

PRODUCTIVITY COMMISSION INQUIRY ROAD AND RAIL FREIGHT INFRASTRUCTURE PRICING

SUBMISSION BY THE NORTHERN TERRITORY GOVERNMENT

COAG COMMUNIQUÉ / TERMS OF REFERENCE

The Productivity Commission review of Road and Rail Freight Infrastructure Pricing arose from a Council of Australian Governments (COAG) decision, as recorded in the Communiqué dated 10 February 2006; to

“ask the Productivity Commission to develop proposals for the efficient pricing of road and rail infrastructure through consistent and competitively neutral pricing regimes, in a manner that maximises net benefits to the community, in particular rural, regional and remote Australia ... The inquiry will include an analysis of how particular communities might be impacted. When COAG considers this report, it will ensure that the interests of rural, regional and remote Australia are addressed.”

At the COAG meeting, the Chief Minister of the Northern Territory, amongst other Members, expressed concern that the application of the concept of the efficient pricing of road and rail infrastructure should not serve to increase freight costs in rural, regional and remote areas.

It is noted that the stipulation that the Productivity Commission should be asked to take particular consideration of what will maximise net benefits in rural, regional and remote areas has been omitted from the Terms of Reference. Also the COAG Communiqué is worded more strongly than are the Terms of Reference with regard to the point that the inquiry will include an analysis of how particular communities might be impacted.

There can be no doubt that the COAG Communiqué represents the higher authority than the Terms of Reference and thus should be used to guide the outcomes of the inquiry.

EXECUTIVE SUMMARY

The Australian economy is characterised by small scale and market distance so that the relative efficiency of the freight transport sector has a significant impact on economic performance.

In the Northern Territory's case, our small and widely dispersed population as well as the relative isolation of our markets from major population centres in other jurisdictions means that the effects of small scale and distance on economic performance are exacerbated. The NT freight task is dominated by vast distances, a heavy reliance on road transport, seasonal restrictions on its road network (in terms of access and load limits), and limited capacity to self fund the large capital and maintenance demands that the road network places on the NT Government.

Of the road network that is under the responsibility of the NT Government 70% is unsealed, hence the access restrictions during the monsoon season. The 30% that is sealed includes the former national highway system, i.e. the Stuart, Barkly and Victoria Highways, as well as sealed regional arterials that were constructed as part of the beef roads programs during the 1960's. This arterial network is crucial to existing and future regional industries, but was not designed for the all year freight demand that is now placed on them. Low strength pavements result in wet season access restrictions even on these sealed surfaces.

These particular socio-economic circumstances in the Northern Territory require a public benefit approach to freight transport infrastructure pricing. In other words, the implementation of a competitively neutral pricing regime for freight routes and major freight transport infrastructure projects should be subject to an assessment of net economic benefits, inclusive of social factors.

In the Territory's case, the application of competitively neutral freight transport pricing based on full recovery of economic costs may not promote the interests of economic efficiency in the following circumstances:

- where freight transport infrastructure is designed to service small remote communities, with high costs of infrastructure provision and economic disadvantage;
- where in reality road is the only transport option available there is limited capacity for inter-modal competition - preventing freight users from transferring freight requirements to the most efficient mode and where the external impacts of freight transport operations are not significant and the community service obligation (CSO) of the road and the services it provides outweighs any efficiency argument. The NT is of the view that the CSO factor associated with the provision of road infrastructure is heightened in remote areas where it is the only transport service that can be offered to the population; and
- where the lack of a critical mass in the economy requires public investment in essential infrastructure such as transport in order to promote economic development. This infrastructure is generally not warranted in terms of current

usage levels but needs to be in place as part of the essential social and economic infrastructure.

In these circumstances, a cost recovery framework needs to take into account: extrinsic and intrinsic financial costs rather than economic costs; direct Government contributions; and a rate of return on capital that is lower than the opportunity cost of that capital.

The NT considers that there is sufficient flexibility under Part IIIA of the *Trade Practices Act 1974* for the circumstances outlined above to be accommodated in pricing arrangements for *rail* freight infrastructure.

In terms of road freight infrastructure, the NT view is that the application of a pricing regime based on economic cost recovery and as a means to influence modal choice decisions in the name of economic efficiency has little application in the remote areas. The issue for a pricing regime for remote areas where the aim is to provide basic transport infrastructure for social as well as economic needs is more about equity in the cost recovery of capital and maintenance without the detriment of high end user prices rather than about an optimum amount of rail and road infrastructure. Mass distance charging on a whole of life road costing basis is an alternative to the existing national averaging system that is PAYGO and needs to be investigated. However the low traffic volumes in the NT will still cause a large gap between cost recovery and actual expenditure.

The pricing framework for road freight infrastructure would require sufficient flexibility to accommodate the circumstances applying to the NT outlined above. This could be achieved by adopting a regulatory test and/or public benefit criteria in the road infrastructure pricing framework, consistent with those applying for rail under the National Access Regime.

There would also appear to be scope for better aligning investment and planning criteria for both road and rail, particularly given the broadening of the National Transport Commission's charter to include rail and intermodal regulatory reform.

Any new national pricing system that results from the inquiry must recognise the problems pertaining to a 'one size fits all' approach. Using the price mechanism to achieve a more efficient use of resources in the provision of transport infrastructure may be an option to meet the twin problems of growing congestion and a growing freight task in major capital cities and urban areas, but cannot be so readily applied to areas such as the Northern Territory.

TREASURY CONTRIBUTION TO NORTHERN TERRITORY GOVERNMENT SUBMISSION

1. Background

Implications of the Price and Quality of Freight Transport Infrastructure for Economic Performance of the Territory Economy.

It is generally accepted that the efficiency of the freight transport industry is a significant determinant of Australia's economic performance. This is due to the implications for the cost/price of traded commodities resulting from the size of the national population, geographical dispersion and distance from major trading partners.

The implications of freight transport costs on economic outcomes are relatively greater in the Northern Territory due to small scale and dispersion of population. The Territory has approximately 1% (202 000) of the national population dispersed over 17.5% (1.3 million square kilometres) of the Australian land mass. Further, the Territory is geographically isolated from major population centres located on the South-eastern sea board. Consequently, freight transport costs tend to be high relative to more populous and developed regions of Australia, reflecting:

- small freight volumes combined with large distances that limit the extent to which freight transport operators can exploit economies of scale;
- the lack of connectivity of intra and inter-state road and rail transport networks reduces competition between freight transport routes; and
- a single north – south rail line providing the only opportunity for sustainable inter-modal freight transport competition.

The Territory economy is reliant on the mineral and energy, primary industry and tourism sectors as sources of investment, employment and income. Most final consumer goods and capital inputs are sourced from external markets. Therefore, freight transport costs are a significant input to the end consumer price of goods and services. This affects the capacity for Territory producers to compete in domestic and international markets and the cost of living for Territory consumers.

The price and quality of freight transport infrastructure has a direct bearing on the efficiency of freight transport operations and hence the performance of the Territory economy and living standards. A further relevant consideration is the relatively early stage of the development of the Territory economy.

Northern Territory Freight Transport Infrastructure

The bulk of intrastate and interstate freight in the Territory has historically been transported by road, although the opening of the Darwin to Adelaide rail link in January 2004 has reduced the volume of interstate road freight, with rail now taking some 80% of freight on the north – south transport corridor.

At more than 35 000 kilometres in length, the Territory's road network is extensive in comparison to the size of the population. Approximately 12% of the road network is

classified as national highway, 19% as arterial road, 45% as secondary road for the regional distribution of traffic and 24% as local road. Road represents the primary mode of intrastate freight in the Territory

The road network is the most comprehensive freight transport link in terms of connectivity. The Stuart Highway runs the length of the NT and connects Darwin with Adelaide. The Victoria Highway, which intersects the Stuart Highway at Katherine, provides the main road freight link with WA, while the Barkly Highway, which intersects the Stuart highway near Tennant Creek, provides the main road freight link with Queensland. Other highways are generally unsealed and carry limited freight volumes.

The Darwin to Adelaide rail link (the AustralAsia railway) currently provides the only sustainable substitute to road transport for interstate freight and intrastate freight along the north – south transport corridor (between Alice Springs, Tennant Creek, Katherine and Darwin). The railway links with both the Barkly and Victoria Highways through terminals at Tennant Creek and Katherine respectively. The railway and associated facilities are the only rail freight infrastructure services currently operating in the Territory.

Construction of the Alice Springs to Darwin railway was completed in 2003. The 1 400 kilometre line extended the existing Adelaide to Alice Springs railway through to Darwin and hence represents the final link in a north-south inter-continental railway. The railway terminates at the East Arm Wharf in Darwin Harbour. The rail was constructed and is operated by a private consortium under a 50 year build, own and operate (BOOT) scheme. The Northern Territory, South Australian and Commonwealth Governments jointly contributed to construction costs.

Approximately 590 000 tonnes were transported by rail in 2005. Most rail freight is final consumer goods, with capital equipment and bulk goods representing a relatively small proportion of rail freight volumes to date. However, mining projects being developed in proximity to the rail freight corridor, such as the Bootu Creek manganese mine, should substantially increase bulk good volumes in the future.

2. Freight Transport Infrastructure Pricing

Standard economic theory suggests that certain services provided by freight transport infrastructure can be subject to market failure.

Road freight infrastructure can be both non-excludable and (subject to capacity constraints) non-rivalrous in consumption. This limits the capacity for the use of such services to be effectively priced in a market, as the short run marginal costs of providing such services can be zero. While the free rider problem can potentially be overcome through the imposition of toll ways in certain circumstances, thereby facilitating private provision, this approach may not be practical in all cases for long distance road freight routes.

As such, in the absence of regulatory intervention, market forces may not facilitate road freight infrastructure being provided at economically efficient levels. Historically, the general policy response to the public good characteristics of road freight infrastructure in Australia has been direct Government provision, funded from taxpayer revenue.

Rail freight infrastructure can exhibit natural monopoly characteristics, given the need for large, up front capital investments (which are generally sunk) and relatively low marginal costs, which decline over the range of output. In such situations, the interests of economic efficiency can be advanced through a single provider of rail freight infrastructure for a given freight route. However, this presents problems for economic efficiency given the essential nature of rail freight infrastructure as part of the rail freight supply chain and because short run marginal costs are generally below average cost.

The traditional policy response to the natural monopoly characteristics of rail freight infrastructure in Australia has been the establishment of vertically integrated public monopolies. However, reforms introduced since the mid 1990's has seen the structural separation of rail freight providers and the establishment of third party access arrangements for rail freight infrastructure.

As such, prices for the use of road and rail freight infrastructure are either independently determined or negotiated subject to independent oversight. As the presence of market failure limits the use of price signals to guide investment decisions, infrastructure provision and augmentation can also be subject to formalised planning criteria and/or regulatory testing mechanisms.

Road Freight infrastructure Pricing in the Territory

In the Territory, heavy vehicle access prices for the use of road freight infrastructure are determined by the Australian Transport Council (ATC), acting on the recommendations of the National Transport Commission (NTC), as part of the national regulatory framework for transport.

The methodology applied by the NTC determines charges aimed at recovering the average of the previous three years road infrastructure capital and operating costs. Total costs are allocated across vehicle classes based on estimated usage and contribution to costs. The infrastructure pricing structure includes a fixed registration charge and a fuel charge levied through the diesel fuel excise.

An NTC paper prepared by Tony Wilson and Barry Moore for the Commission's Round Table on Productive Reform in a Federal System (October 2005) notes that:

“About 70 per cent of total cost recovery is through the fuel charge and 30 per cent through registration charges. The result is full expenditure recovery by vehicle class, but with some under recovery within class for vehicles which are heaviest and travel the longest distances and over recovery from vehicles which are lightest and travel the shortest distance.” (pg 11)

These findings are a driver of this COAG directed review of freight transport pricing.

Rail Freight Infrastructure Pricing in the Territory

Rail freight infrastructure pricing in the Territory is governed by the third party access regime established by the *AustralAsia Railway (Third Party Access) Act* (Northern Territory), *AustralAsia Railway (Third Party Access) Act* (South Australia) and the AustralAsia Railway (Third Party Access) Code, which is a schedule to each Act.

The access regime was certified as an effective regime for the purposes of Part IIIA of the *Trade Practices Act 1974*. The regime was recommended by the National Competition Council (NCC) for certification in 1999 and subsequently endorsed by the Commonwealth Minister in March 2000.

The access regime regulates the provision of below rail services and establishes a right for rail freight operators to negotiate access to services provided by the AustralAsia railway. Where parties cannot reach agreement, prices are set by an independent arbitrator in accordance with principles established in the access code.

The 2 200 kilometre section of the railway between Tarcoola, in South Australia, and Darwin is covered by the certified access regime until 2030. As part of its final report on the application for certification in 1999, the NCC noted:

“In this case, the Regime covers what is, in part, an entrepreneurial greenfields project. The consortium intending to construct and upgrade this rail line will need to generate significant demand if this project is to be profitable – it is taking a considerable risk, even though this risk has been substantially mitigated by Government contributions. In a number of ways, this differs from an established infrastructure facility or a facility built to serve an established market.”

The National Competition Council’s recommendation of the comparatively long certification period (subject to review) and adoption of an access pricing framework, based on a variation of the efficient component pricing rule approach is aimed at promoting revenue certainty for the rail operator while recognising the greenfields nature of the project and the comparatively undeveloped market for rail transport services.

The pricing framework, described as a sustainable competitive pricing approach, guarantees the rail operator the same revenue regardless of whether the freight is transported on its own above rail services or those of a facility user. The benchmark price is determined with reference to the substitute price of a competitive non-rail mode of transport, minus a factor representing the rail operator’s avoidable costs of the above rail services.

A floor/ceiling approach is also adopted to ensure that the access price exceeds the incremental costs of operating the rail but is less than the level which confers monopoly rents. This pricing approach contrasts with revenue and price cap regulation generally applied under third party access regimes.

The access regime is currently being reviewed on behalf of the Northern Territory and South Australian Governments by the Essential Services Commission of South Australia, in accordance with the condition of the NCC's recommendation for certification.

3. Competitive Neutrality in Road/Rail Infrastructure Pricing

As road and rail modes of transport can be direct substitutes, the pricing arrangements for associated infrastructure services can have a significant impact on the capacity for each mode to compete. To the extent that pricing regimes for road and rail infrastructure do not reflect the economic costs of supply for particular classes of user, competition can be distorted, with adverse implications for economic efficiency.

A large body of research has been conducted on the extent to which the current pricing regimes are competitively neutral. There is also a degree of contention with regards to how respective modes are advantaged under the existing pricing regimes. The areas that have been identified as representing departures from competitively neutral pricing are summarised below:

- under the cost allocation methodology applied by the NTC, the costs of road freight infrastructure provision for heavy, long distance freight operators is being subsidised by light, short distance operators;
- the pricing framework for road freight infrastructure does not provide for a return on sunk capital – this does not recognise the opportunity cost of capital and given the long life of assets and capital intensive nature of freight transport infrastructure provision, this could also potentially advantage road freight operators over rail;
- there is no direct link between road freight access pricing and the allocation of infrastructure funding – this may limit the degree to which pricing regimes can reflect the costs of supply across different classes of road freight user and the flexibility for operators in choosing routes and mass limits which maximise productivity;
- there is no allowance for externalities (noise/carbon emissions, congestion and road safety) in current pricing regimes, which has adverse implications for allocative efficiency where such externalities are significant;
- divergent planning and investment criteria are used for rail and road freight infrastructure; and
- as a response to the factors outlined above, rail access regimes can provide for the capping of prices at levels commensurate with those charged for road freight – to the extent that this provides for a reduced rate of return on capital, rail freight operators could have reduced capacity to maintain services standards and upgrade/maintain infrastructure.

There is some debate regarding the extent to which the factors outlined above impact on inter-modal freight transport competition and advantage one mode of transport over the other. As such, this is a central issue for analysis by the Commission as part of the inquiry. However, it would seem apparent that reforms to the existing pricing

regimes aimed at better aligning the economic costs of infrastructure provision could promote allocative and dynamic efficiencies for the freight transport industry, with commensurate benefits for consumers and the broader economy.

As such, the pursuit of competitively neutral freight transport infrastructure pricing is advocated as a matter of principle. However in the Territory's context the relatively early stage of economic development, as well as the impacts of remoteness and associated equity considerations, point to a public benefit approach to the provision of infrastructure. These issues are considered in greater detail below.

4. Determinants of Freight Transport Infrastructure Provision in the Northern Territory

As a general principle, the benefits accruing from an infrastructure asset should outweigh the initial and ongoing costs over the life of the asset. That is, the asset should generate a return on capital employed, with the return broadly commensurate with the weighted average costs of capital. This should provide incentives for sustainable and efficient investment in infrastructure that meets user demand and willingness to pay requirements, thereby maximising consumer welfare. However, investment in freight transport infrastructure in the Northern Territory has not always been guided by commercial imperatives. In particular, there have been circumstances where investment has been undertaken in accordance with equity and economic development objectives.

For example, there are well over 300 remote Aboriginal communities in the Northern Territory with populations of up to approximately 3 000. However, a significant proportion of these communities have populations of below 500. Most communities are located on land under title granted under the *Aboriginal Land Rights Act* or *Native Title Act 1993* and are geographically isolated from urban population centres in the Territory.

Coastal communities are often supplied by coastal shipping services as a primary form of freight transport. Also, the close proximity of most significant communities to airstrips facilitates some air transport. However, air freight is limited both in terms of load capacity and cost. Coastal barge services provide the capacity but the market in the NT is dominated by one large provider. Further, there are very few remote communities that have ready access to the AustralAsia railway or related facilities. Consequently, there is a significant reliance on road freight transport for supply of foodstuffs and commodities.

The number, small size and remoteness of communities in the Territory means that the costs of road infrastructure provision are high both in absolute and relative terms. The NT ability to fund the capital and maintenance requirement of its road network is limited. As a result, the quality of road infrastructure linking communities with major road freight routes is often built to minimum standards, with access roads generally unsealed and prone to flooding.

The economic and social disadvantage of Aboriginal people residing in remote communities in the Northern Territory is well documented, with high rates of

unemployment, limited private investment and low education and health standards. As such, the provision of road infrastructure for remote communities is primarily driven by access and equity considerations, with cost recovery, inter-modal freight transport competition and commercial rate of return imperatives a secondary consideration.

The bulk of remote area road freight infrastructure in the Territory has limited capacity for inter-modal competition. Given the economic disadvantage experienced by communities serviced by such roads, the economic costs of implementing competitively neutral road freight pricing may be significant relative to the benefits in the medium to long term.

Furthermore, the Territory is at a comparatively early stage of economic development and hence large scale freight transport projects, with significant up front capital costs and long pay back periods, involve substantial commercial risks. In order to ameliorate the risks associated with a major greenfields project, and in recognition that longer term economic benefits (beyond those captured by the owners of the infrastructure) could potentially accrue, significant public contributions to large private infrastructure projects have been made in the Territory under public/private partnership arrangements.

This proposition is reinforced by the NCC's recommendation on the application for certification of the access regime for the Tarcoola to Darwin railway.

Externalities

The costs of road and rail freight operations can spill over to third parties. In order to promote allocative efficiency it is important to ensure that the economic costs of freight transport operations are internalised and captured in the prices paid for the use of such services.

The negative externalities generally associated with freight transport operations include environmental costs associated with noise and carbon emissions and the economic costs of congestion of urban road networks and motor vehicle and rail accidents.

The extent to which the identified distortions on inter-modal competition, imposed by the existing infrastructure pricing regimes, is a matter for further consideration by the Commission as part of the inquiry. However, there is a view that the perceived competitive advantages accruing to road freight operators over rail under the current institutional arrangements exacerbate negative external costs associated with carbon emissions, urban congestion and road safety.

Due to its relatively small and widely dispersed population, the external costs associated with the use of road and rail infrastructure are comparatively low in the Territory compared to other jurisdictions. Whilst greenhouse gas externalities associated with transport (contributing to climate change) are likely to be relatively proportional to other jurisdictions, more localised externalities, including local air and noise pollution and urban traffic congestion are less prevalent in the Territory.

DEPARTMENT OF PLANNING AND INFRASTRUCTURE CONTRIBUTION TO THE NORTHERN TERRITORY GOVERNMENT SUBMISSION

For the sake of clarity, the comments and views provided generally follow the line of questions that have been posed in the issues paper.

Do participants agree that the Commission should focus on the economic costs as the relevant measure of the cost of providing transport infrastructure?

The logic behind economic costs can be supported in terms of allocative efficiency and transparency. However, the practical application of this to road pricing across a range of Australian jurisdictions is questionable.

Implicit in the concept of economic costs is the ability to value the opportunity cost or second best use of the resources consumed in the provision of the road infrastructure. Given the essential nature of transport, the comparison of opportunity cost should be restricted to comparison between transport modes. i.e. for land transport road and rail. However, even this is problematic given the large community service obligation (CSO) that is inherent in the provision of the road infrastructure, particularly in remote areas, such as those prevalent in the NT.

What is also inherent in the concept of economic costs is the notion of an optimum level of output, for which there is recognition of the value that consumers realise and are willing to pay for. Given the CSO factor associated with roads, the concept of an optimum level of output is difficult to apply for remote areas where roads are built to a minimum standard, where the value to road freight operators is restricted through seasonal road closures and/or weight restrictions, and where the optimum amount of road infrastructure is determined on the basis of general community access to service a range of economic and social needs, and not on vehicle numbers alone.

On account of its remoteness, the Northern Territory faces a high cost of providing even basic access to much of its unsealed road network. To price access to this minimum standard of infrastructure on the basis of economic cost considerations is not warranted.

For remote areas such as in the Territory there is no other option than road transport for the freight task and therefore the concept of economic costs and modal choice based on comparative pricing regimes is not relevant as opposed to financial costs and appropriate levels of cost recovery. The recent road pricing workshop conducted by the National Transport Commission focussed on a whole of life costing for road infrastructure as an alternative to the current PAYGO system. In terms of financial costs, this alternative needs to be investigated.

The NT accepts that the use of a more accurate costing and pricing mechanism needs to be investigated as a means of influencing modal choice, in an effort to combat growing congestion in the urban centres surrounding the major capital cities. However this investigation will need to include consideration of the effectiveness of any price signal alone on modal choice, and its application to a national pricing regime.

Recognising that the provision of road and rail infrastructure is evaluated on different grounds and rather than attempting to neutralise the pricing differences between the two modes, it may be more beneficial to establish a case for the provision of rail infrastructure to be on a similar basis as the provision of road infrastructure. Government financial support could be evaluated on a long term cost benefit analysis basis inclusive of urban land use planning considerations.

The Northern Territory is also concerned with the externality considerations associated with economic costs and pricing. Externalities will differ in type and intensity between locations. The externalities associated with the provision and use of transport infrastructure in the major urban centres is not likely to be an issue in the Territory. Provision will need to be made for individual jurisdictions to have discretion in charging for externalities. This may require consideration as to when a negative externality should become a cost, when a charge should be levied and evaluating measurable improvements as a result of this charge.

Capital cost treatment of road and rail infrastructure

Capital depreciation and allowance for asset replacement should be included in any transport pricing regime. Whether or not the Depreciated Optimised Replacement Cost for rail adequately recovers below rail replacement costs (in comparison to the recovery levels on the road network) is not something the Northern Territory Government is in a position to comment on. However, the treatment of capital cost for rail would be more transparent than the PAYGO treatment of road capital cost. Rail lines can easily be isolated and whole of life cost considerations applied to particular lines. It is more difficult to try and do this with an integrated road network which carries a freight transport component.

Capital cost capture

There are several aspects to this. PAYGO is a national aggregated approach to recovering expenditures that has actually occurred over a two year period and has forecast expenditure for the third year. If the cost allocation template in the model for capital expenditure is correct and the technical relationships that underpin the template are also correct then theoretically aggregate expenditures should match the revenue collected. On an individual jurisdictional basis both under and over cost recovery will occur between years because of the national averaging process. However the Northern Territory is not in a position to test the validity of the technical

relationships on which PAYGO is based but accept them as a reasonable and logical approach.

The real issue which cannot be accommodated in PAYGO is the determination of the required amount of capital expenditure needed to provide the expected level of services from the road network. Capital costs for roads vary between location and road type. For the NT's rural roads, capital costs for gravel construction are estimated to be \$150 000 - \$200 000/km, and \$300 000 - \$500 000/km for sealed roads, with major variations due to flood immunity levels, seal widths and embankments. Again the concept of minimum standard vs vehicle numbers is a consideration that has to be taken into account in any road pricing regime.

The Northern Territory would support an investigation of whole of road life costing that also takes into account the specific differences in capital expenditure due to location as an alternative to the existing current expenditure recovery approach.

Required rates of return

The Northern Territory simply notes that rates of return for road freight will need to be considered in any flexible approach to pricing for above mass limits, e.g. incremental pricing. At the present time much of the 'return to Government road owners' is simply recovering costs for road wear and tear attributed to heavy vehicles as well as the private motorist through registration charges and stamp duties. However, the latter bears little relationship to any consideration of road wear and tear.

Common Costs

The common costs associated with the provision and use of road infrastructure is generally covered in the cost allocation templates associated with the PAYGO model. The Northern Territory has concerns that the effect of environmental factors on road surfaces is an area that is not well understood and further work is required. In the interests of equity, common costs associated with environmental factors would need to be allocated on the basis of Vehicle Kilometres Travelled. Again, the issue of minimum standards vs vehicle numbers prevails and in such cases it would be unreasonable to apportion costs simply on a jurisdictional basis. The Territory would argue that a national averaging process would better serve the equity issue in regard to these common costs.

Options for pricing reform

The Northern Territory does not consider that competitively neutral pricing regimes between road and rail are relevant for the provision and cost recovery for road infrastructure, particularly in remote areas. For much of the regional freight task in the Territory, road is the only option. As already stated the pricing regime for much of

the road network in the NT needs to take into consideration equitable cost recovery for expenditure undertaken, whole of road life costing, minimum standards of road that need to be provided for social access (but not necessarily provided on the basis of traffic volume) and value levels realised by freight users of the infrastructure.

In most cases the provision of transport services by the private sector is based on the two part tariff principle of a fixed and variable cost to cover provision of the infrastructure in the first place and the variable cost to cover the usage factor.

The present PAYGO methodology has its deficiencies. Its basis is a national averaging system which has both intentional subsidies (smaller rigid heavy vehicles subsidise the larger higher productivity vehicles such as the road trains) and unintentional subsidies caused by a single charge being applied across all vehicles in a particular heavy vehicle class.

Mass distance pricing would be a more equitable means of apportioning the cost of road damage due to load. However, this would need to be investigated in conjunction with whole of life road costing and the relatively low revenue raising ability of remote and sparsely populated jurisdictions such as the NT. The Territory view is that the technical relationships that form the basis for the cost allocation parameters in the PAYGO model should also form the basis for the mass distance pricing, but that the recognised deficiencies in the data bases used for the PAYGO model need to be corrected. The relationship between mass (axle loads) and road wear and tear needs to be backed by more accurate data and relationships established for loads on unsealed surfaces.

The Northern Territory agrees with the view that mass distance charges based on marginal cost pricing is unlikely to raise the revenue to cover full economic costs of road infrastructure but would again reiterate that it is unlikely that any pricing mechanism is going to cover these costs and still have a viable road transport industry. Higher road user charges with no commensurate improvement in the road surfaces particularly on the unsealed portions of the Territory road network is an issue for the road transport industry.

The application of efficiency in pricing applications is not likely to be appropriate in the remote areas. Equitable cost recovery for wear and tear, pricing impact on end consumer, viability of the road transport industry, adequate funding to maintain its existing road network to acceptable standards and recognition of the large CSO component of roads in remote areas, where it is the only mode of freight transport, are more critical issues for the Territory. Notwithstanding this, marginal cost pricing has a place in charging for incremental loads above current load limits. The key issue in this respect will be the accuracy of the estimates of incremental wear and tear and appropriate charges to reflect this.

Impacts of different pricing regimes

The Northern Territory view is that infrastructure pricing based on efficiency and productivity considerations would not have application in the remote areas where road transport is the only option for freight. In this monopoly situation any move to marginal cost pricing that resulted in higher charges would simply be passed onto the end consumer via higher end prices. If this was not possible, then road transport operators on small margins would be forced out of the business. For remote areas of the Territory it is the small operators that service much of the area.

The degree to which the price mechanism affects the modal choice decision will vary between location and type of freight being carried. For the Northern Territory some fresh vegetables are still transported by road in refrigerated units from the southern States to Darwin so that other considerations such as 'just in time' door to door delivery become the major determinant in modal choice.

Design and implementation issues

Incremental pricing is an option that road transport operators could take advantage of but requires constant and predictable loads that are above existing mass limits. For Territory operators this is likely to be limited to bulk commodities where load levels are more predictable.

Efficient pricing mechanisms, where the aim is to optimise modal share between road and rail, would need to be considered on a location basis. For the Territory, congestion and the need to improve productivity on transport infrastructure to cater for a growing freight task are not relevant issues. Capacity constraints on transport infrastructure are generally due to pavement protection and/or complete road closures because of flooding. Any national infrastructure pricing mechanism must take account of regional differences and the inability of mass distance pricing to raise the levels of revenue to actually maintain and improve the road network in an area such as the Northern Territory.

Although perhaps theoretically more desirable, any move toward mass-distance charging is likely to be, at least in the early stages, technologically complex, costly and a source of significant uncertainty in the market. It is expected that any marginal gain provided by pricing more efficiently may be somewhat offset by the additional cost and uncertainty created by a more complex regime. As such, it is recommended that due consideration be given to the benefits and costs of moving to a new pricing regime as part of the inquiry.