevant for the calculation of the charge is registered in the central information (computing) system, and an ID card for the vehicle is handed to the driver.

With each entry to Switzerland, the driver inserts this card into the chip card reader at the clearance terminal. The information stored on the card is then complemented, through manual insertion, with actual mileage on the tachograph and data about the trailer.

The driver receives two copies of the receipt that he/she completes with the new (actual) mileage and his/her signature when leaving the country. Cash payments can be deposited directly in the Customs offices, and the Customs will check the declared data randomly at border crossings.

For vehicles without an OBU, changes in the status of the trailer can only be made in so-called controlled environments (e.g. in duty free shops or at inland Customs Offices). The clearance terminals are installed in 100 Customs offices. Using the terminals is straightforward, and is based on a simple dialogue structure with 23 languages on the terminal screen.

Users of equipped vehicles are required to make a monthly declaration. This is done by inserting a chip card into the OBU. Data is written from the OBU to the card. The card is removed and the data transmitted to the central system either by means of a card reader attached to a PC, or by posting the card. Invoicing is separate from the charge declaration.

Impact The Swiss are monitoring the economic and transport planning impacts of their charge. The transport industry has adapted the fleet composition from high-emission trucks to low-emission trucks and the vehicle sizes have been adapted according to the goods that they regularly transport (low-weight trucks for low-weight goods). Freight and fleet management activities have also been increased to maximise the load factor. Routings have been adapted to minimise the distance travelled in Switzerland.

Austria

Purpose Austria has for some time operated a paper-based vignette system covering the entire motorway and major road network. All vehicles are subject to the “tax” which is time based. The vignette is a piece of paper that is displayed in the windscreen and is valid for a specified time period. The new charging scheme replaces the vignette for vehicles over 3.5 tonnes. The Federal Highways Financing Act of 1996 and the Austrian Infrastructure Financing Law of 1997 gave ASFINAG, (a state-owned company and executive of the Federal Ministry of Transport, Innovation and Technology) the power to collect distance-based tolls on the highly developed sections of the Austrian road network and spend the income solely on road and rail related projects.

The main motivation for introducing a distance-based charging system for Heavy Vehicles was the desire to attribute costs more fairly according to use. Because the Eurovignette Directive permitted tolls only in relation to infrastructure costs, it was

decided that these costs should at least be credited on the basis of the distance travelled.

Scope The Austrian federal road network (approximately 2,000km of road network comprising motorways and expressways) is covered by the new scheme. All vehicles exceeding 3.5 tonnes gross laden weight, not just lorries, are subject to the charge, which went live on 1 January 2004, following full-scale end-to-end testing. Classification is based on the number of axles (2, 3, 4+). Tariffs per kilometre are €0.13 for vehicles with 2 axles and €0.27 for vehicles with 4+ axles. Expected total revenue is around €600 million for 2004.

Technology All eligible vehicles must be fitted with an on-board unit - a transponder that is attached to the windscreen. The system uses 5.8GHz microwave DSRC; achieving the greatest possible degree of interoperability with different toll systems in Europe (particularly Austria's neighbouring countries) was considered to be an important aim of the scheme. The vehicles are charged as they pass under gantries that are mounted on each of the 800 charged motorway segments. The scheme operates as a "non-stop" electronic charging system with no barriers. Each gantry is mounted with an array of microwave beacons. There are 100 gantries that are fitted with enforcement equipment (such as cameras and laser scanners).

User perspective All eligible vehicles are required to have an OBU and drivers have to press a button on the OBU to indicate the number of axles for any particular journey. There are no provisions for non-equipped vehicles. There are various ways for companies to obtain an OBU. The fuel card companies are offering fleet owners assistance in opening accounts and getting the OBUs. OBUs are also available at kiosks. There is an extensive network of kiosks, mostly at petrol stations, both on the motorway and nearby. Drivers are offered both pre- and post-pay accounts and may use fuel cards and credit/debit cards, as well as cash.

Germany

Purpose Concerned about the negative impact on German motorways of continued growth in the volume of freight transport, the German Government has decided to redistribute the cost of maintaining, expanding and renovating German motorways among domestic and foreign users. It plans to do this through a toll on commercial trucks weighing 12 tonnes or over, based on distance travelled on German motorways (some 12,000km of road network). This charge was due to be introduced on 31 August 2003, but the scheme has been delayed and it now looks likely that the charge will not be fully operational until January 2006. External commentators have suggested that the problems are essentially down to systems integration issues, capabilities of software in the on-board equipment, an over-complex billing system and an occasional user scheme which is difficult to operate. Assuming that the toll to be introduced is the same as the plans originally announced, it will operate as follows.

Scope The toll will apply to all vehicles of 12 tonnes or more, with exemptions for buses, military vehicles, police vehicles etc. It will replace the time based motorway toll (Eurovignette) that applied in Germany until last year. For tolling purposes there will be three categories of vehicle, broadly corresponding to their Euro emissions class, and within each category there are two rates depending on the number of axles on the vehicle (the more axles, the higher the rate). Rates will range from €0.09 to €0.14 per km.

Technology The on-board units envisaged contain satellite-positioning equipment, which records distances travelled on German motorways, and calculates the associated charges. The unit will periodically transmit this information via the cellular network to the back

office. The OBU would have a DSRC module to communicate with enforcement systems via infra red or microwave signals (microwave technology is seen as the technical prerequisite to enable use in other toll systems).

User perspective Operators of most lorries on German motorways will register for the tolls in advance and their lorries will be fitted with an on-board unit. Drivers have to press a button on the OBU to indicate the number of axles for any particular journey. After that, the toll is calculated and the user billed automatically.

The OBU will be provided to the user free of charge, with a €300 advance payment against future toll liability. The cost of installing the OBU will have to be borne by the vehicle owner.

The alternative scheme for occasional users will entail booking specific journeys in advance via the Internet or at kiosks located throughout the country and at borders.

C

REFERENCES

SELECTION OF RELEVANT DOCUMENTS

HM Treasury: Modernising the taxation of the haulage industry: A consultation document, London November 2001.

HM Treasury: Modernising the taxation of the haulage industry: Progress report one, London April 2002.

HM Treasury: Modernising the taxation of the haulage industry: Progress report two, London May 2003.

ISBN 1-84532-005-0



9 781845 320058 >