Office of Utilities Regulation

Route Taxi Operators Fare Application

Recommendation to the Minister of Transport and Works

OFFICE OF UTILITIES REGULATION

March 2008

DOCUMENT TITLE AND APPROVAL PAGE

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DOCUMENT TITLE: Recommendation to the Minister of Transport and Works on Route Taxi Fare Application

1. PURPOSE OF DOCUMENT

This document provides the Office's recommendation on Route Taxi fare application

RECORD OF REVISIONS

Revision Number	Description	Date

APPROVAL

This Document is approved by the Office of Utilities Regulation.

On behalf of the Office:

J Paul Morgan
Director General

March 25, 2008
Date

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EXECUTIVE SUMMARY

I. Background

The National Association of Taxi Operators (NATO) submitted a proposal for adjustment in fares for route taxi operators to the Minister of Transport and Works and the Transport Authority on behalf of associations under its umbrella[1]. The Transport Authority solicited views and data from other associations and conducted its own research on the appropriateness of the claims. The Transport Authority referred the submissions and its findings to the Office of Utilities Regulation on February 18, 2008, with a request to advise the Minister on the level of adjustment of fares to be allowed.

NATO's fare proposal

	Existing Rate $	Proposed Rate $
Base Stage rate	44.00	70.00
Per kilometre charge	2.50	4.00

II. Opportunity for Public Comment

The Office in accordance with its duty to consult with stakeholders that may be affected by its decisions invited comments on the proposal by means of advertisements placed in the two major daily newspapers[2]. Details of the NATO proposal were made available on the Office's website and the detailed submissions were made available in the Information Centre of the OUR. The print and electronic media also gave prominent coverage of the story. The Office did not receive any comments from the public.

III. Analysis of the Office

Calculation of annual unit fixed and variable costs			
	Variable cost per km	Fixed costs	Total costs
	J$/km	J$	J$
Depreciation		201,600	201,600
Interest		141,120	141,200
Fuel cost	8.76		525,490
Lubricants cost	0.23		16,800
Driver wages		520,000	520,000
Insurance cost		150,000	150,000
Maintenance costs	3.11		223,667
Tyre costs	0.50		36,000
Licence costs		45,350	45,350

[1] The Transport authority indicates that this submission was made on January 8, 2008.
[2] March 2, 2008 in the Sunday Gleaner, Sunday Observer and the Sunday Herald

Subtotal	12.60	1,058,711	1,860,027
Overheads	1.89		136,058
Profits	1.89	158,711	294,769
Total	**16.38**	**1,216,781**	**2,290,854**
Variable cost per passenger/ (km)	**4.09**		
Fixed cost per passenger		**50.70**	

Base Stage Fare = (fixed cost per passenger) + (2 * variable cost per passenger kilometre).

Base Stage Fare equates to **$58.88.**

A charge of **$4.09** is applicable for each additional kilometre after the initial two kilometres.

The Office recommends

1. A Base Stage fare of **$58.88** for the first two kilometres of travel
2. A charge of **$4.09** for each additional kilometres thereafter
3. A review of the fares in the event that there is a **20%** change in either fuel price or exchange rate

For practical purposes, fares of $60.00 for the Base Stage and $4.00 for each kilometre thereafter could be implemented.

CHAPTER 1: INTRODUCTION

Background

1.0 The National Association of Taxi Operators (NATO) submitted proposal for adjustment in fares for route taxi operators to the Minister of Transport and Works and the Transport Authority on behalf of associations under its umbrella. The Transport Authority solicited views and data from other associations and conducted its own research on the appropriateness of the claims. The Transport authority referred the submissions and its findings to the Office of Utilities Regulation on February 18, 2008, with a request to advise the Minister on the level of adjustment of fares to be allowed.

Legal and Regulatory Framework

1.1 There are three main regulatory bodies for the public passenger transport sector under existing legislation. These are the Minister of Transport and Works (MTW), the Transport Authority (TA) and the Office of Utilities Regulation [(OUR) / "the Office"].

1.2 The MTW is responsible for the overall policy decision-making in the sector.

1.3 Section 16 of the Transport Authority Act provides that the Authority may set fares for the sector 'with the approval of the Minister'.

The Transport Authority regulates through the following Acts of Parliament:

- The Public Passenger Transport (Kingston Metropolitan Transport Region) Act;
- The Public Passenger Transport (Rural Area) Act;
- The Transport Authority Act and;
- The Road Traffic Act.

1.4 The OUR is mandated to regulate the sector through the Office of Utilities Regulation (Amendment) Act 2000. Section 4(4) provides that:

"The Office shall have the power to determine, in accordance with the provisions of this Act, the fares which may be charged in respect of the provisions of a prescribed utility service."
The First Schedule defines "Public Transportation by road, rail or ferry" as a prescribed utility service.

1.5 It is evident therefore that there is an overlap of the responsibilities of the OUR and the Transport Authority under the provisions of the various Acts. Until the legislative changes are enacted to harmonise the situation, the policy of the government is that the role of the Office is limited to that of advisor to the Minister on the economic regulation of the public passenger transport sector. The Transport Authority's responsibility for the sector extends beyond economic regulation. The Authority has responsibility for the licensing of all public passenger vehicle including taxis. In addition, the Authority is mandated to develop, implement and enforce quality of service standards for all operators in the sector.

Purpose of document

1.6 The National Association of Taxi Operators (NATO) submitted an application on behalf of Route Taxi Operators to the Minister of Transportation and Works and the Transport Authority. The Transport Authority did a preliminary review of the application after collecting data on operational cost of taxi operators. In this regard sample Operation Expense Sheets were circulated to various Taxi Associations for completion by a representative sample of the associations' membership. The Transport Authority referred the application to the Office along with the submissions of the associations and its findings. This document sets out the recommendation of the Office to the Minister for a new fare regime for route taxi operators.

CHAPTER 2: PROPOSALS FROM ASSCOIATIONS

National Association of Taxi Operators (NATO) Proposal

2.0 The NATO proposal posits that, since the last fare increase in September 2005, inflation and petroleum price increases have adversely affected the input costs to operators.

2.1 NATO has developed a matrix "Route Taxi Inflation Rate" which shows the simple average of the price changes of some key inputs into route taxi operations between 2005 and 2007.

Average Costs Facing Route Taxi Operators

Item	Nov. 2007	Nov. 2005	Percentage change
Gasoline (per litre)	61	35	71
Oil (quart)	340	180	89
Tyres (size 13)	2,500	1,800	38
Clean and care (twice weekly car wash outlets)	700	400	75
Minor Repairs (monthly)	2,600	1,500	73
Service Parts (monthly)	1,258	503	150
Insurance (Annual Average)	35,000	26,000	34
Transport Authority Fees P.A.	8,400	5,000	68
Examination Fees	1,500	500	300
Fees for Parking: taxi Stand (Weekly avg.)	500	250	100
Fees to "back-up men" (Weekly Average)	500	250	100
Route Taxi Inflation Rate			99.82%

2.2 Given that that the Route Taxi Inflation Rate is 99.82% NATO is requesting increase of 60% on the Base Stage rate and per kilometre charge.

NATO's Fare proposal

	Existing Rate $	Proposed Rate $
Base Stage rate	44.00	70.00
Per kilometre charge	2.50	4.00

National Council of Taxi Associations (NCOTA) Submission

2.3 The NCOTA in their response to the Transport Authority submitted a summary Income and Expenditure Statement indicating a $611,000 or 51% increase in expenditure per taxi over 2005 when the last fare adjustment was granted. NCOTA also notes that the average car being purchased to operate as a Taxi now costs on average $1,000,000 and has a depreciation rate of 20-25% per year as a car generally lasts for about four years. NCOTA argues that the actual cost of replacing a Taxi is $200,000-$250,000 more per year and that it should be borne in mind that when the last fare increase was granted, gas was $26.00 per litre compared to the current level of $70.00 per litre.

Income and Expenditure for the year 2007 in Relation to 2005			
EXPENDITURE		**2005**	**2007**
		J$	**J$**
ROAD LICENCE		7,250	7,250
TYRES	Four Sets changed per year	32,000	40,000
STRUTS	Two set change (4)	24,000	32,000
Plug Wires	One set Change	1,500	2,500
CV Joints	one change	10,000	11,200
Rack and Pinion	one change	5,500	9,500
The Rod End	twice per year	1,100	1,700
Ball Joint	twice per year	1,600	2,400
Disc Pads	6 changes per year	6,000	7,200
Brake Shoes	twice per year	940	1,800
Oil & Filter Change	average of 9 changes per year	9,000	14,000
Transmission Oil & Filter	twice per year	6,000	12,000
Professional Maintenance Fee		65,000	130,000
Battery		4,500	8,000
Examination Fee	(twice per year @ $2000)	4,000	4,000
Licensing for One Year		2,750	2,750
Park Fee		14,400	28,800
Gas		823,334	1,193,270
Insurance (Average Comprehensive) Rate		120,000	220,000

General Washing & Cleaning		57,600	86,400
TOTAL		**1,196,474**	**1,807,520**
Less Amount for 2005			**(1,196,474)**
INCREASE ON EXPENDITURE			**611,046**

2.4 NCOTA also alluded to the fact that a typical vehicle purchase of J$1 million would require a depreciation charge of 20-25% per annum.

2.5 The NCOTA indicated that on the basis of 10 round trips a day on a Montego Bay to Rosehall trip, the existing $70 fare for that journey would produce an annual revenue of $1,612,800. NCOTA argues that operators currently have to work overtime make up shortfall in income.

CHAPTER 3: REVIEW BY TRANSPORT AUTHORITY

3.0 The Transport Authority conducted research including a survey of on the level of expenditure incurred in operating a taxi. Their findings are shown below.

OPERATION EXPENSE (ROUTE TAXI)			
	Annual COST	**Monthly COST**	**Daily COST**
CAPITAL COST:			
Cost of the Vehicle 5 year depreciation (1999 Toyota Corolla $550,000)	110,000	9,167	440
Finance Cost (80% / 3 years @ 20% p.a.)	146,667	12,222	587
Loan Interest (148,671.28@ 3 years)	49,557	4,130	136
OPERATIONAL COST			
Insurance Cost (Average Comprehensive Rate)	150,000	12,500	600
Vehicle Registration	2,750	229	11
Fitness (required twice per year @ $2000)	4,000	333	16
Licensing Fee	9,300	775	37
Badge	2,500	208	10
L Form	1,000	83	4
Tyre Cost	36,000	3,000	144
Vehicle Servicing and Maintenance	80,000	6,667	320
(4 times per year $ for parts and service)	52,500	4,375	210
Fuel cost $3000/day @ 250 days per year	850,000	70,833	3,400
Battery Cost	6,167	514	25
Estimated repairs per year	5,500	458	22
Taxi Association (membership fee and dues)	10,800	900	43
Bus Park/Car Park Fees	15,000	1,250	60
General Washing & Cleaning ($300 per day)	75,000	6,250	300
Total Operational Cost	**1,606,740**	**133,895**	**6,365**
Profit Mark-up - 30%	482,022	40,169	1,909
	2,088,762	**174,063**	**8,274**

3.1 Two hundred and fifty (250) operational days per year was derived by taking out Sundays. One day per week is allocated for the driver's salary.

CHAPTER 4: OUR ANALYSIS

Methodology

4.0 The fare structure for route taxis is broken out into a Base Stage Rate and a variable rate for each additional kilometre travelled. The Base Stage Rate recovers the fixed costs from the total passenger load and also includes the first two kilometres of travel. The variable rate recovers costs that are the function of distance travelled. It is therefore necessary to break out the costs into fixed and variable components. In addition, the operating characteristics of a typical taxi operator have to be established in order to derive unit cost of operation. None of the submissions provided adequate details of the above requirements so the Office updated assumptions made in the last recommendation to the Minister with data gleaned from the submissions and research by the Transport Authority along with mini surveys taken by the OUR.

4.1 With regards to expenditure Items, there was wide variation in the levels of line items of expenditure submitted by the associations. The Office relied on research done by the Transport Authority where it deemed the results to be reasonable estimates of expenditures. Modification or additions were done where the Office accepted the estimates submitted by one or more of the associations and based on the research done by OUR staff.

Operating characteristics

Number of seats

4.2 The number of available seats was determined to be four based on the normal legal seating capacity for motor cars of five persons inclusive of the driver. The requirement of the route taxi licence is for a passenger seating capacity of four.

Load factor

4.3 The load factor was assumed to be 100% based on the practice where the vehicle does not depart from its base until it is fully loaded. No account was taken of drop-offs and picks-ups along the way. There was also no adjustment for the impact of discounted fares for children.

Number of Operating days per year

4.4 It was assumed that the taxi operated for 300 days per year (six days per week for 50 weeks). The Transport Authority estimate of 250 day was adjusted as the Authority accounted for one day per week as belonging to the driver as his form of payment. The Office deemed it more appropriate to account for the driver's wages directly and to use the total number of days that the vehicle which is deemed operational as this is a driving factor for computing the level of maintenance necessary.

Kilometres operated per day to earn revenue

4.5 This is the number of kilometres charged for each day. The Office has used the submission of the NCOTA of a typical 10 round trips per day. Taking a sample of taxi operations in the St James region, the Office has determined that the average trip is 10 kilometres. This gives an estimated 200 operating kilometres per day. On an annual basis this amounts to 60,000 kilometres. The level of fuel expenditure proposed by the associations would suggest that taxis are operating far in excess of this amount. This would also account for the levels of some of the proposed expenditure items submitted by the associations. Operating distance is a driver for both cost and revenues and, as suggested by one association, operators are working excessive hours to obtain additional revenues to cover rising costs. This however may be counterproductive if there is a more than proportionate increase in operation and maintenance charges. The Office is of the opinion that, in the interest of the safety of passengers, operators should be able to cover costs over a moderate level of driving time. At the level assumed by the Office operation and maintenance expenditures will therefore be less than what the associations have proposed based on their current experience. The Office is of the opinion that 200 kilometres per day is a reasonable estimate of revenue potential but this estimate should also guide the level of costs allowed.

Kilometres travelled per day

4.6 In estimating the total kilometres travelled per day the Office has assumed an additional 20% of dead mileage or distance travelled and not charged for. This takes into account travel to and from points of operation, detours and administrative usage.

Number of passengers per year

4.7 This is calculated as:
(2 * number of round trips * seating capacity * number of operating days per year * load factor)

Depreciation rate

4.8 The motor vehicle is depreciated over five years at 20% per year.

Kilometres travelled per quart of lubricant

4.9 An estimated oil change of four quarts every 6,000 kilometres amounts to 1,500 kms per quart of lubricant.

Kilometres travelled per litre of fuel

4.10 This was estimated to be 9.18 km/litre of the equivalent of 25 miles per imperial gallon. The US Department of Energy estimates that a 2003 Toyota Corolla has a fuel efficiency of 25 miles per US gallon (30 miles per imperial gallon) for city travel and 34 mpg (40 miles per imperial gallon) for highway travel. The OUR estimate is lower than that of the Department of

Energy as it takes into consideration the state of local roadways which sometimes require travel at low speeds which would reduce fuel efficiency.

Revenue earning kilometres per litre of fuel

4.11 The above was modified by the dead mileage as per:

$$\text{Revenue earning km per litre} = \text{Km travelled per litre} \cdot \frac{\text{Km operated per day}}{\text{Km travelled per day}}$$

Number of tyre change per year

4.12 At 240 kilometres travelled per day on 72,00 kilometres on an annualised basis, and assuming that a tyre will give 25,000 kilometres of usage on rougher rural roads, three sets of tyres (12) are needed annually.

Assumptions for Route Taxi Operations	
Number of seats	4
Average load factor	1
Number of operating days per year	300
Km operated per day	200
Km travelled per day	240
Number of round trips per day	10
Number of passengers per year	24,000
Annual depreciation rate (%)	20
Km travelled per quart of lubricant	1,500
Km travelled per litre of fuel	9.18
Revenue earning Km per litre of fuel	7.65
Km travelled per tyre	25,000
Number of tyre change per year	12

Financing assumptions

Exchange rate

4.13 The current rate of US$1 to J$72 is assumed.

Interest rate

4.14 An add-on rate of 14% which is equivalent to a rate of 19.4% on the reducing balance for a 5 year loan is assumed. This is the current rate of one of the major commercial banks.

Capital cost of vehicle

4.15 Operators typically purchase used vehicles whether imported or sourced locally for the purpose of operating a taxis. The Office concurs with the NCOTA that a value in the range of J$1 million (US$14,000), representing a 5 year old mid-sized vehicle, is appropriate. Older vehicles would increase maintenance levels and would have shorter useful lives thus reducing the time available to recover capital invested.

Financial Parameters	
Exchange rate (J$ to US$)	72
Interest rate on loan (add on % per year)	14
Capital cost of vehicle (US$)	14,000

Operating expenditures

Annual insurance

4.16 The Office accepts the estimate of the Transport Authority of $150,000 as comprehensive insurance for motorcars. This is in accordance with quotes obtained by the Office for vehicles of the type and value assumed.

Vehicle servicing and maintenance

4.17 As mentioned above the level of servicing and maintenance expenditure correlates with the number of kilometres operated. The expenditures proposed by the associations do not reconcile with their assumption of revenues based on an average 10 round trips. The Office is of the view that there should be consistency in the assumptions for both revenues and expenditures and has based the allowed expenditures on the same moderate level of operation that is assumed in the chargeable kilometres operated. On the basis of 60,000 of operating kilometres and 72,000 of total kilometres travelled, the Office has allowed the following expenditure for servicing and maintenance:

Servicing	$80,000
Parts	$87,500
Other repairs	$10,000
Battery	$6,167
Washing & cleaning	$40,000

Tyre cost

4.18 At an estimated $3,000 each total tyre cost for the year is $36,000 based on the assumption of 12 tyre change per year as detailed above.

Driver wages and benefits

4.19 The Office has explicitly included a provision for driver wages rather than an indirect allowance of one day per week use of the vehicle as is the common practice. This allows for a better estimation of costs and revenues. The amount allowed is $520,000 per annum.

Fees and dues

4.20 The Transport Authority has detailed the regulatory fees charged for taxi operations. Other dues and fees are as recommended by the Authority.

OUR approved expenditure estimates		
	J$	J$
Annual Insurance		**150,000**
Servicing	80,000	
Parts	87,500	
Other repairs	10,000	
Battery	6,167	
Washing and Cleaning	40,000	
Annual Vehicle service and maintenance		**223,667**
New tyres		**36,000**
Driver wages and benefits per year		**520,000**
Licensing fee	9,300	
Badge	2,500	
L form	1,000	
Vehicle registration	2,750	
Fitness	4,000	
Taxi association dues	10,800	
Bus park/ car park fees	15,000	
OUR Regulatory fee	5	
Total fees and dues		**45,355**
TOTAL DIRECT EXPENDITURES		**1,860,032**

Overheads

4.21 An allowance of 15% on variable costs is made for overheads.

Profit margin

4.22 The Office has included interest on the capital invested in the allowed expenditures however the operators will need an outlay of working capital to cover ongoing expenses. The Office has allowed a gross profit margin of 15% on total expenditures.

Unit cost of operation

4.23 The Office has allocated expenditure into fixed costs (items that do not vary with the level of operation) and variable costs. The unit variable cost was derived by dividing the variable cost by the kilometres operated and the passenger cost per kilometre was derived by dividing the variable cost by the seating capacity.

4.24 The unit fixed cost was derived by dividing the fixed cost by the annual passenger load.

Calculation of unit fixed and variable costs			
	Variable cost per km	**Fixed costs**	**Total costs**
	J$/km	J$	J$
Depreciation		201,600	201,600
Interest		141,120	141,200
Fuel cost	8.76		525,490
Lubricants cost	0.23		16,800
Driver wages		520,000	520,000
Insurance cost		40,000	40,000
Maintenance costs	3.11		223,667
Tyre costs	0.50		36,000
Licence costs		45,350	45,355
Subtotal	12.60	1,058,711	1,860,032
Overheads	1.89		136,058
Profits	1.89	158,711	294,769
Total	**16.38**	**1,216,781**	**2,290,861**
Variable cost per passenger (km)	**4.09**		
Fixed cost per passenger		**50.70**	

4.25 Base Stage Fare = (fixed cost per passenger) + (2 * variable cost per passenger kilometre).

4.26 Base Stage Fare equates to **$58.88**.

4.27 A charge of **$4.09** is applicable for each additional kilometre after the initial two kilometres.

4.28 The table above indicates that fuel comprises over 50% of variable costs and foreign exchange movements will affect other expenditure items. The Office recommends that a combined movement of 20% from the assumed fuel price and exchange rate should trigger a review of the rates.

CHAPTER 5: CONSULTATION

5.0 The Office in accordance with its duty to consult with stakeholders that may be affected by its decisions invited comments on the proposal by means of advertisement placed in the two major daily newspapers. Details of the NATO proposal was made available on the Office's website and the detailed submissions were made available in the Information Centre of the OUR. The print and electronic media also gave prominent coverage of the story. The Office did not receive any comments from the public.

CHAPTER 6: RECOMMENDATIONS

The Office recommends

1. A Base Stage fare of **$58.88** for the first two kilometres of travel
2. A charge of **$4.09** for each additional kilometres thereafter
3. A review of the fares in the event that there is a **20%** change in either fuel price or exchange rate

For practical purposes, fares of $60.00 for the Base Stage and $4.00 for each kilometre thereafter could be implemented.