

1. Introduction

1.1 The Commission

The Independent Consumer & Competition Commission (the Commission) is a statutory body, established under the provisions of the *Independent Consumer and Competition Commission Act 2002*, which has been given responsibility for the promotion of competition & fair trading, the regulation of prices for certain goods and services, and the protection of consumers' interests and other related purposes.

Much of the work under the former price control regime was administered through the Price Controller's Office and was less transparent than is envisaged under the new ICCA Act and the amended provisions of the Prices Regulation Act. Notwithstanding agreed procedures for price evaluations, reviews were more focused on current costs and not other factors such as new investment requirements, service standards, and a balancing of the interests of the regulated business and consumers as is now required under Section 21(2A) of the amended Prices Regulation Act Chapter 320.

The methodology that is currently used to set prices for PMV and Taxi fares was originally devised back in the early 1970's and has basically remained unchanged since that time. The methodology also sets prices at one point in time and does not give the industry any certainty regarding the likely direction of prices in response to cost increases and the timing of price adjustments.

Hence, in light of the changed legislation relating to price regulation, there is the need for a review to decide whether to continue, amend or terminate the current regulatory arrangements for PMV and Taxi fares. Upon concluding the review process, the Commission as the regulator will have developed a transparent, accountable and consistent pricing methodology beneficial to both the users and the business participants in the PMV and Taxi Industry.

1.2 Review process

The Independent Consumer & Competition Commission is undertaking this review in accordance with the amended provisions of the Prices Regulation Act (Ch. 320). In undertaking this review, the Commission is to have regard to the following:

- Sections 10, 20 (A & B), 21, 25 and 32A of the amended Prices Regulation Act;
- Confidentiality and public disclosure provisions of the Act on information received from submissions; and
- The current and prospective outlook for the PMV/Taxi service Industry in PNG.

Under Section 10 of the Prices Regulation Act (Chapter 320), the Government through the Minister for Treasury has declared the fares for both Public Motor Vehicle (PMV) and Taxi services for price control purposes.

The *Independent Consumer & Competition Act 2002* made a number of changes to the Prices Regulation Act under which the prices for PMV and Taxi services are controlled. In particular, the Prices Regulation Act was amended in the following ways:

- A new section, Section 20A was included which requires the ICCC to publicly notify its intention to determine a Pricing Order under Section 21 of the Prices Regulation Act.
- Section 21 (2A) (see Appendix) was added which introduces specific requirements on the ICCC in terms of the matters that it must consider when making a Pricing Order including encouraging greater efficiency, ensuring an appropriate rate of return and appropriate safeguards for quality, reliability and safety for the supplying industry, and protecting consumers from the misuse of market power by suppliers of declared goods and services.
- Sections 25A, 25B and 25C were introduced which specify the process by which a review of a Pricing Order can be undertaken including the deadlines that must be met, the requirement for the Commission to publish details of its decisions, and the form of a decision that can be taken by the Commission as a consequence of such a review.
- Section 25A (6) allows the Commission of its own accord to initiate a review.
- Section 25C (3) specifies that in response to a review, the Commission may determine to:
 - Continue to operate the existing price control arrangements in their present form,
 - Vary the existing price control arrangements, or
 - Terminate the present price control arrangements.
- Section 32 (A) provides for the declaration of goods or services for price monitoring purposes as an alternative to price control. This is a less stringent form of regulation, which effectively allows the Commission to oversee the prices being charged for the declared goods or services, without requiring the industry to incur the cost of more heavy-handed direct price control.

Under a prices monitoring arrangement, if it is evident that price movements are not reflective of appropriate competitive market benchmarks, the Commission can recommend to the Minister for Treasury that the relevant goods or services be declared under Section 10 of the Prices Regulation Act (Chap.320) for full price control purposes.

These amendments to the Prices Regulation Act increase the flexibility of the Commission in terms of its overall price control activities, and allow for appropriate mechanisms to be developed and implemented that meet the objectives of the Government in terms of price control while minimising the cost of undertaking the price control tasks, thereby ensuring that price control does not of itself create other unintended adverse economic consequences.

1.3 Making submissions

This review is initiated under the provisions of Section 25A (6) of the *Prices Regulation Act*. The process of review will be public and transparent and in addition to the PMV and Taxi industry, other interested parties and the public are invited to make submissions to the review.

The process will involve the following broad stages:

- Public announcement of inquiry & invitation for submissions to be made to the Commission;
- Release of an Issues Paper discussing aspects of the inquiry and the major issues that the Commission believes need to be considered;
- Release of a Draft Report and the inviting of submissions on that Draft Report;
- The possible holding of Public Hearings on the Draft Report; and
- Release of the Final Report and Determination.

A timetable for the review has been provided in the Forward to this Issues Paper. Copies of submissions received by the Commission (unless treated as being confidential) will be available for public viewing at the Commission's office on a 'Public File' or copies can be obtained from the Commission at a nominal cost for photocopying. The Draft Report and Final Report of the Commission are also public documents and can be obtained from the Commission's office once they are released.

2 Structure of the Industry

2.1 Description of the Industry

The Passenger Transport Industry of the Transport Sector is a diverse industry with stakeholders and participants from both the private and the public sector involved in providing services consumers (both individuals and businesses) who use passenger transport services in PNG. With the Government agencies involved more as regulators and policy formulators, the service providers of the industry are primarily private operators and business entities, entering and leaving the industry as subject only to the terms and conditions of their business licences. The long-term viability of the industry depends very much on the efficiency of individual stakeholders in operating their business.

Among the Government agencies having a role in this industry, the Lands Transport Division within the Department of Transport is the lead agency, being responsible for formulating policies and general administration of the various Acts under its jurisdiction. The other statutory authorities are involved primarily in the areas of safety, technical standards, service standards, licensing and registration, and insurance. In the absence of a Government Authority providing Public Passenger Transport, the private PMV operators are the main providers of commuter (passenger) operating over designated routes within the populated rural and urban areas. Taxis generally operate within urban areas as designated by their Licence.

2.2 Lands Transport Division of the Department of Transport

The Land Transport Division is responsible for the formulation and administration of road use policies as well as policies regarding the operation of PMV and Taxis services for the travelling public. Under the Motor Traffic Act (Regulation) 1967, which is the main piece of legislation covering PMV and Taxi operations, the Department of Transport also has the role of enforcing licensing conditions designed to maintain the technical and services standards as set by the National Land Transport Board (NLTB).

Under the Motor Traffic Act (Regulation) 1967, the Transport Secretary is the designated superintendent of Motor Traffic who oversees the inspectors who are staff of the department's enforcement section. The Inspectors are empowered to conduct periodic road blocks at designated sites and issue Traffic Infringement Notices (TINS) to PMV and Taxis (as well as other road user vehicles) who are found to be operating in default of their licence obligations. However depending on the volume of cars involved at certain periods, the Superintendent can gazette officers of MVIL, National Road Safety Council (NRSC) and the Traffic Police to man road blocks from time to time. This responsibility was previously with the Traffic Division of the Police Department but was transferred to the Department of Transport in 1988.

2.3 National Land Transport Board

The NLTB is established by an Act of Parliament and is responsible for the licensing of PMVs and Taxis and issuing of other licences regarding car dealership and freight for self use or hire. These are licensing aspects mainly administered under the Motor Traffic Act (Regulation) 1967 and the Heavy Vehicle Licensing Act. The enforcement of the conditions of the licences is administered by the Departments of Transport and Police through the Traffic Police Division.

Under the Land Transport Board Act, the Board members are appointed by the Transport Minister and consist of representatives from the Government and the Private sector from within the Road Transport Industry. A chairman and executives are appointed and meetings are conducted periodically with decisions published in the National Gazette.

Besides its main role, the NLTB also acts as the secretariat coordinating the activities of the various Provincial Land Transport Boards. Under the current arrangement, PMV operators and Taxi operators submit their applications for relevant PMV or Taxi licences to their respective Provincial Land Transport Boards and these bodies make recommendations to the NLTB for final decision.

2.4 National Road Safety Council

The National Road Safety Council is set up by an Act of Parliament and is responsible for encouraging the reduction and prevention of Motor Vehicle accidents by promoting road safety. Basically, the Council's main function as per section 4 of the NRSC Act can be summarized into four major areas:

1. Foster and promote road safety
2. Formulate, monitor and evaluate road safety programs
3. Facilitate adoption of accident preventive measures
4. Report and advise the relevant authorities on road safety issues

The Council also participates in administering part of the Motor Traffic Act (Regulations) 1967 and the Heavy Vehicle Licensing Act by inspecting vehicles road worthiness when the Council's officers are gazetted to conduct combined road blocks with the other road authorities. As an extension of its function, the council also coordinates the various private inspection stations that conduct road worthiness assessments on vehicles as a precondition for registration. The Council can also interact with town planners on the safety of the design and construction of roads.

The operations of the Council are funded by a 5% Levy on the monthly collections from the sale of Compulsory Third Party Premiums (CTP) by Motor Vehicle Insurance Limited (MVIL) epitomising the functional relationship that the NRSC has with the Motor Vehicle Insurance Provider. In its mandated role, the NRSC must endeavour to reduce more road accidents by promoting road safety and as a result desirably there will be reduced insurance claims made to MVIL by victims of road accidents

2.5 Motor Vehicle Insurance Limited

Motor Vehicle Insurance Limited is responsible for providing Compulsory Third Party Motor Vehicle Insurance to all vehicles registered in PNG. This Insurance cover does not include general Insurance cover on the vehicle as an asset. Rather it is provided to cover the third party injuries which would not necessarily be covered if the vehicle did not hold some form of Comprehensive Insurance.

MVIL has 26 agencies inclusive of the four branches in PNG that collects Compulsory Third Party Insurance on about 65,000 vehicle owners. The CTP is collected together with the Vehicle Registration fees for which MVIL also has responsibility to collect on behalf of the provincial governments through the four branches however the agencies only sell the CTP as a single product.

2.6 National Capital District Commission

The National Capital District Commission is the Municipal Government Authority within the City of Port Moresby which is responsible for the provision of roads and other Transport infrastructure and general formulation of city plans for purposes of providing transport and other related services. It also interacts with the other technical line agencies like the NRSC and the technical division of the Transport Department on Infrastructure Development.

The Transport Division under the NCD enforces licence conditions and service conditions on operators of PMV and taxis in the NCD and also coordinates their business activities within the city.

2.7 Traffic Police Division of the RPNGC

The Traffic Police Division of the Royal Papua New Guinea Constabulary (RPNGC) is responsible for the enforcement of the Motor Traffic Act (Regulations) 1967, as inspectors gazetted by the Superintendent of the Inspectors. Also under their supreme role as the enforcers of the State law through its other powers, the traffic police can enforce licence conditions and charge motorists on other offences relating to vehicle usage.

The Traffic Police Division also has the added responsibilities to report on accidents to MVIL upon request and also to prosecute on behalf of the State, offenders of road infringements that involve injury to others.

2.8 PMV and Taxi Owners/ Operators Association

The PMV Association is a comprised of owners of PMVs and Taxis operating mostly within the NCD. The other centres across PNG have their own associations although some are not operating. In the NCD, there are approximately 326 PMV licences on issue and about 300 licences issued for taxis making a total of 626 public transport licences on issue. These figures are based on current registration details held by the Department of Transport relating to PMV and Taxis Licence holders within Port Moresby. For the various Provincial Land Transport Boards no proper records are available to ascertain the number of licences that have been issued outside of the national capital.

However, according to MVIL, there were 2751 vehicles registered as PMVs and 563 vehicles registered as taxis for Compulsory Third Party Insurance purposes in PNG in 2004. In NCD, MVIL reported that there are 698 vehicles registered as PMVs and 555 vehicles registered as taxis. However, it is unlikely that this is the actual number of PMVs and Taxis currently operating in this capacity. This is due to the fact that some owners do not comply with the legislated registration requirements to register their vehicles for commercial use as PMVs or Taxis. Rather, they register as private vehicles which attract a lower premium. They may then subsequently obtain a PMV or Taxi licence from other operators who are willing to sell their licence privately and can operate either as PMV or Taxi respectively. In addition, vehicles that have been registered for PMV or Taxi operation may subsequently be withdrawn from this type of activity without MVIL being made aware of the change in status or the transfer of the licence to another vehicle.

The NLTB and the various Provincial Land Transport Boards enforce through the Transport Department, the conditions that apply to the operation of the PMV and Taxi licences as stipulated by the Motor Traffic Act (Regulations) 1967. The Superintendent may issue to both PMV and Taxi licences provided some of these conditions are satisfied;

- (a) that the type of vehicle is roadworthy;
- (b) that the type of vehicle is currently registered under the Motor Traffic Act Regulation 1967;
- (c) that the licence applicant is fit and a proper person to operate a PMV or Taxi:

The PMV and Taxi licences may also be issued subject to such conditions as to the area in which the vehicle may be operated, the routes over which they may be operated, the places where the vehicle may pick up and set down passengers and the number of passengers that may be carried, as the Superintendent thinks fit and as specified in the licence.

For the NCD, the PMV operators are accorded different zones ranging from the numbers 1 to 24 as they purchase their licences. These zones are interspersed with bus stops at main suburbs and shopping centres convenient to major employment or residential areas. The Operators normally operate from six o'clock in the morning to six o'clock in the night, seven days a week. They are licensed to carry a maximum number of passengers reflecting the carrying capacity of the vehicle, and are penalised if found to be overloading the vehicle.

The other routes within the country are zoned either as national highways or inter-provincial routes. Operators are assigned routes as part of their licence conditions. Similar load and operating conditions apply on these routes as for those in the NCD. When PMVs are hired out for special occasions, they are required to seek special authorisation from the Superintendent to operate outside of the licence conditions applying to their normal operations.

Most taxi operations are within the urban centres of Port Moresby, Lae and Rabaul while few operate in the smaller or rural towns. Taxi operators allocate their own time to suit their operations and to make use of the fact that passengers move just about anytime of the day to any place in an urban area. Among a host of other conditions, taxi operators are allowed only to carry the maximum number of passengers that the car type can carry and will be penalised if they carry more than approved under the licence.

Throughout the country, ownership of PMV and Taxi businesses are normally held through family groups or individual owners and these owners are primarily small business operators. For taxis there are a couple of major taxi services operating a number of taxis using taxi meters and wireless communications to a central base. However, most taxis are operated as individual businesses that pick up passengers off the street or from areas around the main shopping centres where taxis are known to gather awaiting a fare. Where taxi meters are not in use, passengers negotiate a fare with the taxi driver prior to embarking on their trip.

3 Regulatory history

3.1 Previous price directions

The methodology that is currently used to set prices for PMV and Taxi Fares was originally devised back in the early 1970's and has basically remained unchanged since that time. The current methodology relies upon estimates of current operating costs. These estimates may not fully reflect the cost operating circumstances for all operators. However, they are used as a guide for making adjustments to prices.

Under the existing arrangements, PMV Operators associations/owners and Taxi operators submit proposals for fare increases to their respective Provincial Land Transport Boards and these bodies make recommendations to the NLTB for price adjustment decisions. No formal public inquiry is undertaken. The provisions of the Prices Regulation Act require the Commission to undertake a more public and transparent process for reviewing applications for fare changes.

To meet the current legislative requirements placed on the Commission, it would be necessary to have extended public inquiries into PMV and Taxi fares prior to any adjustment in fares to reflect cost changes. This could have the effect of timing of the pass through of legitimate cost changes (both increases and decreases) and thereby affect the ongoing financial viability of the industry or potentially result in travellers paying inappropriate fares. The Commission is seeking to establish a more efficient and effective way of determining and controlling fares.

3.2 Current PMV price directions

Until April 2004, the Commission had delegated to the NLTB the responsibility to set prices for PMV and Taxi fares. The approach adopted by the NLTB was to develop a model of the average cost of operating a PMV and to consider fare adjustments in the context of movement in that model. Essentially, the model was a "cost build-up" model in which NLTB had sought to incorporate all relevant costs associated with operating a PMV based on an assumed average number of kilometers per week. Thus allowance was made for fuel, vehicle repairs and depreciation plus the wages of a driver and a ticket collector (Bus Crew).

Assumptions made regarding the number of kilometres travelled are essential to the operation of the model. These assumptions are based on the average length of the bus routes and the average number of trips undertaken over the bus routes in a day.

Assumptions are also made concerning the average "investment" in the vehicle, the operating life of the vehicle and the residual value upon its sale or trade-in on another vehicle. The return on investment in the vehicle is calculated using current bank interest rates, no attempt being made to differentiate between return on debt versus return on equity or the difference in the investor risk faced by an investor in this business versus an investor who holds his cash in the bank.

Movements in the total cost of operating the PMV are used to guide decisions on the movement in prices. Assumptions regarding the average number of passengers carried (and the different fare types) are used to derive total revenue outcomes assuming different fare structures and total cost outcomes.

Fare adjustments are not necessarily made in line with movement in underlying costs. The methodology that has been used has allowed a significant amount of discretion to the NLTB in any final decision on fare adjustments notwithstanding the movement in underlying costs. As a consequence, there is no certainty for the PMV operators that legitimate cost increases will be recovered by way of fare adjustments. There is also no public transparency in the process as now required under the amended Prices Regulation Act. Furthermore, the timing for fare reviews is not specified and can be delayed for a variety of reasons outside of the control of operators.

Concern has also been expressed regarding the link between the fares that are set and the standard of service offered by the PMVs. In part this reflects failure of the current process to ensure that mandated service standards which are part of licence conditions, are actively enforced. However, there is also a direct link between the ability of PMV operators to recover their operating costs and their ability to maintain their vehicles and meet the service standards.

The most recent fare adjustment announced by the Commission in January 2005 was based on the methodology previously used by the NLTB. While the Commission sought to make some adjustments to that modelling, effectively the current fares are a product of the existing methodology.

However, the Commission has sought to progress discussions between the relevant enforcement agencies including the Department of Transport, NLTB and the Traffic Police to ensure that service standards are applied. As a result of a public campaign and direct policing of PMVs through roadside vehicle checks, there have been some indications of improvements in the overall level of service offered by PMVs, especially within the NCD.

3.3 Issues arising from Existing PMV fare setting practices.

The current fare setting process is based on a modelled assessment of the average costs of a PMV operating in different locations (and over different route kilometres). It seeks to adjust fares on the basis of the cost of providing the service and thus purports to provide a “cost based” estimate of fares.

However, there are a number of limitations with the current fare setting arrangements. In no order of importance these limitations are:

- Lack of transparency in the process and data that is used in the model. This potentially contributes to a lack of confidence in the system by PMV operators and owners;
- Paucity of data for use in the model. As a consequence, a number of major assumptions have to be made for instance, in relation to distance travelled, passenger carried, actual operating costs, number of trips per day and actual revenues collected (full fare is not collected from all passengers);
- No attempt to link required service standard and vehicle conditions with allowable operating costs in the modelling;
- Limited assessment of the appropriate rate of return on the investment of the business.

In addition, as essentially a “cost plus” form of regulation, there is little incentive given to PMV operators to improve their overall efficiency by allowing these operators to retain some of the efficiency savings made. Essentially, any efficiency savings made which is reflected in cost savings is immediately passed through to passengers at the next fare reset. While there may be limited efficiency savings available to a single PMV operator, there is no incentive for operators in the industry to seek ways in which they may be able to achieve such savings across the industry thereby ultimately resulting in a more efficient transportation system.

3.4 Taxi Fare Determination.

The taxi fare determination especially in Port Moresby is usually based on a fixed flag fall system whereby a base rate is charged when the passenger is actually sitting in the taxi and a per kilometre distance rate when travelling. This has been the practice since the 1970s, as endorsed by the then Department of Transport for most of the major taxi operators.

Under this system, there is a standard flag fall rate of K1.50 as the base rate with K2.00 for every kilometre travelled while K4.00 is charged as waiting time if and when the taxi is static and not moving but is carrying passengers.

There is also the “negotiate and pay” system operated by many of the taxis in NCD. Occasionally, people hire taxis for special occasions or special purposes and the operators and the passengers negotiate and agree on a price that suits both parties.

3.5 Issues arising from Taxi fare setting practice.

The current fare setting process for taxi fares is based on a modelled assessment of the average costs of a taxi operating in different locations (and over different route kilometres). It seeks to adjust fares on the basis of the movement in the cost of providing the service and thus purports to provide a “cost based” estimate of fares.

In addition, as essentially a “cost plus” form of regulation, there is little incentive given to taxi operators to improve their overall efficiency by allowing these operators to retain some of the efficiency savings made. Essentially, any efficiency savings made which is reflected in cost savings is immediately passed through to passengers at the next fare reset. While there may be limited efficiency savings available to a single taxi operator, there is no incentive for operators in the industry to seek ways in which they may be able to achieve such savings across the industry thereby ultimately resulting in a more efficient transportation system

The Commission seeks the views from the industry and others on the relative merits or problems of the current fare setting arrangements for PMV s and Taxis.

4 Retention of price control

4.1 Continuation of price regulation

Under the provision of Section 25C (3) of the Prices Regulation Act, the Commission must determine whether to:

- Continue to operate price control in its present form, or
- Vary the form of price control, or
- Terminate price control.

Any decision to terminate price control needs to be based upon the current state of the industry. Price control was originally introduced in recognition of the limited degree of competition in the market for transport services. While there are numerous PMVs operating throughout PNG, licences are usually issued on the basis of a particular route. Competition on a particular route is therefore constrained by the number of licences that have been issued for that route. The availability of PMVs on a particular route at a particular time of the day depends on the number of PMVs that are on the road at that time, and their location on the route. Those that are operating at a particular time of the day may be heavily patronised and this can increase the market power of the individual PMV operator to increase prices in response to high levels of demand. Thus, the ability of individual passengers to exercise any form of countervailing power is severely restricted.

Similarly, for taxis, while there are a number of taxi licences issued and these taxis compete between themselves, there may be times in the day when shortages of taxis and high demand can give taxi operators considerable market power in terms of the prices that they charge. Customers may find themselves in a position where they do not know what fee they will be charged or may have difficulty in reaching agreement as to the fare that is to be charged.

The existence of a prescribed fare or charge set by the Commission does not necessarily mean that direct negotiation does not occur in the industry. Some taxis, for example, do not have taxi meters and the accepted procedure is to negotiate a fare to a particular location before commencing the journey. There is possibly a degree of acceptance of this practice in Port Moresby at least, and from a consumer and taxi operators perspective this may represent a more suitable resolution of the supply and demand balance than a regulated fare. The Commission will need to consider this issue.

For PMVs, there is a form of “price negotiation” that occurs informally across all routes. Essentially, this occurs when a passenger seeks to negotiate a lower fare for a shorter distance (or because they only have a certain amount of money available to pay the PMV fare). Provided the fare is below the specified regulated fare, there is nothing to prevent this practice. Again, it is an indication that there is a degree of acceptance in the market of the “negotiate and pay” principle.

However, there are also instances where individual PMV operators abuse their market power by not completing the full route as required (and forcing passengers to catch another PMV, thus doubling the cost of their trip), or threatening such action unless passengers pay an additional fee. Where this type of behaviour occurs, PMV operators are exploiting their market power regardless of the existence of price control. This highlights the degree of market power that PMV operators potentially hold and the limited countervailing power held by passengers.

The Commission is required to examine issues relating to the market power held by PMV and taxi operators and to form a view as to whether some form of price regulation should continue. To the extent that there is some evidence of passengers freely negotiating fares with taxi drivers (and to a limited extent PMV drivers), there may be evidence to support an argument that direct price regulation is not required. Such a conclusion would not be inconsistent with a position that saw the retention (and enforcement) of other regulation of the industry, particularly in relation to service standards, safety standards, the condition of vehicles, and licensing of drivers.

The Commission is seeking information and submissions on the current and projected state of competition and contestability in the PMV and Taxi industry in PNG and the need to continue some form of price regulation

4.2 Form of price control

On the assumption that some form of price control or price regulation should be continued for PMV and Taxi fares in PNG, the Commission is required to consider whether the existing form of regulation should apply and if not, what alternative form of regulation should be used.

The options that are available to the Commission are identified in the Prices Regulation Act, namely;

- Price control as Declared Goods under section 10 of the Prices Regulation Act; or
- Price monitoring as Declared Monitored Goods under section 32A of the Prices Regulation Act.

Price control as a Declared Good would require the Commission to have regard to the provisions of Sections 20A, 20B and 21 of the Prices Regulation Act. Specifically that would require the Commission to:

- Undertake a lengthy public review process each time it was proposed to alter the maximum prices approved under the Price Declaration;
- Prepare and publish draft reports and other material relating to the proposed price change; and
- Have regard to the requirements of Section 21 (2A) of the Prices Regulation Act that *inter alia* require the Commission to ensure that an appropriate balance is kept between the interest of commuters and the operators/owners of PMV and Taxi services.

To meet these requirements, the Commission can establish a price direction/price path which could provide for some degree of automatic adjustment of prices albeit against an approved price adjustment methodology (*see Section 5 of this paper*).

Price Monitoring under section 32 A provides a less intrusive method for price regulation. Under the price monitoring approach PMV and Taxi operators can adjust their prices without the need for Commission approval of individual charges. If a “standard fare” was to be applied, it would require some central body acting on behalf of the PMV or Taxi operators to announce the new fare which would then be applied by all PMV and/or Taxi operators. The

Commission would monitor the movement in this standard fare against a benchmark that had been set by the Commission. If fares were found to have increased at a rate above the benchmark, the industry would be asked to explain why the movement in fares is greater than the benchmark. If the Commission is not satisfied with the answer given, it could move to have fares directly regulated.

The Commission invites submissions on the forms of regulation (i.e., price control or price monitoring) that should be applied to PMV and Taxis in PNG).

5. Price Control Methodology

5.1 Legislative requirements

Under the provisions of Section 21 (2A) of the Prices Regulation Act, if some form of price control is retained, the Commission is required to have regard ‘*inter alia*’ to the following:

- The need to protect consumers of declared goods or services from the misuse of market power
- The cost of producing the declared goods / services
- The desirability of encouraging greater efficiency in the production and supply of declared goods / services
- The need to ensure an appropriate rate of return on any investment in the production or supply of the declared goods / services
- Quality standards
- The impact on inflation of a price control order
- The economic and social impact of a price control order.

The need to achieve a balance between the interest of the suppliers/manufacturers and consumers is embodied in these legislative requirements.

The Commission must therefore consider what the best mechanism is, to achieve these particular objectives.

The Commission has elsewhere sought to achieve these objectives by linking the determination of regulated prices with the efficient costs of producing or supplying the regulated goods or services. This allows the Commission to differentiate between the actual costs that a manufacturer/supplier may incur, and the ‘efficient/best practice’ costs that apply to the provision of that good or service. The prices that consumers are required to pay therefore do not include inefficiencies or inappropriate cost pass-through that might otherwise occur in a market where there is no regulation and the supplier has a degree of market power.

The operation of a PMV or Taxi service and the determination of a regulated price for the services presents some interesting issues for the Commission. PMVs are mainly owned and operated by small businesses or individuals. These businesses may hold as few as one PMV licence (the usual situation) or they may have several PMV licences. The Commission is unaware of any single individual or entity operating a sizeable fleet of PMVs.

For taxis, the market appears to operate in a slightly different way. While individual owners may hold a taxi plate licence and operate one or a small number of taxis, these operators work together in groups with links to a single base or dispatch call centre. Thus, while the taxi fleet may be comprised of a number of individual entrepreneurs (a little like the PMV operators) they do operate as a group, linking together with a number of other individual plate owners to form “combines” or fleets operating under a particular name.

From a fare determination perspective, the nature of the operation of the PMVs and Taxis means that there may be limited opportunities for individual operators to achieve economies

of scale in their operations. Thus, efficiencies that may be expected in larger businesses or even transport fleets may not be able to be captured by these essentially individual operators.

This has implications for the way in which a regulated fare might be determined and how this fare might be adjusted over time to take into account cost changes.

The methodology that has been used to this point of time has been a static cost plus approach. Effectively, fares have been based on models of the expected cost of operating a PMV or taxi and adjustments to those fares have been made from time to time, in response to submissions from the industry. Effectively, the model has been a “cost pass through” model with some adjustments being made to the final approved fare (although the reasoning behind these adjustments has not always been made public).

In addressing its statutory obligations, the Commission is required to be transparent in its decision making and to provide greater incentive for efficiencies in the operation of the PMV and Taxi fleets.

For sectors such as electricity, water and telecommunications, the Commission has used a form of forward-looking building block approach to determining a price path. This type of model meets the requirements of the Commission to allow the industry to recover its efficient costs of providing goods and services while at the same time providing an incentive for the regulated industry to improve its overall economic efficiencies. As part of the process of establishing the cost building blocks, the Commission would make allowances for the recovery of a return on prudent investment and past investment, an appropriate recovery of this investment (through the depreciation provision), and recovery of efficient operating costs. The forward looking price path is then linked to some indicator of underlying cost movements (for example, the Consumer Price Index) and an adjustment made to allow for demand changes, new investment requirements, service standard improvements and efficiency improvement.

For the PMV and Taxi industry, while the Commission will continue to seek to identify the efficient costs required to provide the service, it may not be appropriate to make adjustments in the price path for efficiency improvements. Rather it may be more appropriate to establish a price path that is linked to movement in certain significant cost components (for example, fuel, tyres, repairs/maintenance & drivers fees) and adjust the fare levels on the basis of movement in these indicators. Any efficiency cost savings in the production of these inputs to the PMV and Taxi industry would then automatically be passed through to the operators and consumers.

However, the Commission will need to establish an initial fare starting point. Previously, various models of operating costs have been used for this purpose. The differences between the travel pattern of individual PMVs and taxis make it impossible to prepare a separate fare estimate for each operation. However, the use of a model of the cost structure for an individual route or location assumes that all operators can achieve the performance assumed in the model. A model of this type is usually based upon some form of “average” performance. By definition this implies that some operators will be able to outperform the model (that is do better than what the model implies) while others will not be able to achieve the average costs and revenue assumptions included in the model.

This may encourage some operators to improve their performance, but may also mean that operators are forced to leave the industry or allow their service standards (example; safety) to fall below acceptable levels. The enforcement of these safety standards and other standards must therefore occur in coordination with the application of the fare regulation.

The Commission is seeking views and comments on the appropriate methodology to adopt in deriving the cost structure of the PMV and taxi industry. The Commission is seeking views on how it should address the issue of efficiencies in operating costs.

5.2 Components of building block approach

5.2.1 Operating Costs

In order to build a cost based model, the Commission will need to obtain information from the industry on the various costs components that are involved in providing PMV and taxi services. The Commission needs to ‘test’ or benchmark these cost estimates in order to come to a view as to whether they reasonably reflect ‘efficient’ costs.

The Commission will need to consider these costs in terms of the various PMV routes. Within the main urban centres there are multiple routes and the cost of operating over these routes may be expected to be different to that of travelling over more rural or urban/rural routes.

The Commission will also need to consider patronage on these routes and the frequency of service. Fixed costs such as the investment in the PMV will decline on a per passenger basis the more passengers that are carried. Other costs such as fuel or vehicle repair can be expected to have some variability depending on the patronage of the PMV, but will also have a fixed element in that the PMV operator will incur these costs regardless of whether the PMV has no passengers or is full.

Obtaining information on PMV operations is problematic in the PNG context. There is not a convenient point of contact with PMV operators although the Commission will be contacting the various operator’ associations. However, it is expected that the Commission will need to undertake some form of direct data collection from PMV operators and to this end, the Commission is preparing a data information form that will be sent to all PMV operators seeking information on their costs, routes travelled, patronage and type and value of vehicle.

Similar data collection problems occur with taxis although there is some form of grouping of taxis for purposes of providing radio bookings. The Commission will be examining ways of obtaining information from these operators through these channels.

Information obtained from PMV and taxi operators will need to be assessed by the Commission before any final decision is made on the use of the data to determine prices. This process of review by the Commission will need to address issues of operating efficiencies while at the same time recognise the peculiarities of the operating cost environments in various parts of PNG.

The Commission is seeking information on the efficient operating costs of PMVs and taxis in PNG and any difference in cost structure that arise because of different operating locations within PNG.

5.2.2 Rate of return

A rate of return on investment appropriate for the industry needs to be determined for inclusion in the building block model. The rate of return should reflect an appropriate return on the investment by the business in the supply of regulated services. The Commission would normally use a Weighted Average Cost of Capital (WACC) as the basis for the appropriate

rate of return. The WACC takes into account issues such as the appropriate return that the business should generate on both the equity and the debt capital in the business.

A Capital Asset Pricing Model (CAPM) is the type of financial model normally used by the Commission to determine the WACC. To populate the CAPM model, the Commission will need to have regard to the risk free rate of return that presently applies in PNG, the additional costs that should be included to reflect appropriate commercial debt margins on the risk free rate, the level of the additional risk that the PMV/ taxi industry might attract above and beyond the standard risk allowances that would apply to other businesses in PNG, the treatment of tax (a pre tax or a post tax rate of return) and the normal debt equity ratio that should be applied to this industry.

For the PMV and taxi industry where the large proportion of the industry is comprised of sole traders / small partnerships, the use of a CAPM modelling approach to calculate the rate of return that the industry should receive may not be appropriate. For example, a CAPM modelling approach assumes that the owner is able to diversify risks in the business. A sole proprietor / small partnership may not be able to diversify risk and therefore may need to be compensated for a higher degree of risk than a larger business. At the same time, a sole trader operating a PMV or taxi may trade-off higher risks in terms of the rate of return on his investment against the “security” of having effectively purchased a job by acquiring the taxi or PMV. Thus, the owner in these circumstances may accept a lower return of investment for the security of a weekly salary from operating the PMV or taxi. Given the levels of unemployment in PNG and ownership of PMV licences by clan or village based groups, this trade off of a higher rate of return with the guarantee of a job is a real possibility and will need to be considered by the Commission.

The Commission will need to consider the various arguments and comparative information on return on investment for similar types of businesses.

The Commission is seeking submissions on the appropriate rate of return to use for a PMV and a taxi business in PNG and the components of a CAPM calculation of WACC¹

5.2.3 Asset Valuation

The rate of return must be applied to some valuation of the business to provide a value of the return on investment generated on an annual basis.

There are various methods used to derive a value of the investment. Ultimately the Commission is seeking to determine the economic value of the business. Thus, while some estimation of value may be built around the asset values of the business, effectively the Commission is attempting to derive an ‘economic value’ of the business reflecting not simply the investment that has been made in the business over a period of time, but the value of the business to its owners (and therefore the value on which they would expect to generate a financial return). The value that the Commission is seeking to determine is the Regulated Asset Value (RAB)

There are various options available to the Commission in terms of the valuation that should be used. These include:

- Historical Value: this represents the written down book value of the business. The advantage of this approach is that the value can be readily obtained from

¹ For further discussion on the components in a WACC calculation, see *ICCC Final Report-Flour, July 2005*
Issues Paper

the financial account of the business. However, this value will be in Kina of different years (and therefore of different underlying value) and the assets may no longer be fully utilized (that is, sub-optimal) and therefore do not generate a return to the business. Also for PMV and Taxi operations information may not be readily available from their own books of account.

- Optimised depreciated replacement costs (ODRC): this form of valuation reflects the current costs of the assets that are in use after allowance for assets that are not fully used (optimised out of the valuation) and deduction for the value of assets that have already been ‘consumed’ in an economic and financial sense (depreciation). The advantage of this approach is that it effectively represents the value of the business if a new entrant was to buy the assets at their replacement costs today. The disadvantage is that it represents an upper end of the valuation scale and its determination is open to a high level of subjectivity in terms of the equipment and technology that might be used to operate a PMV or a taxi service in PNG.
- Optimised deprival value (ODV): essentially this valuation reflects a compromise in terms of the two extremes of historical value and ODRC in that it is measured as the lesser of ODRC and the value that the asset owner would have to be paid to compensate them fully if they were deprived of the asset. The value that the owner would be paid if they were deprived of the asset is the greater of the scrap value of the asset and the economic value.

The economic value is usually determined by the use of some form of Return on Asset Test (RAT) or may be determined based on a market value of the business if it is sold as a going concern. The advantage of the ODV valuation is that it reflects the market value of the business and as the Commission is seeking to determine a financial value upon which to apply the WACC to generate the return on investment, it more closely reflects this objective than say the historical or ODRC valuation methodology.

For the PMV and taxi industries, the Commission may be able to use information from the industry on the price recently paid for a PMV or taxi business. This would reflect the market’s current perception of the values of the business.

Alternatively, the Commission could consider the cost of investing in the business in terms of the cost of the vehicle used and any associated costs of entering into the business (for example, the cost of licences). The current cost of this investment may reflect the upper end of the valuation scale in the sense that it may be an investment value that does not reflect the value of the business to those that are already in the business (that is, the value that they would be willing to accept to leave the business). The approach that had previously been used by the NLTB incorporated a “current cost” approach, but using a discounted value of the costs of a motor vehicle (that is, the price of a second hand vehicle imported into PNG).

The Commission seeks comments on the methodology to be used to derive a Regulated Asset Base for purposes of applying the rate of return to generate the return on investment for this industry.

5.2.4 Depreciation

As part of the “building block” methodology, the Commission will need not only to allow a return on investment (as discussed above) but a return of investment.

The concept of return of investment embraces accounting for depreciation. Industry will often use the standard IRC / taxation depreciation rates as the guide to what allowance should be made for a return of capital on a yearly basis. However, the economic life of the PMV or taxi may be different to the life for taxation purposes. For example, the taxation life may allow the value of the vehicle to be written-off over five years when in fact the vehicle is still capable of being used as a PMV or taxi beyond that period. That is, the economic life is longer than the taxation life for purposes of pricing. The Commission would be seeking to ensure that the prices paid by travellers reflected the economic life of the vehicle, and not necessarily the taxation life.

The Commission is seeking information on the appropriate rate of depreciation to apply to PMV and taxis.

5.3 Price path determination

Use of the building blocks approach normally involves the forward projection of costs for the business. These forward projections of costs are expressed in real terms and some form of price adjustment formula is used over say a five (5) year period to reflect movement in the underlying costs faced by the regulated industry. The use of a CPI +/- X type formula where the CPI is some indicator of cost movements (usually the Consumer Price Index) provides an incentive to the business to outperform the price adjustment formula. Thus, this form of price regulation is called “incentive regulation” and is favoured by the Commission particularly when regulating public utilities such as PNG Power, Telikom and Eda Ranu.

For industries such as PMVs and taxis where there are a number of individual sole traders or small partnerships, the use of some form of incentive regulation may not be as appropriate, as the businesses themselves have less opportunity within themselves in the short term to trade-off efficiency savings within one area of activity with cost increases in another. This does not deny the fact that efficiencies can be achieved, but the method of using price regulation to encourage the achievement of these efficiencies may need to be different to that applied to other larger businesses.

In these circumstances, one method that is used to set a price path over a period of time is to create a “composite cost index” and to adjust fares in line with the movement in this cost index. Provided the weighting of various costs in the index is reviewed every five (5) years or so, the index will maintain its currency and applicability to an industry which within itself may be undergoing gradual change and reform.

Such an index would be based on the relative weighting of costs that the industry faces. This make up of costs can be derived from the building block calculation as discussed above. The weighting given to each cost component (for example, fuel, tyres, maintenance, wages, return on capital invested and depreciation) will reflect the relative importance of these cost items in the building block calculation.

Moving forward from one period to another, the Commission would use various price indices to calculate a weighted cost movement index that would then be applied to the existing fares. Thus, if the movement in this weighted cost index showed a 2% increase over a period, then fares could be adjusted accordingly. Similarly, if a reduction was indicated by the weighted cost index, the fares would be reduced.

For PMV and taxi operators who managed to keep their own operating costs within the movement in costs indicated by this index (for example, by more careful driving of their vehicle or better maintenance of the vehicle), then they would benefit by the improvement in

fares being at a higher rate than the increase in their costs. They would thus have an incentive to improve their efficiency.

For those operators who were not able to keep their costs within the movements indicated by the index, they would suffer financially. However, this would act as an incentive for them to improve their overall efficiency.

When the index is recalculated and re-weighted at some future time (say in five years), the efficiency savings that were evident in the industry could then be passed through to consumers in future prices. Thus, both the service provider and consumers benefit from the price path mechanism.

The Commission invites submissions on the appropriate form of the required revenue / price path formula that should be used for setting PMV and Taxi fares.

5.4 Demand Projections

An integral part of the process of determining a price path for PMVs and taxis will be the need to set the initial fare structure. A price path adjustment mechanism of the type discussed above will then be applied to these fares that are charged by PMVs and taxis. However, in order to apply that mechanism, an initial fare structure must be determined.

The building blocks approach which accumulates information on the costs that are incurred by the industry will provide that starting point for determining the initial fare structure. The development of the building block estimates themselves will be premised on certain assumptions regarding the passenger demand for service. Thus, the Commission envisages that as part of its survey of the industry and in consultation with the Department of Transport, NLTB and the various industry groups, it will need to acquire information on the current and expected demand for PMV and taxi services.

It is expected that operating costs and demand for services will exhibit regional characteristics. Thus, for example, the transport of passengers in urban centres will involve a greater number of passengers per kilometre than the transport of passengers on rural routes. The Commission will need to reflect these differences in its building block modelling and in the cost indices that it may use to develop some form of composite cost index for the industry.

In its development of the building block cost estimates and passenger per kilometre estimates, the Commission will need to give consideration to the issue of changes in demand over time. For example, if the number of passengers per kilometre is expected to increase over time in say the urban areas, should travellers benefit from the reduction in average costs per passenger that the PMV or taxi operator will face, or should the PMV or taxi operator be allowed to capture this benefit as an incentive to improve the service offered and thus attract greater patronage? At the same time, a reduction in fares, or a slower rate of increase, might also act as a way of encouraging greater patronage, thereby possibly increasing the overall income that the PMV/taxi operator can generate.

There are physical limitations to the number of additional passengers a PMV or taxi operator can carry in one day. Even after improving the turn around time of travel over the designated PMV route, there are limitations to the number of times that the PMV can travel the route in one day. Also, there is a cyclical pattern in the use of PMVs with heavy usage at the beginning and end of each day as passengers go to and from work. These are all factors that the Commission will need to consider when examining demand projections.

The Commission is seeking information on passenger numbers, the passenger per kilometre rates that apply in different parts of the country and on different routes, and the way in which the Commission should treat possible growth in passenger numbers over time.

5.5 Price path period

Incentive regulation of the type the Commission favours requires that the price path be set over several years (rather than a year on year process as is evident in a 'cost plus' approach). The Commission would normally favour a five year price path. This allows sufficient time for the pricing formula to maximize its desirable attributes of encouraging greater efficiency while providing price certainty for both consumers and operators. It also reduces the dead weight cost of repeated intensive price reviews.

Lack of a composite cost index adjustment process will necessitate the re-weighting of the cost index from time to time. The re-weighting will need to take into account changes in the relative cost of individual items in the composite index and other changes in the industry including the number of passengers a PMV can carry. This will become more of a difficulty where there are significant changes in cost over time.

In terms of the PMV and taxi industry, fuel costs represent one area where there has been a significant increase in costs over the last 12 months. It is not known for certain whether world oil prices will stabilize at their current level or whether further significant changes can be expected. For example, one international Merchant Bank is predicting fuel prices to double their current levels over the next few years. Not only will such a cost increase flow through to PMV and taxi fares, but it would significantly alter the relative weights of fuel costs in the composite index.

The Commission therefore recognises the need to make amendments to the composite cost index over time. Normally, the Commission would adopt a five (5) year price path. As noted above, this provides a degree of certainty to the industry in terms of the process for price adjustments over time while also minimizing the cost of regular price reviews.

However, the Commission recognises that significant changes may occur within that five (5) year period which may require the price path to be reviewed. These are often referred to as "trigger events", and one option is for the Commission to specify in advance those trigger events which, should they occur, would result in the price path being re-opened and reviewed.

The Commission seeks views on the length of the regulatory price path and what, if any trigger events should be included in the price determination.

5.6 Timing of fare adjustments

The use of some form of price path extending over more than one year will require the Commission to put into place a price determination which will provide a degree of automatic adjustment to prices periodically over the period. The approach normally adopted by the Commission envisages that price adjustments would be made annually, and that during each year the business would manage its overall costs such that it keeps its total costs within the projection of costs incorporated in the model used to estimate prices.

With more regular movements in some of the costs components (for example, fuel), there may be an argument in favour of more regular adjustment to fares to reflect changes in this cost component. However, the price for fuel does move both up and down, and frequent changes in the level of fares may act to discourage passengers from the use of PMVs or taxis. The PMV and taxi operators also have the ability to take some steps to achieve cost savings or efficiencies over a period of 12 months during which fares might be held constant. Also as some of these costs fall, the operator would be advantaged as a result of these falling costs for the period prior to the next fare adjustment.

The Commission is seeking views on how frequently fares should be adjusted under the automatic price path adjustment mechanism.

The Commission will also need to consider the implications of adjustment in fares which result in movement of only a small number of toea, (for example, one or two toea).

Currently, PMV fares are expressed in terms of the nearest 10 toea. This is convenient for PMV operators in terms of fare collections and change handling when fares are offered. Passenger transport operators worldwide usually prefer fare rates which are rounded to the nearest 10 toea or cents or pence. For taxi operators, this is not a problem as the fare rate is usually expressed in so many toea per kilometre.

Should the Commission opt for a fare setting mechanism which rounds the fares to the nearest 10 toea, there may need to be a mechanism which allows for a system of “unders and overs” so that over time, the fares balance out to the correct level. This may mean for example, a rule that allows a rounding up or down of the calculated fare to the nearest 10 toea, but that enables any adjustment using the composite cost index to apply to the non-rounded calculated fare. Thus, for example, if the fare was calculated at 54 toea, the actual fare charged would be 50 toea. If the composite cost index then calculated an increase of 4% in the fares, then fare would be 54 toea x 1.04, or 56 toea. The actual fare charged under the nearest 10 toea rule would be 60 toea. But when the next adjustment was due, the composite cost index would be applied to the 56 toea, not the 60 toea fare that was being charged.

This is one possible mechanism by which fares might be adjusted to address the issue of rounding of calculated fare outcomes.

The Commission is seeking views on rules and that should be applied in terms of rounding the fare adjustment from period to period.

5.7 Service and Safety Standards

The regulation of prices of PMV and taxis is premised not simply on the efficient costs that must be incurred by these service providers, but also on the achievement of minimum service and safety standards by these operators.

The Commission is not the responsible agency for setting the minimum service standards for PMVs and taxis. This is the responsibility of the Department of Transport and the NLTB. These agencies are also responsible to enforce the observance by PMV and taxi operators of those service standards. The Commission has been engaged in discussions with these agencies and the police regarding ways to improve the enforcement of these standards.

The Commission is required to ensure that the regulated fares for PMV and taxis are set at a level that allows these businesses to achieve the required service and safety standards. The

Commission will need to consider the cost implications of the various service and safety standards that are set by the relevant authorities and incorporate these costs into the cost building block modelling.

Should the relevant agencies alter the service or safety standard requirements, this will potentially have an impact on costs and desirably should be reflected in future movement of fare levels. The Commission will need to consider whether to include as a trigger mechanism for re-opening the declared price path, a trigger that relates to changes in service or safety standards.

The Commission seeks input on the relevant service and safety standards that apply to PMVs and taxis and the cost implications of these standards. The Commission also seeks input on the possible need for a trigger adjustment mechanism for mandated changes in these service or safety standards.

6. Other Issues to be considered

6.1 Industry Reform

The Commission is aware of current public policy consideration of alternate forms of transport, particularly in the Port Moresby urban area. The Commission will need to consider the implication for fares, PMV operators, route lengths and other service related matters arising from the continuing public policy development process. The Commission may also need to consider whether some form of re-opening trigger should be included in its determination on fares to allow for changes in public policy on passenger transport matters.

The Commission is seeking views on possible public policy changes and implications for the operation of passenger transport services.

6.2 The National Highway Routes

This inquiry relates not only to the urban routes in the main towns but also to the National Highway routes and Inter-provincial routes. To the extent that these routes may require particular price arrangements and have other particular characteristics, the Commission will consider these issues as part of the review.

The Commission seeks input on any particular special characteristics of the National Highway and Inter-provincial routes.

Appendix 1 Section 21 (2A) of the PRA Ch.320

When making an order under Subsection (1), the Commission shall have regard to:

- A. the need to protect consumers and users of the declared goods or services from misuse of market power in terms of prices, pricing policies (including policies relating to the level or structure of prices) and the standard of the declared goods or services;
- B. the cost of making, producing or supplying the declared goods or services;
- C. the desirability of encouraging greater efficiency in relation to making, producing or supplying the declared goods or services;
- D. the need to ensure an appropriate rate of return on any investment in relation to the declared goods or services;
- E. the borrowing, capital and cash flow requirements of persons making, producing or supplying the declared goods or services;
- F. considerations of demand management and least-cost planning;
- G. existing standards of quality, reliability and safety of the declared goods or services, and the desirability of encouraging improvements in those standards;
- H. the effect any proposed order on **general price inflation** over the medium term; the economic and social impact of ant proposed order; and
- I. any other matters the Commission considers relevant.