MINISTRY of TRANSPORT
TE MANATŪ WAKA

Land Transport Policy Development: Improvements to the Road User Charging and Fuel Excise Duty Systems

This paper is provided for discussion purposes only. It does not represent Government or Ministry of Transport policy.

Discussion

The Road User Charge and fuel excise duty systems are the only current charges to relate vehicle use to payment for the roading system and are currently the most important sources of revenue to the National Roads Fund.

The Road User Charges system – while world leading when introduced in 1977 – is an average-based charging system that is tied to old technology, and has relatively significant administration and compliance costs for the benefits gained.

The increasing fuel efficiency of modern vehicles is challenging the effectiveness of fuel excise duties and the advent of hybrid cars will accelerate this. The excise duty on LPG collects more from non-road users than from road users, which necessitates a cumbersome refund system.

Improvements to these systems could:

- Provide fairer and more efficient ways of charging road users
- Open up further opportunities for more efficient ways of charging over time
- Reduce administration and compliance costs for road users and the Government
- Reduce evasion.

Possible changes include:

Enabling the introduction of alternative technologies for charging heavy vehicle users

New technology could replicate the current RUC paper licence system but do away with the need for supplementary licences and refunds. Longer term, it could enable the introduction of differentiated charges that vary, for example, by time of day or location. Users could have the choice as to which option, paper or electronic, they used and their privacy would be protected.

Enabling the use of third party credit facilities for the new options

These new technologies could enable users to be billed for their RUC costs rather than having to pre-purchase RUC licences prior to travel. This could enable those on a new system to pay for their road use via the use of third party credit facilities.

Changing RUC licence fees

The current time limit on RUC vehicle users to purchase new RUC licences within 1 month of a change in the licence fee could be increased or removed altogether in order to reduce unnecessary compliance costs on users.

Providing for Hybrid cars, LPG and CNG vehicles

The advent of hybrid cars will need addressing from a road use perspective, given their significantly lower fuel consumption. One option would be to require them to purchase RUC licences.

The substantial off-road use of LPG also raises questions about the sense of continuing to charge LPG and CNG vehicles for their road use through an excise duty. Again, one option would be to put such vehicles on to the RUC system.

Tightening up enforcement

Various amendments could be made to tighten up enforcement of the RUC systems, including clarifying the 5% weight tolerance issue, charging interest on outstanding debts, introducing fines for failing to provide information and raising the fines applicable to other offences.

Issues

Issues to consider include:

- Under what conditions should any new technology should be introduced?
- Who should manage the technologies?
- Are there any other improvements that could made to the RUC and FED systems?
- Are there any other ways to maximise voluntary compliance and minimise enforcement costs?
- Are there any structural implications of these revenue collection methods?

MINISTRY of TRANSPORT
TE MANATŪ WAKA

Land Transport Policy Development: Future of Rates

This paper is provided for discussion purposes only. It does not represent Government or Ministry of Transport policy.

Discussion

Concerns continue to be expressed about the ability and willingness of local authorities to fund a share of local roading costs. This has been demonstrated by the reduction in local roading investment over the last 5 years as reflected in the National Roading Programme (from $80 m in 1995/96 to $62 m in 2000/01), despite traffic growth in that period, and despite higher funding through a lower B/C.

The current method of requiring a large local contribution for local road maintenance and capital expenditures appears to be skewing investment towards the State Highway system, despite the increasingly artificial difference between the two types of road in parts of the country (particularly urban areas). It also appears to be frustrating roading development in areas that have relatively low rating basis such as Northland and the East Cape where forestry and tourism traffic is increasing rapidly. This has clear implications for the Government's regional development policy, and for its road safety initiatives.

This is not to say that rates bear no relationship to the roading system. Clearly a property's value – and hence its rates - is partially determined by its road access, particularly in rural areas. Rates do not vary with road use and are difficult to avoid and so could theoretically be an efficient way of recovering residual roading costs (ie costs that do not vary with use). In addition, requiring local authorities to contribute through rates to the road expenditure decisions they make increases their accountability for that expenditure.

Rates, however, pay for a bundle of goods and so their level is not necessarily determined by roading factors. Secondly, ratepayers and road users are not totally equivalent groups resulting in the former paying for costs that the latter should ideally be bearing. The use of rates is also a very sensitive issue among some groups, particularly Maori and those living in rural areas such as forest owners, given their concerns at the way in which the rates have been levied and the resulting revenue spent.

Reducing the contribution made by rates under the current system, would require increased assistance from Transfund, and consequently, increases in RUC, petrol tax and/or motor vehicle registration and licensing fees. While this may be desirable from a road charging perspective, such a shift in funding raises questions about the impact on road users and ratepayers, the accountability of local authorities to road users as opposed to ratepayers, and the cost effectiveness of funding.

Issues

Increasing Transfund financial assistance in order to reduce the contribution required from rates would raise a series of significant issues:

- Should rates be reduced under the current system?
- What revenue sources should be used to replace the rates contribution (e.g. RUC/FED versus MVR revenues)?
- What impact would any change have on Maori and low-income earners?
- What proportion should still come from rates?
- Who should benefit – all local authorities by the same amounts or urban councils more than rural councils?
- How should any rate savings be dealt with in order to provide confidence to ratepayers?
- Where should accountabilities lie in decision making in light of the relative contributions coming from road users (via the Crown) as opposed to ratepayers (via local authorities)?
- How would further savings (eg in maintenance costs) be incentivised?

MINISTRY of TRANSPORT
TE MANATŪ WAKA

Land Transport Policy Development: Land Transport Charging and Funding

This paper is provided for discussion purposes only. It does not represent Government or Ministry of Transport policy.

Introduction

Growing concerns are being expressed about Auckland's congestion problems, the lack of progress being made on other key projects around the country, and the ability of rural areas like Northland and the East Cape to fund necessary roading upgrades.

Background

Currently road users pay around 75% of the costs of the roading system by two means: Road User Charges (for heavy and diesel vehicles) or petrol tax and motor vehicle registration and licensing fees. Ratepayers fund the remaining costs. Only one tolled public road exists, that being the Tauranga Harbour Bridge.

The Government operates a dedicated National Roads Fund into which all the revenues from Road User Charges and Motor Vehicle Registration and Licensing fees and a portion of the fuel excise duty on petrol, LPG and CNG are paid. Safety expenditure on the activities of the LTSA and the Police are deducted first. The remainder is then paid to Transfund for funding Transit NZ and local authorities according to specified maintenance and capital project criteria.

Problems with the current charging and funding system

The current system:

- inhibits the use of new technology and innovation
- barely relates the charges users pay to the costs they impose on roads and others
- is bureaucratic and complex
- frustrates the development of large-scale projects
- struggles to deal rapidly worsening congestion on urban corridors, and the demands placed on rural roads experiencing increased forestry and tourism traffic.

In essence, the current "average-user-pays with some rates funding" charging system results in users paying less than their true trip costs, for example, at congested/peak. Road users are not charged for the cost of capital tied up in the roading network. Nor are they charged for the environmental pollution their vehicles cause. The result is excessive road use on congested parts of the network and higher roading costs.

The current charging systems are also governed by prescriptive requirements that, in some cases, are outdated, impose unnecessary compliance costs, effectively prohibit the use of new technology, and do not comply with the Privacy Act 1993.

The current system also focuses funding on smaller, shorter term roading improvements and forces current users to pay the full cost of such improvements up front.

The current system also appears to advantage State Highways over local roads (given the requirement on local authorities to fund 50% of the costs of the latter) and limits the extent to which further substantial gains can be made from combining contracts.

Papers

The following papers outline a series of issues in relation to:

- the RUC and fuel tax systems
- the Motor Vehicle Registration system
- the future use of rates
- use of tolls and DBFO/BOOT projects to speed-up the construction of new roads
- charging to improve mobility
- the National Roads Fund funding system

that seek to promote discussion on changes that could be made to improve the current system.

Further papers in Stage 3 will seek to address the potential funding and charging implications for any regional clustering.

MINISTRY of TRANSPORT
TE MANATŪ WAKA

Land Transport Policy Development: Motor Vehicle Registration and Licensing

This paper is provided for discussion purposes only. It does not represent Government or Ministry of Transport policy.

Discussion

Purpose of Motor Vehicle Registration and Licensing

Motor Vehicle Registration and Revenue Management (MVR&RM) activities consist of the collection and refund of Motor Vehicle Registration and Licensing (MVR) fees, Road User Charges (RUC) and Fuel Excise Duty (FED), and the maintenance the Motor Vehicle Register.

MVR&RM activities have two main purposes - revenue collection and safety.

The revenue from MVR (change of ownership, registration, relicensing), RUC and FED flows into the National Roads Fund (NRF). The NRF funds the Safety Administration Programme (S(A)P), the management of the MVR&RM and Economic Compliance Unit (ECU) businesses and the National Roading Programme.

Data collected from MVR is held on the Motor Vehicle Register. This register is primarily a safety mechanism system to identify vehicles and their owners for the enforcement of vehicle safety standards and driving offences. The register is the principle source of information for law enforcement agencies, local authorities, and the general public.

Review of Registration and Licensing Fees

Motor vehicle registration and licensing fees collect about $170 million a year for the National Roads Fund in addition to the monies they collect for the ACC. The question is whether this amount is sensible and whether use of the MVR as such a revenue collection tool is sensible (in comparison with RUC and the fuel excise duties which vary with road use). Some economists would argue that the MVR system is a good way to recover roading costs that do not vary with road use. However, the higher the MVR fees, the more users have an incentive to evade the system entirely and hence reduce the effectiveness of the MVR system in assisting law and safety enforcement. Some options are: dedicating registration and licensing fees (or part of these fees) to the recovery of residual NRF components, dedicating the fees to LTSA outputs, abolishing the fees or retaining the status quo.

Responsibility for MVR&RM activities

MVR&RM operational activities do not seem to tit within the principle objective of the LTSA of promoting road safety. This revenue management responsibility could be transferred to Transfund given that it is responsible for spending most of the resulting revenues, along with administrative responsibility for the RUC system.

Transport (Vehicle and Driver Registration and Licensing) Act 1986 Issues

Part 1 of the TVDRL Act is overly prescriptive and increasingly difficult to administer. For example, requirements in the Act specify how registration plates should be managed in a manner that is no longer feasible. As a result the Act has required frequent amendment.

Of more concern is the Part's treatment of access to the Motor Vehicle Register. Currently any member of the public can obtain the personal details of registered vehicle owners so long as they pay a small administration fee. This is clearly inconsistent with the Privacy Act 1993. A complaint last month to the Privacy Commissioner, from a woman whose details were accessed by an obsessed male, highlights this risk.

Amendments to Part 1 could provide better protection of personal information on the Motor Vehicle Register and shift much of the detail into regulations.

Issues

The key issues to consider are:

- What should be the purpose of registration and licence fee? What should they be set at?
- Who should be responsible for administering the MVR&RM business?
- How should access to the Motor Vehicle Register be controlled to protect personal privacy?
- Should the Transport (Vehicle and Driver Registration and Licensing) Act 1986 be overhauled?

MINISTRY of TRANSPORT
TE MANATŪ WAKA

Land Transport Policy Development: Charging and Financing New Roads

This paper is provided for discussion purposes only. It does not represent Government or Ministry of Transport policy.

TOLLING

Discussion

While central and local taxation sources remain limited for road funding, demand continues to grow for roading improvements, in areas like Tauranga, Wellington (Transmission Gully) and Auckland (Weiti Crossing). Charging for new roads directly via tolls could provide the means to proceed with these roading projects and also provide better signals to road users as to the true costs of their trips (including environmental and safety costs). Longer term, direct charges could also provide one of the most effective ways of managing new road efficiently in key corridors in our urban areas.

However, direct charges can cause people to change their travel behaviour, by continuing to use other roads instead. Manual tolls can cause traffic delays and electronic direct charges can raise concerns about technology compatibility and privacy. The use of direct charges also raises accountability issues.

In light of the Government's other expenditure commitments, direct charges could provide a fair way of funding new roading improvements that might not otherwise be built. The use of such charges ensures that only those using the road pay for it. In contrast, regional petrol taxes would spread the costs across a wide number of road users – but exclude diesel vehicle users – and rates would collect the cost off some who might not receive any benefit from the new road, although their use could to some degree reflect community preferences.

But in order to be acceptable to road users, overseas experience indicates that direct charges can only be imposed where there are alternatives available and the funds raised are used in a transparent manner that benefits those paying.

Another question that such charging raises is whether the private sector should be able to toll a new road in order to fund its construction and maintenance. This is further explored in the next section on DBFO/BOOT projects.

Legislation could enable road controlling authorities and possibly private sector roading providers to apply to toll a new route in order to fund it, under certain criteria. Legislation could also require approval for any new charging technology and ensure that any new system had to comply with the Privacy Act 193 and additional privacy requirements.

Issues

- Is it sensible to enable wider use of tolls to fund new roads?
- Who should be able to set the toll rates and under what conditions?
- What rules should govern their use?
- How should new charging technologies be managed?
- How should transparent use of the revenues best be assured?
- What would be the impact of such charges on Maori and low-income groups?

DBFO/BOOT SCHEMES

Discussion

Use of private sector finance and skills as well as the potential use of direct charges in the form of BOOT (Build-Own-Operate-Transfer) and DBFO (Design Build Fund Operate) schemes could enable larger scale projects to proceed more quickly.

The distinction between these two types of schemes is not always clear cut as the terms are used interchangeably by some and the details of each scheme differ, but in general under BOOT schemes the private sector contractor owns and operates the road for a period (say 30 years) at which point ownership is transferred to the public sector (usually but not always without compensation), whereas under DBFO schemes the private sector contractor builds and operates the road on behalf of a public sector owner.

The UK's experience with DBFO-type schemes has achieved the following benefits:

- The ability to undertake projects which had previously been blocked by constraints on capital expenditure;
- Substantial cost savings over traditional procurement methods (on average 15%, and up to 32%, on an NPV basis on major projects);
- Consistent delivery on, or before, scheduled timescales; and
- Better through-life performance of the road facility.

Many of these benefits derive from the additional incentives placed on the private sector contractor by the combination of construction and operation within one long term contract, and the need to ensure good performance over time to secure the income to repay financing costs. These schemes pass many of the risks associated with large roading projects over to the private sector. Such schemes have been

criticised, however, for encouraging traffic growth. More recent contracts have dealt with this concern by paying – on an output basis – for "lane availability" as opposed to car trips.

In other countries, DBFO-type projects have been utilised along with tolls to fund new roads (ie BOOT-type arrangements). In the UK shadow toll payments from the Crown as opposed to real tolls have been predominantly used. Tolls provide a clear revenue source but can also divert traffic.

The Ministry is carrying out further work on the potential applicability of such schemes to New Zealand (especially since the UK's experience suggests that benefits only arise from larger projects) and the rules that could potentially govern such projects. In light of other countries experiences – such as the Victorian Government's experience with the Melbourne City Link – there are also number of risks with such projects that require careful management, given the conflicting objectives and different environments that confront the private and public sectors.

Assuming a DBFO policy would provide net benefits, a possible policy approach could be as follows:

- Criteria could be developed for assessing DBFO applications. Road controlling authorities could be funded in a manner consistent with specified criteria;
- Road controlling authorities could bid for the right to have some from of shadow toll/output funding for a DBFO project and tender for a private sector provider to finance, construct and operate the particular road for a set period of time according to any specified conditions (e.g. no other roads may be closed); and
- Any such DBFO roads could have to comply with safety and environmental requirements.

Issues

- Are there enough sufficiently large projects in New Zealand to warrant use of the DBFO-type approach?
- What rules should govern the approval and management of any such projects, should they be allowed? Should projects have to reach some form of B/C threshold?
- Do DBFO/BOOT schemes raise any Treaty issues?
- Could and should direct charging also be permitted? How should such tolling revenue be treated in any evaluation?
- What could the payment basis be for DBFO (ie traffic volumes, lane availability, safety performance etc)?
- What minimum revenue guarantees could be required to make DBFO projects viable and if so should a 'maximum' be placed on such guarantees?
- What risks exist and how should they be managed?
- Should there be an approval process?

MINISTRY of TRANSPORT
TE MANATŪ WAKA

Land Transport Policy Development: Paying to Improve Mobility

This paper is provided for discussion purposes only. It does not represent Government or Ministry of Transport policy.

Discussion

Some of our urban corridors, particularly in Auckland and to a lesser extent Wellington, are beginning to experience serious congestion. Congestion is costing the Auckland region in excess of $800 million per annum.

One way to resolve congestion and the associated environmental problems is to require those using the congested corridors to pay to keep them less congested. Users would benefit from lower and more certain travel times and roading providers would gain an additional tool to encourage efficient use of their roads (e.g. by spreading demand outside the peak times). Alternatives like passenger transport would be placed on a more competitive footing.

Overseas, charging regimes in Norway and Singapore are providing congestion relief on key routes. Further schemes are under development in the Netherlands and under consideration in the United Kingdom and United States.

Charging motorists to provide less-congested lanes, however, raises a series of serious concerns among many road users. Such charging can be perceived as an unfair additional taxation, particularly if the monies are not earmarked for projects of benefit to those paying. It can also be heavily criticised if users, particularly low income earners, do not have alternative means of travel available to them. It can raise concerns about the potential misuse of personal information and invasion of personal privacy. It can raise concerns about the costs of any new technology and its compatibility with other forms of technology. It can also have significant traffic diversion impacts if not managed in a co-ordinated manner.

Overseas experience tends to indicate that such charging regimes are only likely to achieve acceptance if they are preceded by a long consultation process, ensure the transparent allocation of the revenues on uses from which users will benefit, have been implemented in a regionally coherent manner, and have been clearly justified.

Auckland road users, for example, might only accept a congestion pricing regime if they consider that all else that could be done is being done to resolve the congestion problems. In which case, issues such as school start times, progress on motorway improvements, progress on passenger transport alternatives, improvements to existing roads through better traffic management would all need to be explored fully before a full charging system could be implemented, or as consequences of its implementation.

As an alternative, the potential use of trials and different lane pricing – where only some lanes are charged on a congestion pricing – may also be worth considering, (assuming they are practical), as ways of assessing and demonstrating the benefits of such a charging regime.

Proposal

Legislation could enable the introduction of charges to reduce congestion on existing roads but only on a regionally consistent manner (enabling individual road controlling authorities to each introduce their own congestion charges raises the risk of significant co-ordination problems). The conditions under which such charges could be introduced would need careful attention.

Further, such charges should only be introduced after a period of extensive consultation and analysis. This process would have to identify that the congestion was serious enough to warrant such an approach and that alternatives were sufficiently available for those likely to be affected, and that the use of the revenues was broadly acceptable to those paying it. Trials and lane pricing could be options.

In order to protect persons' privacy with these new charging systems, roading providers could be required to meet a range of privacy rules set out in legislation, in addition to the Privacy Act. Examples include providing an anonymous purchase option and restricting the use and disclosure of personal information.

Issues

- Should legislation enable charging on existing roads? Under what conditions?
- Should trials and/or lane pricing options be used first?
- What would be the impact on users, and particularly low income earners of any regime? How could any adverse impact be ameliorated?
- How could any such regime be introduced in a regionally consistent manner?
- Does such charging raise any Treaty issues?
- How could the traffic diversion risks best be managed?
- Who should be able to set the charges?
- How should any revenues be used?
- How should new charging technologies be managed?
- How should privacy be protected?

MINISTRY of TRANSPORT
TE MANATŪ WAKA

Land Transport Policy Development: Land Transport Funding Systems

This paper is provided for discussion purposes only. It does not represent Government or Ministry policy.

Current Situation

There are three main activities related to roads that are currently funded:

1. The Safety (Administration) Programme

The Police and the Land Transport Safety Authority (LTSA) undertake a range of educational and enforcement activities to promote safe vehicles and safe driving. The Government, through the Safety (Administration) Programme (S(A)P), purchases these outputs, and some community and local authority safety projects. Applications for the latter are processed through LTSA, and approved by the Minister of Transport. The funds spent on the S(A)P come from the National Roads Fund (NRF).

2. The construction and maintenance of roads

Expenditure on State Highways is paid for entirely out of the National Roads Fund. Expenditure on roads by territorial local authorities is paid for partly from property rates raised by the local authority and partly from the NRF.

Transfund administers the NRF and the National Roads Programme. Transfund's Financial Assistance Rates (FAR's) vary between councils, and average 50% for maintenance and 55% for capital expenditure. In general, rural councils have higher FAR's than urban councils. Allocations by Transfund are based on Benefit-Cost calculations (for capital works) and RAMM (for maintenance).

3. Passenger transport subsidies

Transfund contributes towards subsidising bus, ferry and rail public transport services administered by regional councils. Regional councils contribute further subsidies out of their rates revenues. From October 2000 the newly approved patronage funding system will be used to determine the allocation from Transfund to regional councils.

Transfund also contributes to three public transport social service programmes operated by regional councils:

- Total mobility, a taxi voucher scheme for people with disabilities and older people.
- Concession fares for older people, school children and other targeted groups.
- Urban school bus services.

Regional councils also contribute to these programmes from rates revenue.

Transfund's contributions come from the NRF, and hence from road users throughout New Zealand. Its contributions go mainly to the major urban areas.

Discussion

1. The Role of the NZTS

The Government intends to develop a New Zealand Transport Strategy (NZTS) setting out its strategic objectives and policies for the transport sector overall. The NZTS will influence the allocation of funds between alternatives, although the means by which this will be done has yet to be defined.

2. The Allocation to Safety

Currently, the Minister of Transport decides the amount devoted to the S(A)P. It is, therefore, done separately from the allocation of funds to roads and passenger transport subsidies. Clearly, however, road construction and maintenance and passenger transport provision impact on safety. They can be substitutes for and complements to education and enforcement as means of achieving safety outcomes. In fact, it is estimated that approximately 35% of the total benefits from expenditure on roads by Transfund are safety related.

3. The Common Threshold

Currently, all outputs funded by Transfund are supposed to be ranked against a common efficiency test. However, comparing urban school bus services against developing a new motorway, has proved very difficult with the tools used. The practice has become to use different tools (and arguably to set different funding thresholds) for road maintenance, road construction and passenger transport services. The allocation of funds to the S(A)P, and among various options within the programme, is not integrated with other allocations at all.

4. Output Funding of Roads

Currently, Transfund allocates money to road construction and maintenance using administrative procedures: B/C for construction, and RAMM for maintenance. It effectively buys inputs – roads and road maintenance.

One suggestion is that the B/C approach places no real constraint on costs for projects with high benefits as they will "qualify" even if more elaborate and expensive design options are taken. By the same reasoning, it is suggested that the B/C approach leads to comer cutting in design and expenditure for marginal projects so they can meet the cut-off B/C ratio to qualify for funding. There are also suggestions that RAMM leads to an engineering approach to when maintenance should be undertaken and not necessarily the optimum programme from the point of view of users.

While providers may focus on inputs, users are not usually interested in them. They want outputs, and the outcomes that flow from them. Patronage funding of passenger transport is about to be introduced. This is a form of output funding. Accountability for results is an obvious issue with output or outcome funding.

Issues

- What role should the NZTS play in decisions about the allocation of funding?
- Is it sensible to have decisions about the allocation of funds to the S(A)P divorced from roading and passenger transport decisions?
- Should the practice of setting different funding allocations for safety, roading and passenger transport be officially recognised, and different thresholds and efficiency tests be set for these different kinds of expenditure?
- Should an attempt be made to develop methods to make better comparisons between expenditure on diverse outputs, including the S(A)P?
- Should walking and cycling have separate allocations? Expenditure on these modes is currently "hidden" within general road expenditure.
- Should Transfund develop output and performance based funding systems that pay for the availability of the road network and for the level of traffic it actually carries?
- What other funding alternatives are there to the Government?