



Submission to the NTC for the next road pricing determination

Background and the Evolution of the Current Pricing Scheme

What is a 'Pay As You Go' (PAYGO) pricing scheme?

In the simplest of terms, the players, under a PAYGO scheme, pay the costs which are outlaid for them to operate in their specific environment. That is the scheme recovers the costs in providing the infrastructure or utilities that the users rely on to operate. In this case PAYGO recovers the costs of the attributable truck use by trucks greater than 4.5 tonnes GVM for a range of incurred costs: a proportion of the common road costs like traffic lights, kerb and guttering, white lines etc, an allocation of the capital roads' expenditure (new and rehabilitation) and maintenance costs across the three levels of government, as well as a degree of regulatory costs, which now even includes the costs of the National Heavy Vehicle Regulator.

Sounds easy except maintenance and new capital investment can be very lumpy from year to year, and even truck use, in times of economic hardship, can actually go negative. So, to overcome this year to year lumpiness, a degree of moving averaging has been employed in the cost recovery process. This gets rid of the expenditure peaks and troughs but does not keep all authorities happy even though over the selected moving average period full cost recovery will be achieved.

TABLE 1: Not so smooth Registration Increases by configuration

Vehicle Configuration	Adjustment Date	% Increase actual
B-Double 9 Axle	Sept Qtr 2010	+25.5%
B-Double 9 Axle	Sept Qtr 2012	-8.30%
Road Trains Double, Triple	Sept Qtr 2012	+21.0%
2 Axle Rigid Truck	Sept Qtr 2012	+29.0%
2 Axle Rigid Truck	July 2016	+11.0%
6 Axle Semi trailer	Sept Qtr 2012	+11.3%
3 Axle Truck, 3 Axle Dog	July 2016	+32.0%
3 Axle Truck, 4 Axle Dog	July 2016	+30.7%
Rigid Truck 8 x 4	July 2016	+11.4%

Source: NTC Annual Registration notifications, various

However, as Table 1 shows all registration charges do not always get levied on a steady upward trend and there have been some notable hiccups in recent times in the expected ‘smooth’ registration charges line matching a smoothed moving average, cost recovery function.

So a simple cost recovery procedure, when turned into a PAYGO scheme for roads may not be quite as simple as first thought, although it could still be an efficient and even be a ‘quasi’ equitable user pays cost recovery scheme.

The Historical Evolution and a bit of Politics

In 1995 the first NRTC’s Road Pricing Determination was enacted. However, what happened in 1994, one year earlier, was the release of an very important piece of analysis that was undertaken by the federal Department of Transport (Minister Bob Brown’s Department at the time, the Brown one, not the Green one). However, the work was never published, but it certainly found an audience with the then Road Transport Federation, pre the emergence of the Australian Trucking Association, and the wider industry. Titled “Taxes and Charges Paid by the Road Transport Industry” the in-camera analysis and distribution showed that the Industry’s total tax contribution was some \$32 billion but the total roads outlay was only some \$16 billion dollars. The Road Transport Industry was definitely paying its way and was in fact almost the highest taxed sector in the economy. This work eventually had an impact!

The First PAYGO Determination was highly important

In 1995 the first NRTC (PAYGO) determination was implemented. This user pays system introduced a new charging framework that had advantages. There would be two parts in

recovering the attributable costs to trucking. Obviously, a ‘fuel based’ charge recovered the industry’s attributable costs and a ‘standardized’ set of registration charges, as some smaller States were discounting rego heavily, would still go to the States. This headed off a revenue turf war that could have been caused by a ‘fuel only’ charge, which is actually another efficient charging mechanism, but all that fuel revenue going to the federal Treasury and sidelining the State treasuries could cause a war.

Where the 1994 Road Taxation Analysis Came into play

When the Goods and Services Tax (GST) package was introduced on 1 July 2000, there was new element in this package besides the removal of sales taxes. It was the introduction of the On-Road Diesel Rebate which became known as the Diesel Fuel Credit Scheme and now known as the Fuel Tax Credit Scheme. This introduction removed the ‘over-taxed’ fuel component in heavy vehicle charges, such that a road user charge and the truck registration fee less the (diesel) fuel tax credit covered Australia’s attributable trucking costs. Initially the scheme covered the entire of regional Australia with some restrictions for vehicles under 20 tonnes GVM in Capital Cities and some large population conurbations. These restrictions were later removed.

In essence the 1994 proof of significant over taxation of the road transport industry had been vindicated with the activation of the Diesel Fuel Credit Scheme. However, there is now significant feeling that whatever taxation level is applied on each economic sector, if the market can bear it, general revenue benefits, irrespective of the equity or efficiency of the charging regime.

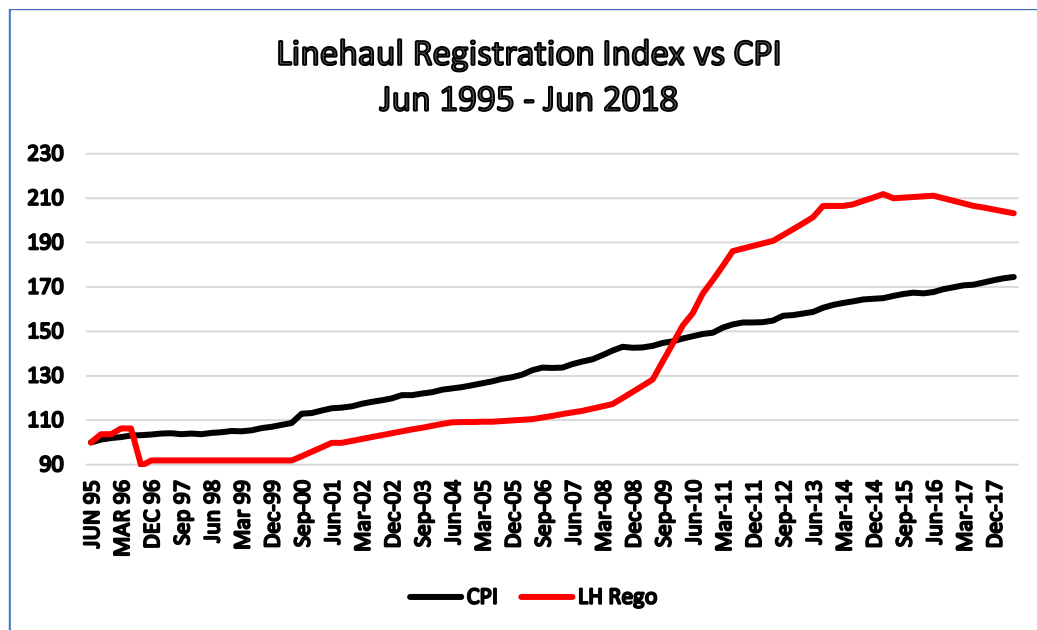
TABLE 2: Long Term Changes in the Road User Charge

Date	RUC (cents/litre)
2001/02	19.60
2004/05	20.00
2006/07	22.10
2009/10	21.70
2010/11	22.96
2012/13	25.00
2014/15	26.14
2016/17	25.90
2018/19	25.80
2019/20	25.80
Ave Growth p.a	1.54%

Source: NRTC, NTC Determinations and annual adjustments

Table 2 reflects the gradual increases and the more recent stabilization of the Road User Charge. However, at this level along with the rises in State registration fees, especially since the CPI cap on registration charges was lifted in July 2009, there has still been massive over recovery of costs from the industry. It is estimated that for 2016/17 overcharging reached \$250 million and for 2017/18 this figure rose to \$265 million, and yet some critics and Tollway operators suggest that trucks do not pay their way!!

Figure 1: Linehaul Registration changes vs CPI Since NRTC's Determination 1



Source: Translog Databases 1984 - Current

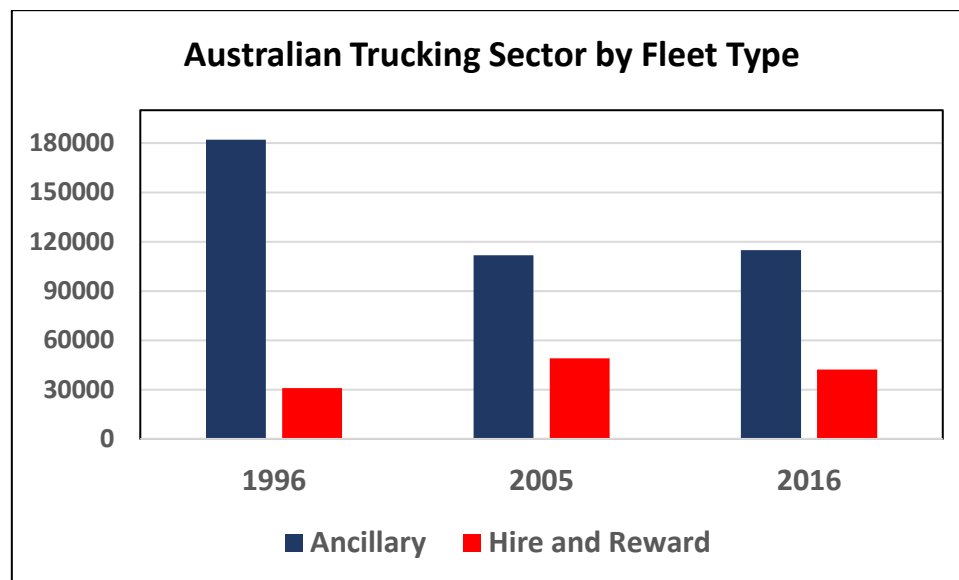
The Inequity in the current PAYGO system

As has often been stated by this author there is a light year of difference between operations in the 'Hire and Reward' sector versus the 'Ancillary' Sector. It comes as a great surprise to many analysts, regulators and even politicians that the Road Freight Industry is totally dominated by the 'Hire and Reward' sector. After all the Road Safety Remuneration Tribunal was all about the Hire and Reward sector which as always is referred to as 'The Industry'. Recently a major report on Driver Health was reflective of the 'Industry' and yet no ancillary operators were in the survey. Driver deaths you would think are dominated by the Hire and

Reward ‘Industry’ but in fact, they are evenly split between the Hire and Reward and Ancillary sectors. So why then, from a pricing point of view, is this difference important?

Firstly, Ancillary fleets, although many are small, these dominate the Australian road fleet population.

Figure 2 Ancillary vs Hire and Reward Fleets 1996 - 2016



Source: Industrial Logistics Institute from Translog databases

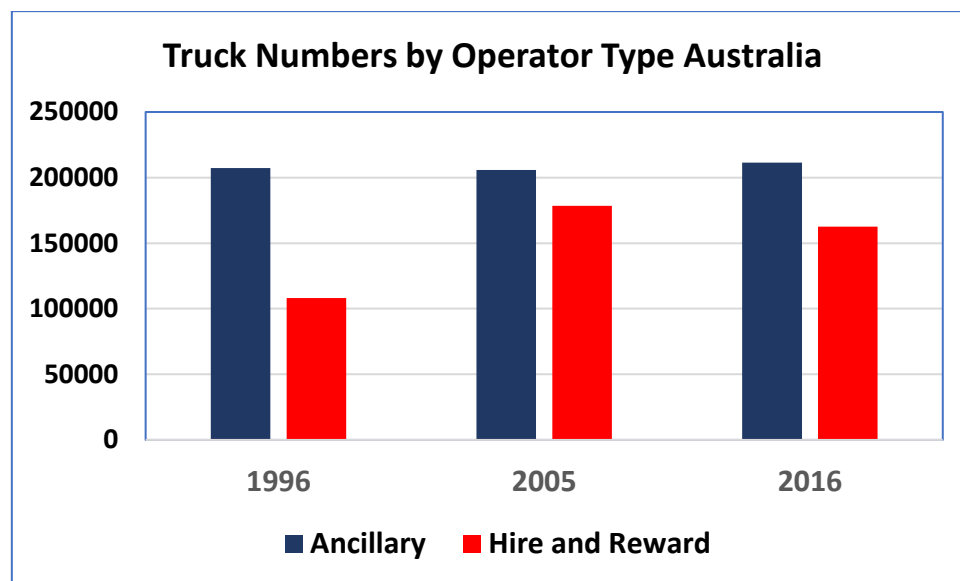
As shown from Table 3 and Figures 2 and 3 the Ancillary sector is larger than the Hire and Reward sector in fleets and in trucks. This is a rarely cited fact. The Ancillary sector, as at 2016, has 56.5% of the heavy vehicle fleet. BUT, Ancillary does not hold the upper hand at all for kilometres travelled and Gross tonne-kilometres performed on the roads. Data from 2019 has shown the Hire and Reward truck population has declined to being 42% of the national heavy vehicle fleet..

TABLE 3: Structure of Trucks >4.5 tonnes by Operation

Estimates Fleets and Trucks	Ancillary	Hire and Reward
Number of fleets 1996 Est	182040	30960
Number of fleets 2005 Est	111807	49033
Number of fleets 2016 Est	114826	42306
Number of trucks 1996	207200	108200
Number of Trucks 2005	205812	178503
Number of Trucks 2016	211464	162548

Table 4 presents an example of this kilometre travelled disparity for the standard semi-trailer, 3 axle prime mover with a 3 axle trailer. The average kilometres travelled per annum on Australia is around 71,500 kms per annum. Ancillary semis, based on several surveys, perform about 15,500 kilometres per annum, often a bit less for the agricultural sector. This implies that to attain the national average kilometres of 71,510 kms per annum, for a semi-trailer, the Hire and Reward sector performs, on average about 103,500 kilometres per annum. This is over six times the kilometres performed by the ancillary operator, and yet their registration charges under the current PAYGO methodology are the same!!!! This is because the current charges are based on average kilometre by vehicle configuration which gives a massive cross subsidy to the Hire and Reward sector. Perhaps PAYGO is not so equitable after all. (The Translog database is possibly the only existing database where ancillary kilometres have been intermittently estimated.)

Figure 3 Ancillary vs Hire and Reward Truck Numbers 1996 - 2016



Source: Industrial Logistics Institute from Translog databases

How is this huge inequity fixed? Well generating the Australian Bureau of Statistics special data cube for 'own business' (Ancillary) and Hire and Reward kilometres travelled by vehicle configuration would be a great start. This should be possible but has been resisted for over a decade. If this kilometre segmentation data were available a new dimension, perhaps radical, but a lot simpler and less costly than fitting all trucks with a GPS could be achieved. What would this radical idea be?

TABLE 4: Australia's 6 Axle Semi: Hire and Reward vs Ancillary kms pa

Operation	Number Semis (2015)	Ave kms p.a
Hire & Reward	30,125	103,556
Ancillary	17,236	15,500
Total (All Semi trailers)	47,361	71,510

Source Derived from NTC 2015, SMVU 216 data cubes, Translog Surveys, this table has since been updated.

As a thought, the new road charging body could develop **‘two’ Road User Charges and ‘two’ Diesel Fuel Rebate rates**, one for the Hire and Reward sector and one for the Ancillary sector. How equitable is this, and we save on fitting GPS systems to 211,000 Ancillary trucks, and they would save at least \$1 a day in telemetry charges. That would be a saving of \$77 million per annum! When GPS trials were undertaken recently only Hire and Reward fleets were used. Although the above suggestion is somewhat tongue in cheek the possibility of having two Road User Charges is the lesser evil compared to having two registration charges, one for ancillary and one for hire and rewards operators. This process of two RUCs could be efficiently handled by the ATO. This cross subsidy need sto be acknowledged and brought to public and industry attention.

In brief since the first NRTC Pricing determination there has been a significant cross subsidy flowing to the Hire and Reward sector. This is because of the averaging of kilometres travelled is based on an ABS average and these averages are used by the NTC in their determinations. Since 1995 to the current time this inequity will be huge and should be investigated. Time has not allowed this author to calculate this 25 years worth of subsidy but it makes for a great future study. A former policy spokesperson for a large national association who was aware of this cross subsidy once replied to this author “Kim, we just love averaging!”

The problem with the ABS/NTC kilometre averaging process is that nobody does those average kilometres and this brings about a cross subsidy in the registration calculation.

Two further points:

Depreciation thoughts

Road depreciation often comes up as an idea in road pricing discussions. However, full road rehabilitation is actually the sum of all depreciation since the last rehabilitation. Periodic maintenance should be separated from rehabilitation in pricing, although slotting rehabilitation into the maintenance category would seem to be a great temptation for a provincial road authority to get a fractional reimbursement on a quicker time scale. The attempt to quantify a hypothetical depreciation each year would lead to mischievous outcomes. States would define rehabilitation as maintenance and possibly then ask for a depreciation top up. This double dipping attempt was rejected in New Zealand.

Performance Based Standards Vehicles

Previous studies, Austroads 2014 and NTC 2017 showed that PBS vehicles were performing well above the national average kilometres that are used for the NTC pricing determinations. This fact has been proven again in NHVR, 2021 (Appendix III, Table A3) where even the conventional vehicles in the Hire and Reward industry were performing well above the 'national average'. A special survey was undertaken for this PBS study as the NTC 'national averages' were so inconsistent with what even the conventional Hire and Reward fleets were doing. The now 11,000 PBS vehicles themselves are further increasing the cross subsidy within the registration charge between the hire and reward sector and the ancillary sector as 99.5% of the PBS fleets are Hire and Reward fleets.

References:

1. NHVR (2021), Review of Major Crash Rates for Australian Higher Productivity Vehicles, Brisbane , NHVR [Review of Major Crash Rates for Australian Higher Productivity Vehicles: 2015 – 2019](https://www.nhvr.gov.au/research-and-statistics/review-of-major-crash-rates-for-australian-higher-productivity-vehicles-2015-2019) ([nhvr.gov.au](https://www.nhvr.gov.au))
2. Hassall K, (2018), *Safety and Productivity Observations on a Billion Kilometres of travel by Australian Trucks Using the Performance Based Standards Scheme*. Logistics and Transport, ISSN 1734-2015, No 4(40)/2018, p111-120, University of Logistics and Transport Wroclaw.
3. (2017) "Quantifying the Benefits of High Productivity Freight Vehicles in Australia – Update" For the NTC's "PBS Market Place Review" Melbourne 2017.
4. (2014) Austroads "Quantifying the Benefits of High Productivity Freight Vehicles in Australia", Austroads Project FS 1805, Austroads, Canberra.

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