

**THIRD HEAVY VEHICLE ROAD  
PRICING DETERMINATION  
DRAFT REGULATORY IMPACT  
STATEMENT SUMMARY**

**October 2005**



**Prepared by  
National Transport Commission**

*National Transport Commission*

**Third Heavy Vehicle Road Pricing Determination: Draft Regulatory Impact  
Statement Summary**

Report Prepared by: National Transport Commission

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## REPORT OUTLINE

**Date:** October 2005

**ISBN:** 1 877 09399 8

**Title:** Third Heavy Vehicle Road Pricing Determination:  
Draft Regulatory Impact Statement

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**Type of report:** **Regulatory Impact Statement**

**Objectives:** To improve transport efficiency, productivity and equity, reduce administration costs, improve road safety, and promote nationally consistent regulatory reform.

**NTC Programs:** Pricing

**Key Milestones:** This draft Regulatory Impact Statement is accompanied by a detailed Technical Paper and is to be submitted to the ATC for voting approval by December 2005, and heavy vehicle charges are to be implemented by July 2006.

**Abstract:** This report is a draft Regulatory Impact Statement on proposals to update national heavy vehicle charges for the use of Australia's roads. National road use charges for heavy vehicles were last updated between July and December 2000. Since then, there have been significant changes in the pattern and amount of road expenditure, better understanding of the link between roads use and road expenditure, and changes in the use of roads by Australia's heavy vehicles. This report updates the charges, and addresses the various concerns which have arisen since the previous set of charges.

**Key words:** Third Determination, charges, heavy vehicles, road cost recovery, allocated costs, pricing.

**Comments by:** 14 November 2005

**Comments to be addressed to:**  
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## FOREWORD

This draft Regulatory Impact Statement sets out the National Transport Commission's proposals for a Third Heavy Vehicle Road Pricing Determination. It is accompanied by a detailed Technical Paper. This work updates the previous Draft Technical Paper that was published in July 2005, in conjunction with the Discussion Paper on estimates of heavy vehicles' share of road costs.

This draft Regulatory Impact Statement details the considerations and reasoning underpinning the judgments the NTC believes should be made in moving from cost estimates to recommend actions regarding heavy vehicles. It also presents refined estimates of heavy vehicles' share of road construction and maintenance costs. These estimates take account of the comments received in response to the Discussion Paper, as well as associated workshops and discussions held throughout August and September 2005.

The NTC would like to acknowledge the valuable input provided by government, road and transport agencies and, in particular, representatives of the transport industry. This input has been instrumental in the formulation of the recommendations.

Comments on the proposed charges set out in this draft Regulatory Impact Statement are sought by 14 November 2005. The NTC proposes to arrange a series of discussions with interested stakeholders, during this time to ensure a full understanding of the issues and to encourage provision of comments through written submissions where major concerns still remain.

The NTC will review its proposals in light of these discussions and all written submissions. It will finalise its recommendations to submit to the Australian Transport Council in mid December 2005. Ministers will have two months to consider the proposals. It is intended that any changes to the national heavy vehicle charges would be implemented from July 2006.

The NTC acknowledges the work of Chris Egger, Fiona Calvert, Keith Lloyd and Amy McDowell as the major contributors to this paper.

Michael Deegan

Acting Chairman

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## SUMMARY

### ***Who Sets the Charges and What is the Process?***

The National Transport Commission (NTC) is responsible for recommending national heavy vehicle charges to the Australian Transport Council (see Sections 1 and 3 for further detail). The NTC is required to make assessments to ensure that these charges are kept at a level which is sufficient to ensure that each type of heavy vehicle recovers its share of road construction and maintenance costs. These assessments are done by way of a 'Determination', which is recommended to Australia's Transport Ministers for decision.

### ***How Are the Charges Calculated?***

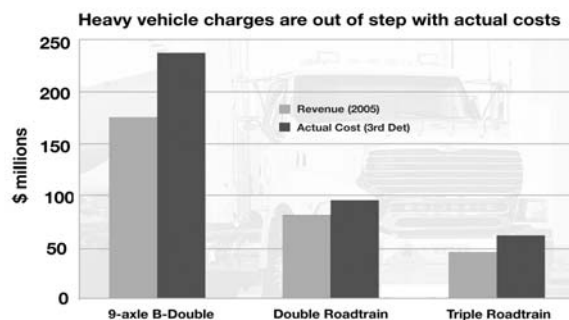
Heavy vehicle charges are calculated by assessing the annual level of government road construction and maintenance expenditure relevant to heavy vehicles and their use. This allocated cost is charged to individual heavy vehicle types by both a fuel charge in cents per litre (via the fuel excise) and by an annual registration charge (see Section 5 for more details).

### ***Why the Need for a Determination?***

Heavy vehicle charges last underwent a full re-assessment in the 1998 to 2000 period when the Second Determination was prepared, with resulting charges coming into effect in the second half of 2000. However, since that time there have been substantial changes in road expenditure, and substantial changes in both road use and the composition of the vehicle fleet. This has resulted in heavy vehicles' charges no longer reflecting their costs of using the road network (see Section 2.2 for further details).

An annual adjustment process was set up in 2001 to adjust heavy vehicle registration charges only, but this was only ever a partial measure, with registration charges only accounting for a third of total heavy vehicle charge revenue. The fuel charge has remained unchanged at 20 c/litre since 2000. The remaining two-thirds of the total charges were collected through the fuel charge under the Second Determination.

As the fuel charge has remained at the same level, the national heavy vehicle charges have gradually eroded in value in real terms over time. Although the NTC estimates that the costs per net tonne kilometre for a Third Determination would be also lower, the national set of charges must be increased for some vehicles if heavier vehicles are to pay their way. In recent years, heavy vehicle charges for multi-combination trucks have fallen out of step with actual costs by an estimated \$106 million per annum (see Figure 1).

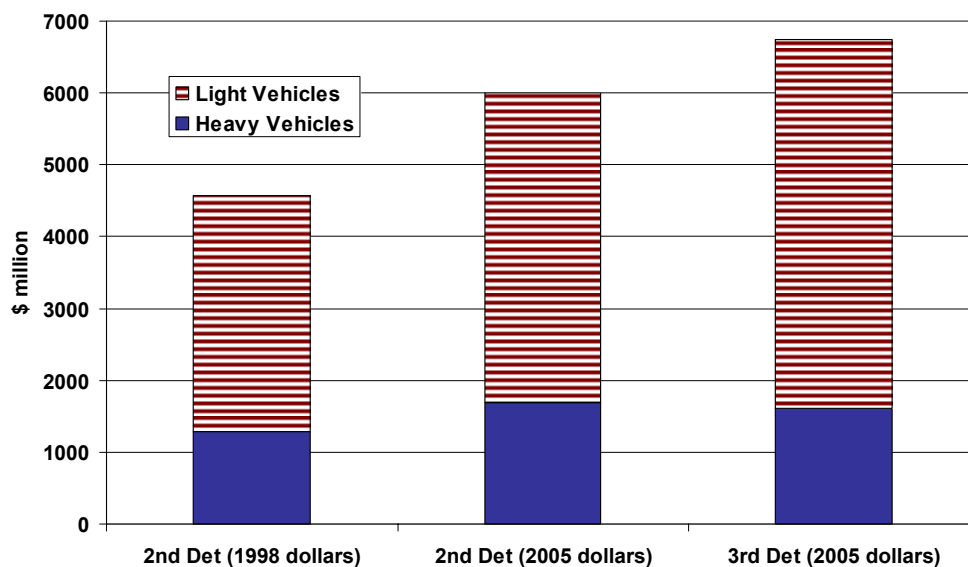


**Figure 1. Costs and Revenues for Multi-Trailer Combinations**

Key changes that have occurred since the Second Determination include:

- Road expenditure has increased by 13 per cent in real terms, with changes in the composition of road expenditure, including increases in urban expenditure relative to rural, and some categories of road expenditure (such as road rehabilitation and periodic maintenance) falling in real terms, and others (such as servicing and operating expenses) increasing substantially. In total, annual road expenditure has increased by \$2,200 million since 1998, with just \$340 million of this attributable to heavy vehicles.
- Road use has changed with rigid trucks increasing their average distance travelled, whilst larger trucks in general have experienced a decrease in average distance travelled.
- Fleet composition has changed with a shift towards heavier vehicles, in particular B-doubles, as the freight task has grown.
- There has been a decline in charges per net tonne kilometre compared with allocated costs per net tonne kilometre.

The net effects of these changes are shown in Figure 2. Under the pricing principles approved by the Australian Transport Council (ATC), heavy vehicle classes are expected to pay their ‘fair share’ for this increase in road expenditure.



**Figure 2. Light and Heavy Vehicle Shares of Road Expenditure**

### ***Key Changes to the Cost Allocation Method Since the Second Determination***

NTC has adopted a conservative and sympathetic approach to its judgements, which has reduced the allocated cost to heavy vehicles from \$1,735 million (estimated in the NTC’s July 2005 Discussion Paper) to \$1,619 million. Heavy vehicles’ share of total road costs fell from 28 percent in 1998 to 24 percent in 2006.

Measures of deep pavement wear which are determined using the Equivalent Standard Axle (ESA) measure have been updated based on the availability of more up to date and

reliable data. This has generally resulted in higher ESA values, increasing allocated costs for a number of heavy vehicles, in particular B-doubles and triple road trains. This is further explained in Section 6.3.

Pavement maintenance cost allocation has been updated to reflect more up to date analysis and stronger relationships than have been used in the past. A conservative approach has been adopted that includes an allowance for the effect of weather on pavement maintenance (see Section 6.1 for more information).

Local road use estimates for articulated trucks, B-doubles and road trains have increased from around 5 to 10 per cent, based conservatively on the results of the first major survey of heavy vehicle use of local roads. Higher estimates could have been used but were discounted. This is further explained in Section 6.4.

Travel by road trains on unsealed roads has been taken into account for the first time. A weakness of the NTC cost allocation model is that it assumes all travel is on sealed roads. However, for the Third Determination the model has been refined by taking into account unsealed road travel for road trains. Road use information was sought from industry associations and jurisdictions on travel of this nature, which suggests around 30 per cent of double road train travel is on unsealed roads nationwide and 35 per cent of triple road train travel on unsealed roads nationwide. This enabled costs assigned to pavement wear for road train travel to be discounted, reflecting the fact that unsealed roads do not wear in the same way as sealed roads.

Road expenditure related to Community Service Obligations (CSO) in remote areas has also been taken into account for the first time. This expenditure was estimated to constitute some 5 per cent of all road expenditure in road train areas, and it was decided to adjust allocated costs for road trains by 5 per cent because of this. The net effect of the allowance for unsealed travel by road trains and for CSO is to reduce allocated costs by 17 per cent for double road trains and 18.5 per cent for triple road trains. More information on unsealed road travel and CSO can be found in Section 4.2.

In addition, heavy vehicle enforcement expenditure has not been explicitly included in the Third Determination as it is very difficult to determine what amount should correctly be used. There are very large differences between States and Territories in the level of heavy vehicle enforcement expenditure. In addition, it is not clear what enforcement costs should be recovered through the national heavy vehicle charges (eg should safety enforcement as well as enforcement of mass limits be included?). Also, there is no clear policy on whether the amount should be net of penalty revenues (which are generally intended to act as a deterrent rather than recover administrative costs).

However, the NTC acknowledges that in principle it is legitimate to recover administrative costs of enforcement from heavy vehicles. We expect that in the future the focus of enforcement will change, to become more reliant on accreditation, audit of records etc, where administrative fees are common. In the meantime, the level of over recovery is sufficient to provide for any charge relating to recovery of enforcement expenditure. This is explained further in Section 6.2.

### ***Key Changes to the Charging Method since the Second Determination***

In the previous two Determinations, the fuel charge was set based on fully recovering the allocated cost of the smallest heavy vehicle, which is a 2 axle rigid truck with a Gross Vehicle Mass of 4.5 to 7 tonnes. However, this method proved to be unstable in the Third Determination, since it is highly sensitive to changes in data for the smallest 2 axle rigid

truck, which varies from year to year due to survey methods. Basing the fuel charge on a broader class such as all 2 axle rigid trucks was investigated. However, this resulted in a significant shift in the balance of revenues between governments or significant over recovery from smaller heavy vehicles.

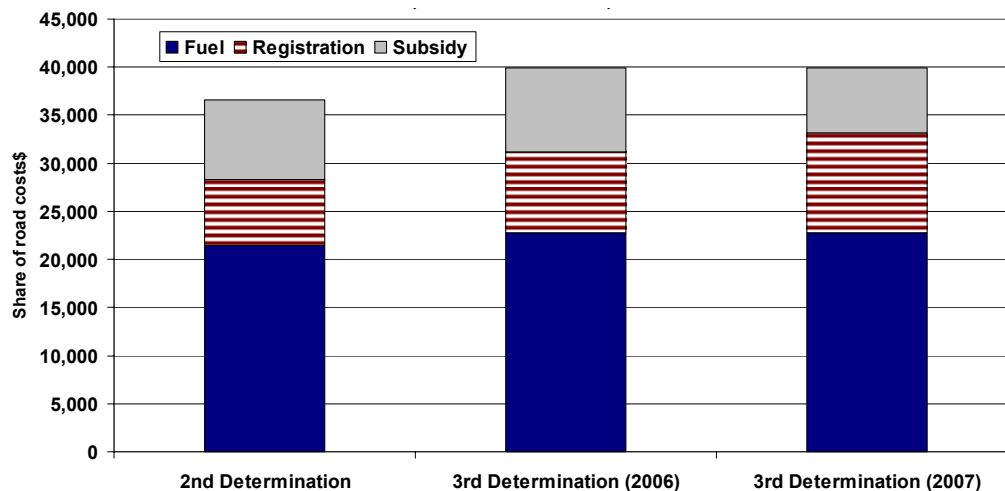
The NTC is proposing that the fuel charge be set in a manner that ensures that the relative shares of Federal and State/Territory charge revenue remain unchanged from the Second Determination. This method results in more stable results and minimizes relative over recovery from the smaller vehicles, while not disrupting revenue flows between different levels of government. The approach to setting the fuel charge is discussed further in Section 5.

### **How the Charges Have Been Updated**

The major recommendations in the Regulatory Impact Statement reflect the cautious and conservative approach taken. This includes:

- Registration fees are effectively ‘frozen’ for 53 percent of the vehicle fleet;
- A small increase (less than \$40) in registration fees for 44 percent of trucks, plus a further \$16 per axle for towed trailers, is recommended;
- The greatest increases have been levied on B-double and road train prime mover registration charges (3 percent of heavy vehicles), with a phased increase to occur. This is an increase of less than \$3,000 over two years for B-Doubles and road-trains. This phased increase is to allow industry time to adjust to the change;
- B-double prime mover charges are proposed to continue at the same level as that of road train prime movers, as was the case in the Second Determination, in recognition of the relative safety, efficiency and environmental benefits of B-doubles. This involves a B-Double charge subsidy of between \$5,500 and \$7,500 (see Figure 3), which can be fully met from other prime movers for the first time; and
- It is proposed that the fuel charge be increased from 20.0 c/litre to 22.1 cents/litre. This represents a moderate increase of just over 10 per cent over the six year period since the Second Determination.

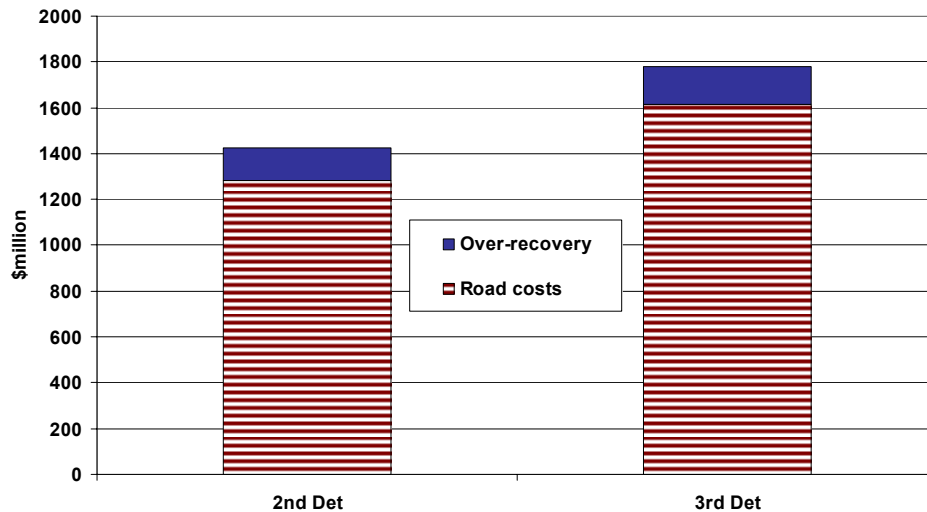
The proposed charges are summarised in Table 1.



**Figure 3. Subsidy for 9-axle B-doubles**

The Road User Pricing Principles agreed by the Australian Transport Council require the NTC to calculate charges based on major heavy vehicle classes paying their ‘fair share’ of road construction and maintenance costs.

In order to ensure consistency with registration fees for light vehicles, rigid truck registration charges slightly over-recover their costs (shown below). The over-recovery is continued, but limited, by effectively freezing charges for this class of vehicle.



**Figure 4. Continuing Over-Recovery in Aggregate**

***What Consultation Was There With Industry?***

The road transport industry has participated in the Third Determination process since work commenced. In particular, industry representatives have been part of a NTC Road Pricing Reference Group since September 2003, which has met around three times per year.

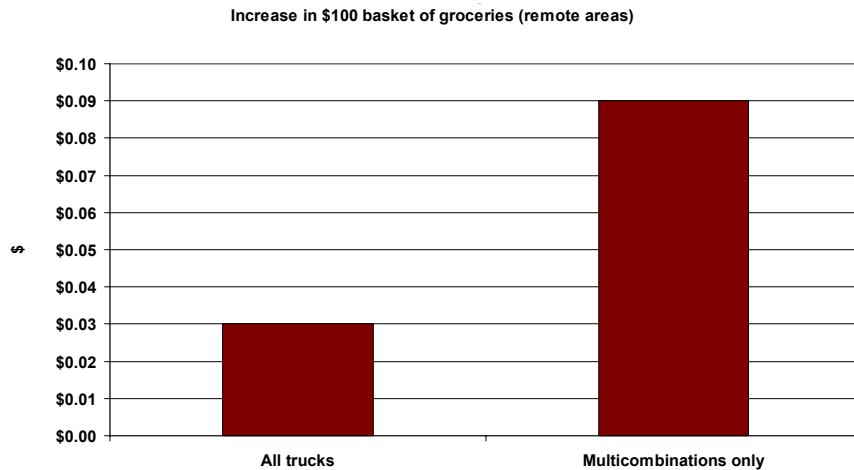
Following the release of a Discussion Paper and a draft Technical Report in July 2005, national workshops were conducted in most capital cities, which had strong industry representation. Responses were sought from industry, and over 40 responses to the Discussion Paper were received from industry. A series of visits to speak with individual industry association representatives, and teleconferences, have occurred over the July to September 2005 period. These are summarised in Section 7.2 and in more detail in Appendix A.

***What Impacts Will the Third Determination Have?***

The NTC estimates that the charges will increase vehicle operating costs by 0.6 per cent across the fleet based on the Australian Road Research Board (ARRB) vehicle operating cost model, with B-double and road trains costs rising by 1.8 per cent after the full phase-in of the proposed charges in 2007. The phased increase will give operators more time to re-negotiate contracts if necessary.

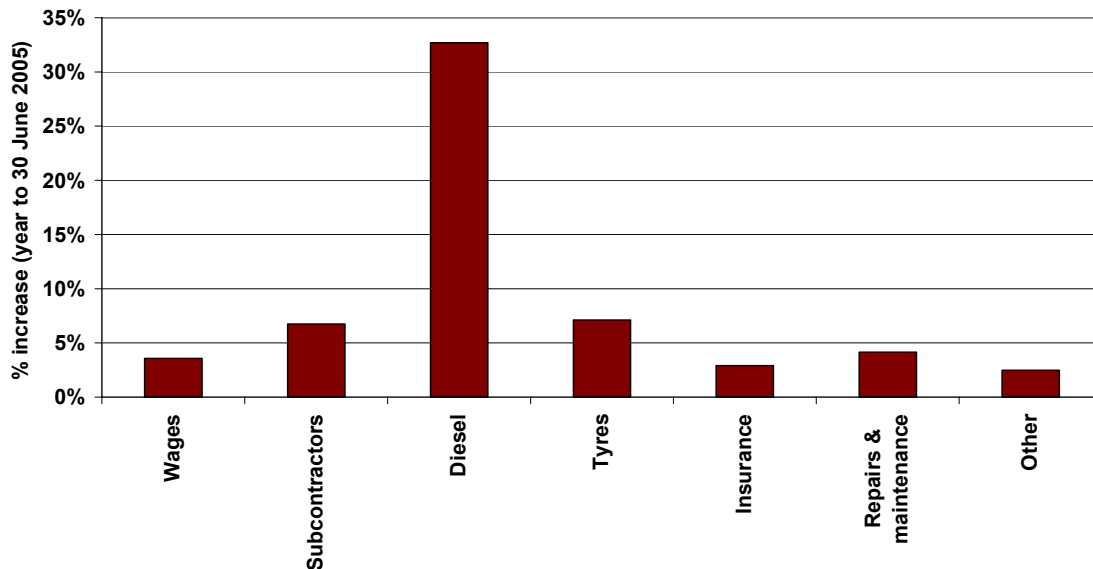
The effect of the charge increase would be to add an extra 9 cents to a \$100 grocery bill for people in remote areas serviced by multi-combination trucks (see Figure 5). The impact is much lower in urban areas (see Section 5.4.6 for more detail).

The impact on other industry sectors is dependant on their relative reliance on road transport. On average the increase in production cost inputs is 0.02 percent. The worst case increase is 0.5 percent for a significant transport user (ie: the cement, lime and concrete sector) running multi-combination vehicles.



**Figure 5. Consumer Impact**

An increase of 7.6 percent in truck operating costs for the year to 30 June 2005 (ATN/PKF Truck Operating Cost Index) puts the average 0.6 percent increase into perspective with other business cost pressures faced by operators (see Figure 6).



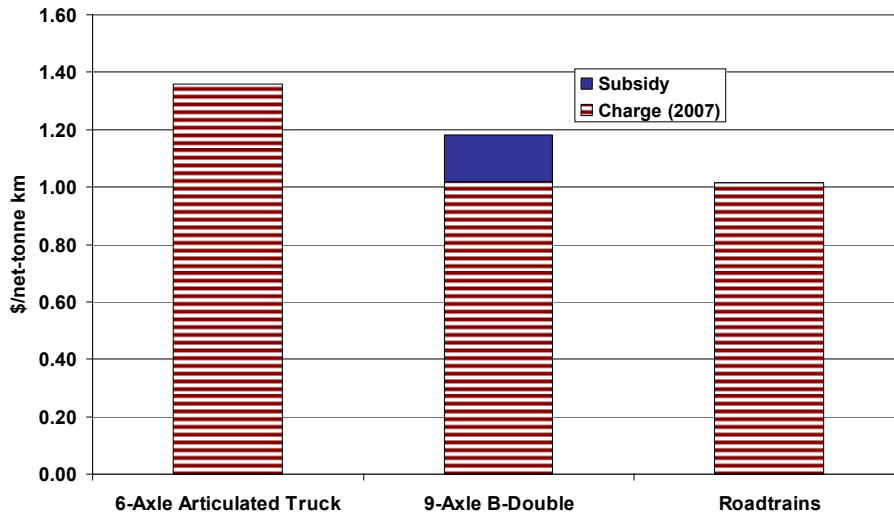
**Figure 6. Other Business Cost Pressures**

NTC has sought to strike a balance between the principles of heavy vehicle classes 'paying their way' while recognising efficiency and equity considerations.

An independent consultant was engaged to undertake a survey of the possible effects on industry operating costs and potential effects on fleet choices. The results of this survey

clearly indicated that the proposed Third Determination charges would not cause undesirable movements in fleet choices that would adversely affect productivity or environmental outcomes. B-Double operating costs would need to increase by at least 15 percent to 25 percent for truck owners to consider switching to single-trailer use. This work is summarised in Section 5.4.4 and Appendix C.

If heavy vehicle charges are expressed in \$ per net tonne km, the B-Double remains considerably more cost-efficient than 6-axle articulated trucks, as shown in Figure 7.



**Figure 7. Heavy Vehicle Charges Relative to Freight Carried**

However, the national heavy vehicle charges will also ensure that all major groups of heavy vehicles pay their share of road costs.

The charges will increase revenues to the Australian Government and to State and Territory governments (see Section 5.4.7).

### ***When Will the New Charges Come Into Effect?***

The new fuel charges will come into effect from 1 July 2006. The fuel charge determined by the NTC is now explicitly linked to the effective level of fuel excise for heavy vehicles, and the calculation of the diesel fuel rebate following a June 2004 decision by the Federal Government in its Energy White Paper, Energy Task Force (2004).

New registration charges will also come into effect from 1 July 2006. The full increase in registration charges will apply as soon as relevant State/Territory legislation is effective, with the exception of registration charges for B-double and road train prime movers where a phased increase will occur.





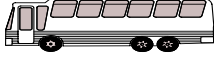

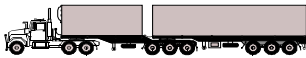

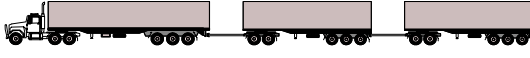
### ***How Frequently Will Future Charges be Updated?***

From July 2007, it is expected that an annual adjustment to both the registration and fuel charges will apply, based on an updated annual adjustment procedure. The method for future updates of heavy vehicle charges is yet to be determined, and will be the subject of a separate Regulatory Impact Statement to be submitted to the Australian Transport Council (ATC) for approval in 2006.

### ***What Happens Next?***

Once the four week comment period closes, the NTC will discuss the proposals further with interested stakeholders and make a final recommendation to the Australian Transport Council (ATC) in December 2005. Ministers will consider the proposals. They are asked to formally indicate whether they approve the recommendations. If a majority of Ministers approve the proposals they will be adopted.

**Table 1. 3<sup>rd</sup> Determination Heavy Vehicle Charges: Selected Vehicles July 2006 and July 2007 (2005/06 dollars)**

Vehicle Type	Size	Current Charge (2005)	Recommended Charge (2006)	Change\$
Fuel (road user) charge		20 cents/l	22.1cents/l	2.1 cents
2-axle rigid truck 	Up to 12.0t	\$334	\$350	\$16
	Over 12.0t	\$557	\$560	\$3
3-axle rigid truck 	Up to 16.5t	\$668	\$690	\$22
	Over 16.5t	\$890	\$890	-
Truck and dog 		\$4 228 + \$1 336 = \$5 564	\$4 230 + \$1 400 = \$5 630	\$66
Bus 	Up to 12.0t	\$334	\$350	\$16
	Over 12.0t	\$557	\$560	\$3
Coach 		\$1 390	\$1 390	-
6-axle semi-trailer 		\$3781 + \$1 002 = \$4 783	\$3 780 + \$1 050 = \$4 830	\$47
9-axle B-Double 		\$5 561 + \$2 004 = \$7 565	July '06 \$6 300 + \$2 100 = \$8 400	\$835
			July '07 \$8 310 + \$2 100 = \$10 410	\$2 845
Double road train 		\$5 561 + \$2 672 = \$8 233	July '06 \$6 300 + \$2 800 = \$9 100	\$867
			July '07 \$8 310 + \$2 800 = \$11 110	\$2 877
Triple road train 		\$5 561 + \$4 342 = \$9 903	July '06 \$6 300 + \$4 550 = \$10 850	\$947
			July '07 \$8 310 + \$4 550 = \$12 860	\$2 957