

# *Review of 2011/12 annual taxi licence release for Sydney*

## Final Report

*Transport NSW*

*Final Report*

*18 March 2011*

*(revised 29 April 2011)*

**pwc**

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you like to grow?*



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## **Disclaimer**

This Issues Paper has been prepared for Transport NSW (Transport NSW)

In preparing the Report, PricewaterhouseCoopers (PwC) has only considered the circumstances of Transport NSW. Our Report may not be appropriate for use by persons other than Transport NSW and we do not accept or assume responsibility to anyone other than Transport NSW in respect of our Report.

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## Acronyms

Abbreviation	Full Text
<b>ATDA</b>	Australian Taxi Drivers Association
<b>CPRS</b>	Carbon Pollution Reduction Scheme
<b>DTMR</b>	Department of Transport and Main Roads (Queensland)
<b>FAL</b>	Fringe Area Licence
<b>GSP</b>	Gross State Product
<b>KPI</b>	Key Performance Indicator
<b>LPG</b>	Liquefied Petroleum Gas
<b>model</b>	Taxi Growth Model
<b>NSW BC</b>	NSW Business Chamber
<b>NSW TDA</b>	NSW Taxi Drivers Association
<b>PAL</b>	Peak Availability Licence
<b>PwC</b>	PricewaterhouseCoopers
<b>SFD</b>	State Final Demand
<b>TAMS</b>	Department of Territory and Municipal Services (ACT)
<b>TWU</b>	Transport Workers Union
<b>VTD</b>	Victorian Taxi Directorate (Victoria)
<b>WAT</b>	Wheelchair Accessible Taxi

## Notice of Revision

Please be aware that this version has been revised from the original Report dated 18 March 2011.

### Changes to original version

Paragraph under heading *Provision of Price Information* in Appendix E of original version :

*The Government identified the price of the highest bid for each licence type, which then became the uniform price at which the conventional licences and WATs would be sold.*

Revised paragraph under heading of *Provision of Price Information* in Appendix E:

*The Government identified the price bid for the 200th highest bid, which then became the single price at which the 200 conventional licences would be sold. This meant that all but the 200th highest bidder paid a price lower than the price they bid during the tender process.*

## Summary of recommendations

Further to taxi licensing reform amendments in late 2009, Section 32C(3) of the *Passenger Transport Act 1990* sets out the matters that the Director-General must consider in making the annual determination of the number of annual taxi licences.

The recommendations from this review are for the 2011/12 licence release only and do not represent a recommendation or position for future determinations. The relevant matters and recommendations resulting from PwC's review are summarised below:

### Summary of recommendations for the 2011/12 annual licence determination

Matters for consideration	Recommendations for 2011/12
<b>Number of annual licences to be issued</b>	<ol style="list-style-type: none"> <li>1. Based on the model and approach proposed for the 2011/12 Sydney Taxi Growth Model, the recommended number of to be released in Sydney during the year commencing 1 July 2011 is:                             <ul style="list-style-type: none"> <li>– 197 new growth annual taxi licences (3.6% fleet growth)</li> <li>– An additional 30 licences to replace those expiring in 2011/12</li> <li>– Total of 227 growth and replacement licences.</li> </ul> </li> <li>2. It is recommended that Transport NSW collect meter swing data from each network on an annual basis (beginning with the years 2009/10 and 2010/11 for possible incorporation in the 2012/13 determination), in order to provide a more comprehensive measure of passenger demand than the current 'network booking' measure in the Model.</li> </ol>
<b>Number and class of annual licences for authorised taxi drivers</b>	<ol style="list-style-type: none"> <li>3. The number of licences to be issued to eligible, authorised taxi drivers only should represent between 50-70% of the new growth licences released in 2011/12.</li> <li>4. The remaining growth and replacement licences should be open to anyone to apply.</li> <li>5. PwC recommends all growth licences be unrestricted (i.e. no restriction on time of operation) to allow the market to decide on the hours of operation and the price for a licence based on this. However, there may be grounds to release a portion of taxi driver only licences as peak availability licences given the suitability of these licences for owner drivers and the role such licences can play to vary traditional changeover times.</li> </ol>
<b>Potential limit on the number of licences granted to an applicant or related applicant</b>	<ol style="list-style-type: none"> <li>6. Limit on the number of licences:                             <ul style="list-style-type: none"> <li>– Maintain 2010/11 restrictions whereby the taxi driver only category is limited to one licence per successful applicant</li> <li>– For the remaining licence categories open to anyone to apply, do not restrict the number of licences that an individual or entity can obtain to promote competition for emerging operators and networks.</li> </ul> </li> <li>7. Market share of licences                             <ul style="list-style-type: none"> <li>– Based on the current taxi industry structure, it is not considered necessary for the 2011/12 release to restrict the total number of licences or percentage of market share, an individual or entity can own or operate.</li> </ul> </li> </ol>

Matters for consideration	Recommendations for 2011/12
	<p>In the future, this aspect may warrant review if the structure of the taxi industry changes significantly and there are demonstrated abuses of market power from owning or operating a large quantity of licences.</p>
<p><b>Other matters relating to the issue of annual licences</b></p>	<p>Method to release taxi licences:</p> <ol style="list-style-type: none"> <li>8. Retain the 2010/11 release sealed bid, e-tender process as stakeholder views suggest that there are no significant issues to justify a change. However, further consideration of alternative methods and their advantages/disadvantages is still warranted for future releases.</li> <li>9. Transport NSW should increase awareness and communication within the bidding process. This includes continuing to provide officer(s) from Transport NSW that are available for bidders to seek procedural advice during the process of submitting an online tender.</li> </ol> <p>Low emission/hybrid class licences:</p> <ol style="list-style-type: none"> <li>10. It is not recommended at this stage that Transport NSW allocate licences in the annual release specifically for low emission or 'green' licences, nor to provide a discount incentive. If Transport NSW wishes to pursue a policy of actively promoting 'green' initiatives in the taxi industry, the use of subsidies across the entire industry may be more effective.</li> </ol>

## Executive summary

### *Introduction*

In late 2009, legislation was passed that changed the way taxi licences are administered in the Sydney Metropolitan Transport District. The purpose of the changes was to make it easier to progressively get more taxis on the road. Further objectives were to align supply of taxis with passenger demand (including latent demand), provide a more affordable means of entry to the industry, reduce barriers to entry, reduce pressure on fare increases and simplify existing taxi licence structures.

The legislation involved a new supply-based model that requires the Director-General of Transport NSW to determine the number of renewable, non-transferable annual licences to be released each year for which an annual licence fee is payable.<sup>1</sup>

In 2010, PwC was commissioned to develop a Sydney Taxi Growth Model to help Transport NSW to assess the need for taxi fleet growth in Sydney on an annual basis. The model was first used to inform the 2010/11 licence release determination.

### *Purpose and scope of this review*

The Director-General must determine before 31 March of each year the number and class of new licences to be released for the year commencing 1 July, and may also consider other factors related to the annual release. The Director-General may also seek public submissions before making a determination.<sup>2</sup>

To assist in this process, PwC's scope is to:

- Review and update the Sydney Taxi Growth Model
- Consult with stakeholders on the suitability of the model to assist in estimating the number of annual licences for release in 2011/12
- Consult with stakeholders on other issues relating to taxi licences in Sydney, including the distribution of licences to be released, method to release taxi licences and determine the annual licence fee, potential limit on the number of licences issued to a single applicant and assessment of low emission/hybrid class licences
- Provide a report to Transport NSW to inform the 2011/12 determination by the Director-General.

The consultation process undertaken as part of this review has involved:

- Release of an issues paper and call for public submissions (7 -21 February 2011)
- Hosting a stakeholder forum with taxi industry and other stakeholders, as well as select industry consultations to understand views on the annual release and relate issues (on 16 February 2011).

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<sup>1</sup> Excluding wheelchair accessible taxis (WAT) licences, which continue to be available on application for \$1,000 per annum to Transport NSW

<sup>2</sup> Refer to <http://www.transport.nsw.gov.au/taxireform>

## *Matters relevant to the determination*

Section 32C(3) of the *Passenger Transport Act 1990* (the PTA) sets out the matters that the Director-General must consider in making the annual determination on the number of annual taxi licences to release in Sydney during the year commencing 1 July. Any such determination may also do any of the following:

- Number of annual licences to be issued
- Number and class of annual licences for authorised taxi drivers only
- Potential limit on the number of licences issued to a single applicant or related applicants
- Other matters - other matter relating to the issue of annual licences that is prescribed by the regulations.

The PTA also requires that the Director-General has regard to the following matters in making the annual determination:

- Likely passenger demand and latent demand for taxi services
- Performance of existing taxi-cab services
- Demand for new taxi licences
- Viability and sustainability of the taxi industry
- Any other matters the Director-General considers relevant, having regard to the objective of ensuring improved taxi services.

Each of these matters is discussed below.

### *1. Number of annual licences to be issued*

As part of the review for the 2011/12 release, PwC has considered ten factors and weightings applied in the 2010/11 Sydney Taxi Growth Model. Drawing on feedback from stakeholder consultation, some adjustments have been made to model components and their weightings, and updated data incorporated for each model component. Feedback from stakeholders and Transport NSW has been critical to this process.

PwC emphasises that because continuity of components and weightings will enable comparison of trends over time, changes to the 2010/11 approach have only been made if there is compelling reason supported by verifiable data. The availability of verifiable data is one of the key issues limiting the scope of possible model components.

Further to submissions made, the unemployment component was removed, and the 5% weighting re-allocated to Sydney population size providing greater emphasis on the influence of population growth on demand. All other components and weightings were kept as in the 2010/11 model. The model was also aligned with changes in components over an annual period.

It is recommended to consider for the 2012/13 determination whether there is merit in replacing or adding to the current components (based on secondary market data) to include time series average annual licence bid prices or the ratio of bids received to licences released.

## Outcome of the 2011/12 model

Based on the model and approach outlined above the recommended number of growth taxi licences to be released in Sydney during the 2011/12 year is 197. The drivers of taxi demand used in the model reflect key aspects considered by the Director General in the determination of licences to release and their effect on the model reflect changes in components over the year 2010/11 to 2011/12:

### *Likely passenger demand and latent demand for passenger services:*

- In the 2011/12 model, NSW Government projections for economic activity and population are factors used to indicate likely passenger demand. Historical taxi network bookings and Sydney Airport passenger numbers and are used to understand latent demand over the past year. Broadly, all of these indicators have increased, suggesting an increase in likely passenger demand and latent demand
- A benefit of retaining 'indirect' demand measures in the model such as state final demand and Sydney population is that these provide an indication of the potential market size for the industry. Using current, direct measures as the only indicators of demand may increase the risk of limiting industry growth and loss of market share against other competitors such as hire cars
- Whilst only representing 20-40% of total taxi jobs, network bookings is considered the most reliable proxy available at this stage (without access to all network's meter swing data over a two year period). Network bookings have increased by 1.9% between 2009 and 2010. This represents a change from last year, when growth of -1.1% was included the 2010/11 model, and indicates greater demand for pre-booked taxi services.

### *Industry viability and sustainability and demand for new licences*

- In the 2011/12 model, viability and demand for new licences is measured by considering historical data for changes in the transfer value of transferable unrestricted licences and plate lease costs. These secondary market values of licences and plate lease costs are considered to represent the best current proxies for not only recently Government issued plates, but also those ordinary plates existing in the market. When at least two years of data is available on the bid values/bid numbers for the annual licence releases, there will be opportunity to incorporate annual licence values into the model (i.e. for the 2012/13 release)
- The transfer value of unrestricted licences has increased 4.0% between 2009 and 2010, though this is a lower increase than the 9.6% measured in the 2010/11 model. Plate lease costs have also increased 9.2% between 2009 and 2010. These increases suggest demand for new licences and also indicate an industry viability issue from higher licence costs

### *Performance of existing taxi services*

- Existing taxi performance can be measured by industry performance data. In the 2011/12 model taxi industry performance is represented by average pickup time, percentage of pickups in 15 minutes and percentage of no cars available. If average pickup time or percentage of no cars available increase, this may indicate inability of the industry to serve customer demand
- Actual data indicates that the percentage of no cars available has increased by 13.2% between 2009 and 2010. This component has had a significant impact on the model due to the large percentage increase, which has been accentuated when compared to its impact in last year's model when this component decreased.

The outcome of the 2011/12 model is shown in Table ES.1 below.

**Table ES.1 Outcome of the 2011/12 model**

Key drivers of taxi demand	Component	Weighting		Growth	Contribution to 2011/12 model
<b>Likely passenger demand and latent demand for passenger services</b>	State final demand (NSW economic activity)	20%	50%	3.5%	0.700%
	Sydney population size	10%		1.2%	0.118%
	Unemployment rate	0%		-4.8%	0.000%
	Sydney Airport passenger numbers	10%		6.5%	0.654%
	Total network bookings	10%		1.9%	0.185%
<b>Industry viability and sustainability and demand for new licences</b>	Value of licences	10%	20%	4.0%	0.403%
	Plate lease costs	10%		9.2%	0.924%
<b>Performance of existing taxi services</b>	Annual average pick up time (mins)	10%	30%	0.2%	0.020%
	Percentage of pickups within 15 mins	10%		4.3%	-0.427%
	Percentage of 'no cars available'	10%		13.2%	1.321%
<b>Taxi fleet growth</b>					<b>3.9%</b>
<b>Number of new annual taxi licences</b>					<b>215</b>
<b>Adjustments</b>	(1) Number of WATs released (representing portion of standard jobs)				-40
	(2) Attrition of licences				1
	(3) Staged release of demand backlog				21
<b>Number of new annual taxi licences</b>					<b>197</b>
<b>Total Taxi Fleet growth</b>					<b>3.6%</b>

The fleet growth of 3.6% as suggested by the model is at the lower end of the long term average demand growth of 3-5% which is based on an economy growing at trend and relative stability in the market share of taxis, hire cars and tourist vehicles. This long term average range was determined in 2010 using both industry growth rates (radio bookings and Sydney airport passenger numbers) as well as external published analysis relating to the taxi industry.

In addition to fleet growth, the table below presents the total licence release including replacement of the existing short term licences due to expire in 2011/12 (short term licences can no longer be issued in Sydney, therefore a new annual licence is to be issued to ensure no reduction in service).

**Table ES.2 2011/12 total annual licence release including growth and replacement licences**

Key drivers of taxi demand	Component	Contribution to total licence release
<b>Number of new annual taxi licences</b>		<b>197</b>
<b>Replacement licences due to expire in 2011/12</b>	Peak availability licences	24
	Unrestricted licences	1
	Fringe area licences	5
<b>Number of new and replacement annual taxi licences for 2011/12</b>		<b>227</b>

## *2. Class and number of annual licences for authorised taxi drivers*

On 30 March 2010, the Director-General determined that 316 annual taxi licences be issued during the year commencing 1 July 2010, comprised of 167 growth licences (Unrestricted) identified from the 2010/11 Sydney Taxi Growth Model – representing a 3.2% fleet growth; and 149 replacement licences made up of 52 unrestricted, 90 peak availability licences (PALs) and 7 Fringe Area Licences (FALs).

The licences were tendered in two stages so that there would not be a significant overlap of additional taxis on the road prior to the expiry of short-term licences in the second half of 2010/11. The Stage 1 tender comprised all 167 growth licences and 83 replacement licences.

Of the 167 growth licences, it was determined that 90 (54%) would be available to eligible taxi drivers only. However, taxi drivers were able to apply for licences in both the taxi driver only and open categories.

### **Number of taxi driver only licences**

In the 2010/11 Stage 1 tender there was strong demand for licences in the taxi driver only category with 3.8 bids for each of the 90 licences on offer. There was also strong demand from taxi drivers for licences in the open unrestricted licence and PAL categories.

The Stage 1 tender involved release of unrestricted licences available to eligible taxi drivers only, and unrestricted licences, PALs and FALs open to all (some of these being new growth licences, and some replacement licences). While it is not possible from the Stage 1 results to understand driver demand for new growth licences only, considering bids for all licences, taxi drivers (including the categories drivers and drivers/operators) comprised 58% of all applications (47% of all applications for the licences open for anyone to apply), and were

successful in obtaining 78% of all licences issued (66% of all licences open for anyone to apply).<sup>3</sup>

This level of interest may suggest that a range between 50-70% of the growth licences would be appropriate to reserve for taxi drivers only in the 2011/12 release.

### *Class of taxi driver only licences*

In the Stage 1 2010/11 release, all taxi driver only licences were released as unrestricted licences (i.e. not PALs or FALs).

PwC recommends all growth licences be released as Unrestricted to allow the market to decide on the hours of utilisation of taxis and the price for licences based on this. However, there may be grounds to release a portion of these licences as PALs given the suitability of these licences for owner- drivers and the role such licences can play to vary changeover periods.

### *3. Potential limit on the number of licences issued to a single applicant*

Currently, the majority of Sydney taxi licence holders own just one or two licences. The largest licence holder owns 5.5% of the Sydney taxi fleet.

The taxi licence market in Sydney is fairly mature and characterised by a fairly large secondary market for licences and leasing. Over time a small number of players have established a strong presence in the industry.

Preliminary information indicates that taxi drivers have been successful in obtaining approximately 67% of licences issued to date in the Stage 1 open categories. The outcomes of both the interim and 2010/11 Stage 1 tender indicate that taxi drivers and individuals have taken up a majority of licences.

Given that the largest licence holder owns 5.5% of the Sydney taxi fleet, there are stakeholder suggestions that it would need to be demonstrated that existing legislation was insufficient to deal with abuse of market power before constraining market share of licence ownership.

While there are differing views from stakeholders on this, at this time, there does not appear to be any significant reasoning to limit the number of licences issued to a single applicant.

### *4. Other matters relating to the issue of annual licences*

#### *4.1 Method to release taxi licences*

There are three methods currently being considered by Transport NSW to release taxi licences in the 2011/12 release:

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<sup>3</sup> Note: Not all taxi drivers applying for licence in the open categories were eligible to apply for a licence in the taxi driver only category.

- *Electronic tender (as used for the 2010/11 licence releases)* - This method generally provides a measure of willingness to pay, but can be hindered by bidders not being able to see what others are willing to pay. Stakeholders recognise the advantages of using an electronic on-line system due to the speed and efficiency of the process as well as the opportunity for applications to be validated prior to lodgement to minimise errors or mistakes. However, this online mechanism requires adequate knowledge and ability of participants. This knowledge extends to not only knowledge of the application process, but also how to effectively use technical equipment and navigate online programs

To assist interested applicants, Transport NSW provided a contact number on the front of the tender package for bidders seeking assistance. The high compliance rate of the electronic system with only 4 out of 1,801 applications non-compliant) compared to the paper-based system suggests that it was successful in optimising compliance. The high rate of applications per licence offered also suggests that the online process was not a deterrent to applicants

- *Auction / in person / price revealed model* - This model provides bidders with the opportunity to respond to prices nominated by other bidders until a threshold of their willingness or ability to pay is reached. This could be implemented by electronic or in-person bidding
- *Auction / electronic / price revealed model* - An electronic system may necessitate greater time upfront in planning and delivering the system by Transport NSW, but can reduce the time needed to receive and sort applications, as well as to make offers. Given that an e-tender process was recently implemented by Transport NSW in 2010, there may be advantages in maintaining consistency of method so that participants have an opportunity to learn and understand the procedures

Some submissions to this review highlighted disadvantages of auction processes, including the ability to be physically present at an in-person auction, the different technical abilities of bidders in an electronic auction, and the potential for manipulation of market price.

At this time, the range of feedback received for all possible approaches did not raise significant issues that would justify a change to the current method used to release licences (sealed bid, e-tender process). However, further consideration of alternative methods and their advantages/disadvantages is still warranted to understand this further.

## 4.2 Assessment of low emission/hybrid class licences

In addition to considering the method to release taxi licences, Transport NSW has requested that PwC consider low emission/hybrid class licences as part of this review.

During the stakeholder forum, stakeholders expressed wide ranging support for the notion of environmental awareness within the taxi industry. Stakeholders did note, however, that it would be more equitable to provide incentives for the entire industry rather than future licence releases only.

As such, it is not recommended that Transport NSW introduce a class of low emission or 'green' licences or provide a price advantage for low emission vehicles. This policy is for Transport NSW to consider in further reviews. If Transport NSW wishes to pursue a policy of actively promoting 'green' initiatives in the taxi industry, stakeholders suggest the use of subsidies across the entire industry.

# 1 Introduction

## 1.1 Recent taxi licensing reform

In late 2009, legislation was passed that changed the way taxi licences are administered in the Sydney Metropolitan Transport District.

The purpose of the changes was to make it easier to progressively get more taxis on the road with objectives to:

- Ensure that the supply of taxis responds closely to growth in passenger demand for taxi services
- Provide a more affordable means of entry to, and expansion of, the industry without unreasonable impacts on the value of existing transferrable licences
- Reduce reducing barriers to entry and encouraging competition
- Place downward pressure on fares over time
- Simplify existing taxi licence structures.

The legislation involved a new supply-based model that requires the Director-General of Transport New South Wales (NSW) to determine the number of renewable, non-transferable annual licences to be released each year for which an annual licence fee is payable (excluding wheelchair accessible taxis (WAT licences)<sup>4</sup>).

The 12 month non-transferable licences can be renewed annually nine times (that is a total of 10 years of operation) on payment of the annual licence fee, which can be paid by monthly instalments.

In addition, the NSW Government does not set the fee for the new annual taxi licences. The tender or auction process will establish the annual licence fees for each of the licences being offered based on applicant bids. Importantly, the annual licence fee set for each licence by public auction or sealed tender will remain the same for up to 10 years.

In 2010, PwC was commissioned to develop a Sydney Taxi Growth Model to help Transport NSW to assess the need for taxi fleet growth in Sydney on an annual basis. The model was first used to inform the 2010/11 licence release determination.

## 1.2 Purpose of this report

The Director-General must determine before 31 March of each year the number and class of new licences to be released for the year commencing 1 July. The Director-General may also seek public submissions before making a determination.<sup>5</sup>

In making this determination, the Director-General is to have regard to the following matters, as set out in section 32C(3) of the *Passenger Transport Act 1990*:

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<sup>4</sup> WAT licences continue to be available on application for \$1,000 per annum to Transport NSW

<sup>5</sup> Refer to <http://www.transport.nsw.gov.au/taxireform>

- Likely passenger demand and latent demand for taxi services
- Performance of existing taxi services
- Demand for new taxi licences
- Viability and sustainability of the taxi industry
- Any other matters that may be relevant.

The Director-General may also consider whether it is necessary to:

- Make a certain number of licences available to authorised taxi drivers only
- Limit the number of licences granted to the same applicant, or related entity, to promote competition.

To assist in this process, PwC's scope is to:

- Review and update the Taxi Growth Model
- Consult stakeholders on the suitability of the model to assist in estimating the number of annual licences for release in 2011/12
- Consult stakeholders on other specific issues relating to taxi licences in Sydney, namely:
  - Distribution of licences to be released
  - Method to release taxi licences and determine the annual licence fee
  - Potential limit on the number of licences issued to a single applicant
  - Assessment of low emission/hybrid class licences
- Provide a report to Transport NSW to inform the 2011/12 determination by the Director-General.

### 1.3 Consultation process

Preparation of this report has involved a consultation process to inform the Director-General's determination:

- Release of an issues paper to guide public submissions (7 – 21 February 2011)<sup>6</sup>
- Hosting a forum with taxi industry and other stakeholders, as well as select industry consultations to understand views on the annual release and relate issues (on 16 February 2011)

A list of stakeholders consulted with and submissions received is in Appendix A.

### 1.4 Structure of the report

The remainder of the report is structured to consider each of the matters the Director-General must consider in making 2010/12 determination<sup>7</sup>:

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<sup>6</sup> Refer to <http://www.transport.nsw.gov.au/201112-annual-taxi-licence-release-issues-paper>

- Chapter 2 – considers the number of annual licences to be issued during the year commencing 1 July 2011
- Chapter 3 – considers the class of annual licences that are to be issued to authorised taxi drivers who are also accredited taxi operators
- Chapter 4 – considers whether there is merit to limit the number of annual licences that may be granted to a single applicant
- Chapters 5 and 6 consider other matters relating to the issue of annual licences as requested specifically by Transport NSW, namely:
  - Method to release taxi licences and determine the annual licence fee
  - Assessment of low emission/hybrid class licences.

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<sup>7</sup> Passenger Transport Amendment (Taxi Licensing) Act 2009, s32C(3)

## 2 Number of annual licences to be issued

Section 32C(3) of the *Passenger Transport Act 1990* (the PTA) sets on the matters that the Director-General must consider in making the annual determination of the number of annual licences (excluding wheelchair accessible taxis) to be issued in Sydney.

This chapter considers factors to estimate the number of annual licences to be issued during the year commencing 1 July 2011.

To do this, it provides an overview of the 2010/11 Sydney Taxi Growth Model developed to consider the factors identified in the legislation, and then describes proposed changes to this model for the 2011/12 release, drawing on outcomes of stakeholder consultation.

### 2.1 Factors to consider in determining the number of annual licences

Section 32C(3) of the PTA (1990) requires that the Director-General has regard to the following matters in making a determination:

1. Likely passenger demand and latent demand for taxi services
2. Performance of existing taxi-cab services
3. Demand for new taxi-cab licences
4. Viability and sustainability of the taxi-cab industry
5. Any other matters the Director-General considers relevant, having regard to the objective of ensuring improved taxi services.

### 2.2 Approach used to consider annual licence factors in 2010/11

As discussed above, the 2009 taxi licensing reform not only requires the Director-General of Transport NSW to determine the number of annual taxi licences to be released each year, but also specifies a set of factors to be considered when doing this.

In 2010, PwC was commissioned to develop a Sydney Taxi Growth Model to help Transport NSW to assess the need for taxi fleet growth in Sydney on an annual basis. This model was developed through a combination of desktop research and stakeholder consultation, to address the first four factors listed above.

#### 2.2.1 *Components in the 2010/11 Sydney Taxi Growth Model*

Development of the 2010/11 Sydney Taxi Growth Model initially involved development of components that can assist to represent the factors identified above in the legislation. Table 1 presents the ten weighted components.

Each of these components is reviewed in turn later in this chapter, reflecting outcomes of stakeholder forums and PwC consideration of the continued relevance of the components and weightings for 2011/12.

**Table 1 Components included in the 2010/11 Sydney Taxi Growth Model**

Factors identified in legislation = key drivers of taxi demand	Component
<b>Likely passenger demand</b>	State final demand (NSW economic activity)
	Sydney population size
	Unemployment rate
	Sydney Airport passenger numbers
	Total network bookings
<b>Viability and demand for new licences</b>	Value of licences
	Plate lease costs
<b>Performance of existing taxi services; latent demand</b>	Annual average pick up time (mins)
	Percentage of pickups within 15 mins
	Percentage of 'no cars available'

Source 1 PwC (2010), *Analysis on release of new annual taxi licences from 1 July 2010*, New South Wales, prepared for NSW Transport and Infrastructure, March 2010

### 2.2.2 Demand captured in the 2010/11 Sydney Taxi Growth Model

Legislation specifies that the annual licence release consider both likely passenger demand and latent demand for taxi services. As part of the consultation undertaken for the 2011/12 review, Dr. Peter Abelson, Visiting Scholar in the Department of Economics at the University of Sydney, School of Economics, also acknowledged that a structured taxi growth model such as the one applied in 2010/11 may have two purposes:

- Meet growth in passenger demand, or
- Meet latent demand.<sup>8</sup>

The 2010/11 Sydney Taxi Growth Model was constructed to measure both of these factors, though only considering latent demand over a defined period of time:

- Growth in annual passenger demand was incorporated in the model though the six measures of 'likely passenger demand', with each of these forecast for the year ahead (2010/11)
- Latent demand was incorporated to a limited extend in two mechanisms:
  - Firstly, annual growth in the measures of 'viability and demand for new licences' and 'performance and latent demand' were assessed over the period from 2006-2010

<sup>8</sup> Review of 2011/12 Annual Taxi Licence Release for Sydney: *Issues Paper*, Submission to Transport NSW, Dr. Peter Abelson, School of Economics, University of Sydney February 2011

- Secondly, an external assessment of historical growth of all ten components as set out in Table 1 above were assessed considering the change between 2006 and 2010, resulting in an adjustment to address an historical backlog.

Importantly, however, the model has been developed to represent ‘flows’ or changes in the number of licences, and is not fundamentally aimed to assess if the ‘stock’ or total number of licences adequately represents the needs of the Sydney taxi market.

### 2.2.3 Results from applying the 2010/11 Sydney Taxi Growth Model

Following application of data to measure growth in the ten components in Table 1, relative weights were applied to each component as summarised in Table 2.

**Table 2 Component weightings in the 2010/11 Sydney Taxi Growth Model**

Key drivers of taxi demand	Component	Weighting	
<b>Likely passenger demand</b>	State final demand (NSW economic activity)	20%	<b>50%</b>
	Sydney population size	5%	
	Unemployment rate	5%	
	Sydney Airport passenger numbers	10%	
	Total network bookings	10%	
<b>Viability and demand for new licences</b>	Value of licences	10%	<b>20%</b>
	Plate lease costs	10%	
<b>Performance of existing taxi services; latent demand</b>	Annual average pick up time (mins)	10%	<b>30%</b>
	Percentage of pickups within 15 mins	10%	
	Percentage of 'no cars available'	10%	

Source 2 PwC (2010), *Analysis on release of new annual taxi licences from 1 July 2010*, New South Wales, prepared for NSW Transport and Infrastructure, March 2010

The final number of taxi licence growth was also then adjusted by:

- The number of plates released throughout the previous year
- Changes in total fleet size and composition that occurred through attrition over the previous year
- The number of current licences set to expire in the following year
- The external latent demand factor discussed above.

The model outcome suggested that 167 new growth licences be released in Sydney for the year commencing 1 July 2010, representing a 3.2% fleet growth. It also identified that 149 replacement licences would need to be issued to replace existing short-term licences which were due to expire in 2010/11.

### Box 1 Alternate approaches to consider taxi fleet growth

It is not the role of this review to consider alternate approaches to taxi fleet growth, other than the supply-based model supported by the new 2009 taxi licensing legislation.

However, it is useful to understand the possible approaches available to provide some context to the report.

In 2010, Transport NSW commissioned PwC to develop a Sydney-specific Taxi Growth Model to consider the number of taxi licences to be released. In that review, it was identified that there is no widely accepted model used across jurisdictions within Australia and internationally to estimate the optimum number of taxis.

In establishing the number of additional taxis, it appears that regulators use a variety of approaches ranging from:

- Structured approaches with the use of formula-based taxi growth models (such as Queensland, using a model with four drivers of growth: demographic changes, industry issues, service levels and community expectations)<sup>9</sup>
- Unstructured approaches that may be influenced by industry pressure or policy considerations (such as Victoria)<sup>10</sup>
- Unregulated approach whereby release of plates is not regulated by government (for example as in New Zealand where in 1989 the government stopped restricting the numbers of taxis and their fares)<sup>11</sup>.

Considering the three possible approaches to taxi fleet growth discussed above, the Sydney Taxi Growth Model is a structured approach to growth. It is comprised of components to represent growth in demand for taxi services, demand for licence plates and performance of taxi services, using both current and forecast components to identify the appropriate growth of the taxi fleet in Sydney over time.

During the consultation process to prepare this report, the use of a growth model for this purpose in Sydney was broadly supported. Chief stakeholder comments on the model (discussed later in this chapter) related more to the choice of components, component weightings and measures of component growth. This appears to be due to a widely accepted view by stakeholders, that the supply of taxis should meet the demand for taxi services. In general, '*demand increases over time in a growing economy with an increasing population*' (ATDA).<sup>12</sup> It was suggested there is no concern with releasing licences as long as there is sufficient demand and bids are broadly within a price band (TWU).<sup>13</sup>

<sup>9</sup> *Taxi Licence Model Review*, Draft Final Report, SAHA, 9 December 2009, prepared for Queensland Transport

<sup>10</sup> Under a policy decision, the Victorian Government released 600 peak licences over six years from 2003 (i.e. 100 licences every year). It has also announced the release of 200 unrestricted taxi licences for metropolitan taxis and 330 WAT licences later this year.

<sup>11</sup> TeAra.govt.nz (2011), *The Encyclopaedia of New Zealand*, Taxi industry deregulation, online accessed 25 February 2011, refer to <http://www.teara.govt.nz/en/taxis-and-cabs/3>

<sup>12</sup> *Submission by The Australian Taxi Drivers Association, 2011/12 Annual Taxi License Release*, 21 February 2011

<sup>13</sup> Obtained through consultation with Transport Workers Union, 16 February 2011

Dr. Peter Abelson, Visiting Scholar in the Department of Economics at the University of Sydney School of Economics, did indicate in his submission, views that the presence of a licence fee is inefficient as it is a fee to provide a service and acts as 'a wedge between somebody wishing to provide a service and somebody getting a service'.<sup>14</sup> He did not, however indicate explicitly that he does not agree with the Sydney Taxi Growth Model nor provide alternate options.

## 2.3 Approach to consider annual licence factors in 2011/12

The 2009 NSW taxi licensing legislation sets out a set of factors to be considered when determining the number of annual taxi licences to be released each year.

PwC has considered each of the ten components applied in the Sydney Taxi Growth Model last year in turn. This analysis is based on feedback from the stakeholder consultation process, as well as incorporation of updated data for each component.

Prior to outlining this analysis, PwC emphasises that because continuity of components and weightings will enable comparison of trends over time, changes to the 2010/11 approach have only been made if there is compelling reason supported by verifiable data.

Furthermore, it is also important to note availability of reliable data is a key limitation in considering appropriate demand components and their related growth measure. Not only is some industry data not currently collated from an entire industry perspective, but there is also some data (for example on the recent NSW licence releases) that cannot be considered for inclusion in the model until two years' data is available to measure 'change' in a factor.

The remainder of this section is structured into the following key drivers/factors of taxi demand:

1. Likely passenger demand and latent demand for passenger services
2. Performance of existing taxi service and latent demand
3. Demand for new taxi licences
4. Viability and sustainability of the taxi industry
5. Other model adjustments.

### 2.3.1 *Likely passenger demand and latent demand for passenger services*

#### Components to represent likely passenger demand

In the 2010/11 model, the potential passenger demand for taxi services was represented by four indirect measures (state final demand, Sydney population,

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<sup>14</sup> Comment of Dr. Peter Abelson during the Inquiry into the NSW Taxi Industry, 3 February 2010, *Uncorrected Proof, Report of Proceedings Before Select Committee on the NSW Taxi Industry*,

unemployment rate and Sydney Airport passenger numbers) and measurement of a more direct measure of demand (network bookings).

A summary of each of the components is below:

- *NSW economic activity: measured as State Final Demand* – A measure of NSW's economic activity from an expenditure view of the economy. It encompasses expenditure by individuals, businesses and government within NSW's borders.<sup>15</sup> This aspect is considered more relevant than an alternative measure, Gross State Product (GSP) as GSP is a broader measure of economic activity than SFD and includes production activities that may not necessarily influence the demand for taxi services. State final demand is considered to be a key component of the model given it comprises a range of economic growth factors and measures
- *Sydney population size* – A measure of the current population of the Greater Sydney area
- *Unemployment rate* – A macroeconomic measure of labour market activity, which is linked to the level of economic activity. An increase in unemployment may result in a decline in the demand for taxi services
- *Airport passenger numbers* – Passenger traffic at Sydney Airport is a significant source of fare revenue for taxis. Volumes through the airport are also correlated to tourism activity levels with tourists being more active taxi users
- *Network bookings* – Network bookings represent on average 20-40% of the total Sydney market. However, in the absence of a more complete and reliable measure of passenger demand, network bookings are considered a useful proxy for direct taxi demand. The total network bookings per month is reported by each network and published by Transport NSW.

#### Consideration of reasonableness of retaining direct and indirect components

The NSW TDA indicated in their written submission that their most preferred model involved excluding state final demand, Sydney population size and unemployment rate (i.e. weightings equal to zero) and re-distributing the weightings to Sydney Airport passenger numbers (20%), total network bookings (30%) and rail passenger numbers (10%).<sup>16</sup>

This was based on NSW TDA indicating that, anecdotally, there is demand for taxi trips to and from train stations, indicating a possible similar 'direct' measure to the Sydney Airport trips.

PwC acknowledges that there may be a correlation between train and taxi trips, however without greater evidence of this correlation (e.g. a form of data to isolate total train trips resulting in a taxi trip) it is not considered appropriate to include rail trips in the 2011/12 model.

Furthermore, a benefit of retaining the 'indirect' demand measures in the model is that these provide an indication of the potential market size for the industry. Using current, direct measures as the only indicators of demand may increase the risk of limiting industry growth and loss of market share.

For example, if plates are released to satisfy only current demand, then the ability of the industry to grow and increase competitiveness compared to other

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<sup>15</sup> It includes personal and government expenditure on goods and services, and government and business fixed capital investment.

<sup>16</sup> NSW TDA Inc. Response to Plate Issues Paper, NSW TDA, February 2011

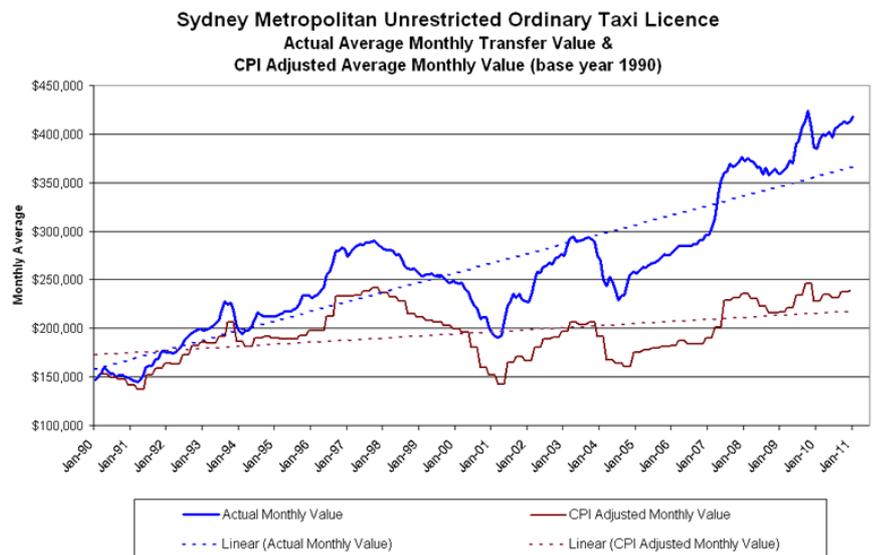
forms of transport, such as hire cars, would be restricted. In addition, the 'indirect' components are also readily measurable as forecasts of future demand given projections of each component are prepared by the NSW or Commonwealth Governments, making these measures relatively reliable.

**Consideration of reasonableness of the unemployment component**

It has been suggested that there may be a counter-cyclical trend with licence transfer values in Sydney and unemployment than may have anecdotally been expected.

While it may have been expected that higher employment would result in higher taxi demand and thus taxi values, the data indicates that licence values increase at times of higher unemployment. This can be seen indirectly from the graph of average transfer values of unrestricted Sydney licences from January 1990 to January 2011 compared against unemployment data over the same period (Figure 1).

**Figure 1 Sydney ordinary taxi licence values and economic conditions (change in Consumer Price Index over time)**

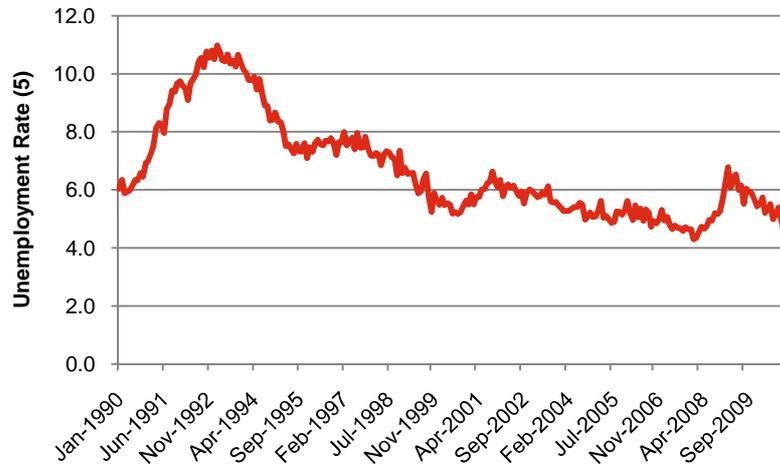


Source 3 Taxi Reform, TNSW, <http://www.transport.nsw.gov.au/taxireform/>

This can be compared to unemployment in NSW over the same period (January 1990 to January 2011). As ordinary taxi licence values increased, the unemployment rate in NSW declined (Figure 2).<sup>17</sup>

<sup>17</sup> Seasonally adjusted unemployment data for persons in NSW

**Figure 2 Unemployment rate in NSW, January 1999 to January 2011**



Source 4 ABS, Labour Force, Australia, cat no. 6202.0, latest release January 2011

Due to the divergent (and unclear) effect of unemployment on the demand for taxi services and the value of taxi licences, this component has been removed for the 2011/12 licence determination.

**Consideration of reasonableness of network bookings as a measure of direct demand**

Other feedback from the stakeholder forum and written submissions on passenger demand components related to the appropriateness of ‘network bookings’ as a measure of direct taxi demand. Evidence suggests that taxi network bookings comprise between 20% and 40% of the total taxi market, depending on the area of trip origin. The remainder of trips being rank, hail and private bookings for which complete data is not readily available on an ‘industry-wide’ basis as it is currently held by each individual network operating in Sydney. Some stakeholders (NSW TC, NSW TDA, and ATDA) indicated anecdotal evidence that taxi network bookings are declining. However, while there was a period of decline in taxi network bookings between July and September 2010, Transport NSW data relating to network bookings indicates that have increased between 2009 and 2010.<sup>18</sup>

NSW TC suggested that more reliable data regarding rank and hail may complement current network data. It has been suggested by the ATDA and NSW TDA that information provided from the running sheets of secure (supervised) ranks could provide data on the number of occupied taxis, number of passengers in each taxi and average waiting times at each rank. However, this data is not currently provided to Transport NSW and while increasing the knowledge of taxi trips, does not appear to provide an indication of total trips each year in the Sydney region.

The most complete measure of direct passenger demand could be provided by taxi ‘meter swings’ (recording each time the meter is switched on and off). Meter swings could also provide an indication of taxi fleet utilisation (as indicated by NSW TC, ATDA). However, this data is not currently provided to Transport NSW by industry, and if it was to be provided for this purpose, a reliable, time series

<sup>18</sup> Taxi KPIs July 2008 to November 2010, Transport NSW, provided to PwC 22/12/10

basis that spans more than two full years would be required prior to being able to incorporate it into the Sydney Taxi Growth Model.

## Weightings to represent relative impact of passenger demand components

In terms of weightings to determine relative affect on taxi demand, in the 2010/11 model allocated likely passenger demand a 50% weighting of the total model. This reflects a focus on passenger demand for taxi services, considered to be the most significant factor in the 2010/11 model. Weightings for each of the sub-components in 2010/11 were:

- State final demand (NSW economic activity): 20%
- Sydney population size: 5%
- Unemployment rate: 5%
- Sydney Airport passenger numbers: 10%
- Network bookings: 10%.

### Consideration of weightings for indirect components

NSW TC suggested in the stakeholder forum to reduce the weighting of passenger demand components due to the indirect nature of most of the components on the taxi industry.<sup>19</sup>

As discussed above, however, the inclusion of indirect demand measures provides an indication of the potential future market size for the industry. In addition using direct measures as the only indicators of demand may increase the risk of limiting industry growth.

The weightings will however need to be amended due to the exclusion of unemployment from the 2011/12 model. When the NSW TC proposed a model in 2005 to the Ministry of Transport (now Transport NSW), the model proposed a 30% weighting on Sydney's population. This suggests that at that time the Taxi Council considered changes in population to be the main determinant of changes in the demand for taxi services.<sup>20</sup> A further benefit of applying the weighting previously allocated to unemployment now to population, is that it provides more consistency in relative weightings across the passenger demand components. It is proposed to apply the following weightings for likely passenger demand components:

- State final demand (NSW economic activity): 20%
- Sydney population size: 10%
- Sydney Airport passenger numbers: 10%
- Network bookings: 10%.

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<sup>19</sup> Submission to the Review of 2011/12 annual taxi licence release for Sydney, NSW Taxi Council, February 2011

<sup>20</sup> Provided by NSW TC to PwC in 2010

## Data to measure passenger demand components

With the exception of the comments on network bookings as a component and data source, as discussed above, stakeholders did not provide PwC with commentary on the data used to measure each component.

In the 2010/11 model, indirect measures were estimated based on forecasts to represent potential taxi customer market. In contrast the direct measure, network bookings, was estimated as an annualised growth figure but over a four year period. This same approach is proposed for the 2011/12 determination. The only change to this is the use of only one year of historical data for the network bookings. This is because the previous 2010/11 model has already captured the change for every year to 2009, so otherwise double counting of historical trends would occur. This is likely to be the approach for future measures of this component going forward on an annual only basis.

**Table 3 Proposed data and timing to measure each 2011/12 passenger demand component**

Relevant factor	Component	Weighting	Description of data
<b>Likely passenger demand</b>	State final demand (NSW economic activity)	20%	Forecast growth between 2010/11 and 2011/12: NSW Treasury, Half Yearly Review 2010-11]. Annual data for year ending Jun 30. <sup>21</sup>
	Sydney population size	10%	Forecast growth between 2010/11 and 2011/12: NSW Department of Planning population forecasts. Annual data for year ending Jun 30. <sup>22</sup>
	Sydney Airport passenger numbers	10%	Historical growth between 2008/09 and 2009/10: BITRE 'total passengers in Sydney'. Annual data for year ending Jun 30. <sup>23</sup>
	Total network bookings	10%	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. Based on monthly disaggregated taxi network data. <sup>24</sup>

<sup>21</sup> *Half Yearly Review 2010-11*, Department of Treasury, NSW Government, released 15 December 2010

<sup>22</sup> *NSW State and Regional Population Projections: 2008 Release*, Department of Planning, available at <http://www.planning.nsw.gov.au/Programsservices/Populationandhousingprojections/tabid/124/Default.aspx>

<sup>23</sup> Data for Sydney airport passenger numbers, including both inward and outbound passengers, is published by the Commonwealth Department of Infrastructure and Transport (BITRE). Airport traffic for the financial years from 1985-86 to 2009-10 is provided on an annual basis, by airport. The most recent addition was published in October 2010.

*Airport Traffic Data 1985-86 to 2009-10*, Department of Infrastructure and Transport (BITRE), Airport Passengers, Sydney, available at <http://www.bitre.gov.au/info.aspx?ResourceId=191&NodeId=96>

<sup>24</sup> The total network bookings per month is reported by each network and published by Transport NSW. Aggregate bookings for calendar years 2009 and 2010 were compared, with the percentage change in total number of bookings used in the model.

*Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

## Summary of passenger demand for the 2011/12 determination

**Table 4 Summary of passenger demand components for the 2011/12 determination**

It is proposed to retain the following components in the 2011/12 Sydney Taxi Growth Model:

- State final demand
- Sydney population
- Sydney Airport passenger numbers
- Network bookings.

It is proposed to remove the unemployment component due to the divergent/sometimes counter cyclical relationship it appears to have with demand for taxi licences.

It is recommended that Transport NSW collect meter swing data from each network on an annual basis (beginning with the years 2009/10 and 2010/11 for incorporation in the 2012/13 determination), in order to use total taxi trip data as opposed to only network bookings as the direct measure of passenger demand.

It is proposed to apply the following weightings to likely passenger demand measures, reflecting the removal of 5% weighting to unemployment that has been added to increase the relativity of population:

- State final demand (NSW economic activity): 20%
- Sydney population size: 10%
- Sydney Airport passenger numbers: 10%
- Network bookings: 10%.

### 2.3.2 Viability and sustainability of the taxi industry

#### Components to represent viability and demand for new licences

In the 2010/11 model, viability and demand for new licences was represented by historical data for the following two components:

- *Real value of licences* – Changes in the transfer value of transferable unrestricted licences were included in the model as a means of representing industry viability as well as demand by people to enter the industry. An increase in licence values would suggest that there is capacity for additional taxis in the industry. An increase in licence values could also be expected to generate demand for new licences

- *Plate lease costs* – Plate lease costs represent an important cost to taxi operators who lease their plates (it comprises 12% of the taxi cost index,<sup>25</sup> which impacts the pay-in levels for drivers). An increase in lease costs indicates capacity for additional taxis in the industry.

#### Consideration of reasonableness of secondary market values as a measure of direct demand for annual licences

The current components in the 2010/11 model use the secondary market value of licences and plate lease costs as proxies for the demand for taxi licences and industry viability. These components represent the best current proxies for not only recently Government issued plates, but also those ordinary plates existing in the market. Each component currently has more than two years of data, which allows for use in the model.

The chief issue raised by stakeholders in relation to the viability and new licence demand component related to the reasonableness to use secondary market values as a measure in an annual licence growth model. There was also concern about the price of successful bids in the recent Interim and Stage 1 tenders, which the industry believes were too high to be sustainable.

In the stakeholder consultation, the NSW TDA suggested that the median value of all recent annual licence bids (not only successful bids) could be considered as a component to represent the demand for new annual licences. While this alternative component may be useful to indicate the actual value of licences to industry participants, this data is not currently available over a two year time period (with data only currently available to the Stage 1 release when all 167 annual growth licences and 83 replacement licences are released).

The lack of multiple time period data prevents the use of bid values in this year's licence determination. However, this data is expected to be available for consideration in the 2012/13 determination (enabling incorporation of 2010/11 and 2011/12 release bid values).

If bid values were to be incorporated into the model for future releases, either the mean or median of all bids over the year being measured could be used.

- Using a mean value as a proxy for licence price would reflect variance in bid prices and may be skewed by outlier bids
- Using a median value would represent the middle value of bids, and be less skewed by outlier (high or low) bids.

An alternative option to measuring bid values as a licence demand component would be to compare the number of bids placed (successful and unsuccessful) relative to the number of licences available. If there were more bids than licences available, this could indicate demand for more licences in the market.

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<sup>25</sup> 2009 Review of Taxi Fares in NSW, IPART, June 2009.

Data below in Table 5 for the Interim, Stage 1 and Stage 2 releases illustrate that the demand (as measured by ratio of bids) increased between the Interim and Stage 1 releases. Peak availability licences (PAL) have the highest number of bids per licence (Table 5).

**Table 5 Ratio of bids to licence released (2010/11)**

	Licence type	Number of conforming bids	Total licences to be released	Ratio of bids to number released
<b>Interim</b>	Unrestricted annual	736	100	7.4
<b>Stage 1</b>	Unrestricted annual	816	96	8.5
	Driver Only	346	90	3.8
	PAL	633	61	10.4
	FAL	2	3 (as a package)	2.0
<b>Stage 2</b>	Unrestricted annual	322	33	9.8
	PAL	213	29	7.3
	FAL	18	4	4.5

Source 5 Interim 2010-11 Stage 1 Tender data (updated), 13/01/11, Transport NSW and information provided by Transport NSW

### Weightings to represent relative impact on viability and demand for new licence components

In the 2010/11 model both demand for new taxi licences and industry viability and sustainability was represented by historical data for the following two components: :

- Value of licences: 10%
- Plate lease costs: 10%.

These components use the secondary market value of licences and plate lease costs as proxies for the demand for taxi licences and industry viability.

The chief issue raised by stakeholders in relation to this factor was the use of secondary market values to measure demand for annual licences. However, these components are considered to represent the best current proxies for not only recently Government issued plates, but also those ordinary plates existing in the market. That is, if transfer values and lease values increase then this indicates both:

- Increased demand for licences within the industry
- Increased licensing costs borne by operators, impacting on the viability of taxi operations:
  - The IPART Taxi Cost Index identifies licensing costs as the second largest cost of taxi operation at 12% of total costs which therefore affects viability
  - 78% of Sydney licences are leased by an operator from the licence holder, therefore the cost is borne by the majority of operators.

While the use of the bid values of recent annual licence releases could be considered as a component to represent the demand for new annual licences in 2012/13, this data is not yet available over a two year time period to enable annual comparison. Industry has commented that, if used, bid prices should include all eligible bids, not only successful bids.

Given there were no significant reasons provided by stakeholders to amend these weightings, and PwC's emphasis on continuity of components and weightings to enable comparison of trends over time unless there is compelling reason supported by verifiable data, it is proposed to retain these weightings for the 2011/12 determination.

### Data to measure viability and demand for new licence components

With the exception of the comments on the components being measured in this factor, stakeholders did not provide PwC with commentary on the data used to measure each component.

In the 2010/11 model, both of these factors were estimated as an annualised growth figure but over a four year period. As with the approach proposed for network bookings, it is proposed in 2011/12 to use only one year of historical data for these two components. This is because the previous 2010/11 model has already captured the change for every year to 2009, so otherwise double counting of historical trends would occur.

**Table 6 Proposed data and timing to measure each 2011/12 viability and new licence component**

Relevant factor	Component	Weighting	Description of data
<b>Viability and new licence demand</b>	Value of licences	10%	Historical growth between 2009 and 2010: TNSW supplied data for Unrestricted licence transfer values. <sup>26</sup>
	Plate lease costs	10%	Historical growth between 2009 and 2010: IPART (published annually) data. <sup>27</sup>

Summary of viability and demand for new licences for the 2011/12 determination

**Table 7 Summary of viability and demand for new licence components for the 2011/12 determination**

It is proposed to retain the following components in the 2011/12 Sydney Taxi Growth Model (i.e. no change from 2010/11):

- Value of licences
- Plate lease costs.

It is proposed to retain the following weightings (i.e. no change from 2010/11):

- Value of licences: 10%
- Plate lease costs: 10%.

It is proposed to measure both components historically over the previous year.

It is recommended to consider for the 2012/13, whether there is merit replacing or adding to the current components (based on secondary market data) to include annual licence release bid values or bid as a proportion of licences released.

<sup>26</sup> This component is measured using the average of monthly transfer values for Unrestricted Sydney Metropolitan Ordinary taxi licences over a calendar year. Data is reported monthly, with the most recent data from January 2011. The component is calculated using the change in average value from 2009 to 2010

<sup>27</sup> This component is measured using the annual calendar year plate lease costs for unrestricted licences; data has been supplied by IPART (2010) sourced from industry and Transport NSW. The growth, or change, in plate lease costs between the years 2009 and 2010 is used in the model. *2010 Review of Taxi Fares in NSW*, IPART, June 2010, available at <http://www.ipart.nsw.gov.au/investigations.asp?industry=4&sector=24&show=com>

### 2.3.3 Performance of existing taxi services

#### Components to represent performance of existing taxi services and latent demand

In the 2010/11 model, performance of existing taxi services and latent demand were represented by historical data for the following three components:

- *Average pickup time* – The time from when the booking is accepted by the network booking service to the time the driver turns the meter on<sup>28</sup>
- *Percentage of pickups within 15 minutes* – The number of recorded pickups within 15 minutes divided by the total number of recorded “meter-on” events in a month<sup>29</sup>
- *Percentage of ‘no cars available’* – The number of times a network is unable to fulfil a booking divided by the number of booking requests to a network.

#### Consideration of reasonableness of network information as a measure of performance and latent demand

As part of the Taxi Network Standards, authorised taxi networks are required to report monthly on the performance of standard and WAT taxis. Selected monthly KPI data for Sydney and metropolitan networks is published by Transport NSW on a quarterly basis.<sup>30</sup>

As this data is provided to Transport NSW by the networks, In general, feedback from industry supported these measures being retained, and, if possible, being given greater weighting in the model. However, the NSW TDA suggests it may warrant consideration as to the reliability of data. This may be something for Transport NSW to consider beyond this review.

It has been acknowledged earlier in this report that network booking data reflects between 20% and 40% of the total taxi market in Sydney. Despite this, there are no other reasonable indicators of the taxi industry performance that have reliable, time series (more than 2 financial years) data. Furthermore, a change in performance of network bookings is likely to still provide information on the performance of the industry more generally.

Currently the model allows for growth in the taxi industry and these performance components are included to respond to variation in industry performance. If there is significant decline in service between time periods, this indicates that the industry is not adequately responding to customer needs, and the model will recommend more licences be released.

#### Consideration of reasonableness of no cars available as a component

The percentage of ‘no cars available’ (NCA) is calculated comparing the number of ‘no cars available’ over a year, divided by the total number of booking requests over the same year.

This component is an indicator provided by the networks that the requested service has not been provided; it provides no indication of the reason why a

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<sup>28</sup> *Taxi Performance Data Definitions*, Transport NSW

<sup>29</sup> *Taxi Performance Data Definitions*, Transport NSW

<sup>30</sup> Data available at <http://www.transport.nsw.gov.au/taxi-network-performance>

passenger was not picked up. For this reason, at the stakeholder forum there was some discussion whether it is relevant to include if it measures not only 'lack of vehicles to service a booking' but also 'lack of driver willingness to accept a trip'. (It is useful to note that the indicator of NCA does not include 'no shows', which is indicated by drivers as an M3 and is reported separately). PwC suggests that regardless which factor is most prominent in the indicator, both indicate that customer needs are not being met, so may warrant licences to be released. In consultation, stakeholders anecdotally expressed that service had been improving. It is likely that these perceptions were based on incomplete data, as the number of NCAs has actually increased by 13% between 2009 and 2010.<sup>31</sup>

In summary, it is proposed that, in the 2011/12 model, the weighting of no cars available and the other two components remain at 10%. This is important to not only provide for continuity over time, but also to reflect the degree that the industry is meeting customer demand. A single no car available indicates that the taxi industry is not able to, for whichever reason, provide a service at that time. This would indicate more taxis are needed to serve existing demand.

### Weightings to represent performance of existing taxi services

In terms of weightings to determine relative affect on viability and demand for new licences, in the 2010/11 model allocated these components a 30% weighting of the total model. Weightings for each of the sub-components in 2010/11 were:

- Annual average pick up time (mins):10%
- Percentage of pickups within 15 mins: 10%
- Percentage of 'no cars available': 10%.

#### Consideration of weightings for the industry performance factor

Some stakeholders indicated they favour increasing the weighting of the components related to taxi service performance (currently 30%) relative to the other components in the model. NSW TC (in consultation) suggests this could involve a consequent decrease in the weightings for passenger demand. In their written submission, the NSW TDA suggested that the performance of taxi services be weighed 40%. This was comprised of Average pickup time (10%), percentage of pickups in 15 minutes (10%) and actual taxi rank usage and delays (20%).<sup>32</sup> At this time, actual taxi rank usage data has not been provided to Transport NSW in sufficient capacity (over more than two time periods) to use in the model.

Increasing the weight of current performance would illustrate the ability of the industry to meet current demand, but reduce the relative importance of allowing the industry to grow with potential passenger demand.

Given that the proposed new components relied on data not currently available (over two or more time periods), definitive evidence to change the weighting was not provided by stakeholders, and PwC's emphasis on continuity of components and weightings to enable comparison of trends over time unless

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<sup>31</sup> *Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

<sup>32</sup> *NSW TDA Inc Response to Plate Issues Paper*, NSW TDA, February 2011

there is compelling reason supported by verifiable data, it is proposed to retain these weightings for the 2011/12 determination.

### Data to measure performance of existing taxi services

With the exception of the comments on the components being measured in this factor, stakeholders did not provide PwC with commentary on the data used to measure each component.

In the 2010/11 model, these three components were estimated as an annualised growth figure but over a four year period. As with the approach proposed for network bookings, it is proposed in 2011/12 to use only one year of historical data for these three components. This is because the previous 2010/11 model has already captured the change for every year to 2009, so otherwise double counting of historical trends would occur.

**Table 8 Proposed data and timing to measure each 2011/12 existing taxi service performance and latent demand component**

Relevant factor	Component	Weighting	Description of data
Performance of existing taxi services	Annual average pick up time (mins)	10%	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. <sup>33</sup>
	Percentage of pickups within 15 mins	10%	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. <sup>34</sup>
	Percentage of 'no cars available'	10%	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. <sup>35</sup>

<sup>33</sup> The average pickup time, as reported by monthly networks is calculated by taking the mean of all average pickup times from networks in each calendar year. Monthly disaggregated taxi network data is published quarterly by Transport NSW

*Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

<sup>34</sup> The percentage of pickups within 15 minutes is calculated using the total number of pickups in 15 minutes (KPI 6.1) divided by the total number of taxi pickups (KPI 6.4) in each calendar year. Data is published by Transport NSW. Monthly disaggregated taxi network data is published quarterly

*Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

<sup>35</sup> The percentage of NCA is calculated using the number of 'no cars available' (KPI 12) divided by the total number of booking requests (KPI 1). The total number of NCA and number of booking requests by each network are aggregated by calendar year. Monthly disaggregated taxi network data is published quarterly

*Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

## Summary of existing taxi service performance for the 2011/12 determination

**Table 9 Summary of existing taxi service performance and latent demand components for the 2011/12 determination**

It is proposed to retain the following components in the 2011/12 Sydney Taxi Growth Model (i.e. no change from 2010/11):

- Annual average pick up time (mins)
- Percentage of pickups within 15 mins
- Percentage of 'no cars available'.

It is proposed to apply the following weightings (i.e. no change from 2010/11):

- Annual average pick up time (mins): 10%
- Percentage of pickups within 15 mins: 10%
- Percentage of 'no cars available': 10%.

It is proposed to measure all components historically over the previous year.

### 2.3.4 Other model adjustments

#### Number of WATs released

In 2010/11, 88 WAT licences were issued in Sydney. Assuming that wheelchair accessible jobs comprise 55% of WAT activity, 45% of the WAT licences released can be counted as standard or equivalent taxi licences.<sup>36</sup>

Hence, the 88 WATs are equivalent to approximately 40 standard or conventional taxis released in Sydney over the year.

#### Attrition of annual licences

In 2010/11, one annual licence was surrendered to Transport NSW due to medical reasons.<sup>37</sup>

#### Staged release of demand backlog

In the 2010/11 model, an additional model was developed that looked at the change in components between 2006 and 2010, in contrast to the core model which looked at annualised growth over the same period. The model indicated that 42 additional licences were needed to address the backlog in demand between the two time periods (in addition to the 100 licences released in the interim tender to address backlog).

<sup>36</sup> Assumption based on ability of WATs to undertake both standard and wheelchair accessible jobs

<sup>37</sup> Information obtained by PwC in discussion with Transport NSW, 28/02/11

In order to stage the release of licences, half (21) of these licences were released in 2010/11, with the remaining 21 licences to be released in 2011/12.<sup>38</sup>

## 2.4 2011/12 Taxi Growth Model

### 2.4.1 Summary of key changes from the 2010/11 model

The previous 2010/11 licence release was the first year that a model was used by Transport NSW to determine the number of taxi licences to release in Sydney. Data from this release provides only one year's worth of information regarding bid price and number of total bids. Due to the nature of the model, these single data points cannot be used for the 2011/12 licence determination.

Given that there is potential for several aspects in the model to change with more data available in following years, it is viewed that maintaining a majority of aspects used in the 2010/11 model for this year will provide the for the most robust analysis.

The changes integrated into the 2011/12 model were based on discussion with stakeholders and Transport NSW. Key changes recommended from the 2010/11 model are outlined in Table 10 below.

**Table 10 Key changes to incorporate in the 2011/12 model**

Relevant Factor	Aspect changed in 2011/12 model
<b>Likely passenger demand</b>	<ul style="list-style-type: none"> <li>• Unemployment - Due to the potentially unclear relationship to the demand for taxi services and value of taxi licences, the component was removed from the model.</li> <li>• Weightings redistributed to Sydney Population, which increased from 5% to 10%</li> </ul>
<b>Demand for new licences; viability</b>	<ul style="list-style-type: none"> <li>• Retain previous weightings and components with the recommendation to review prior to the 2012/13 licence determination</li> </ul>
<b>Performance of existing taxi services</b>	<ul style="list-style-type: none"> <li>• Retain previous weightings and components with the recommendation to review prior to the 2012/13 licence determination.</li> </ul>

<sup>38</sup> Analysis on release of new annual taxi licences from 1 July 2010, PwC, report to New South Wales Transport and Infrastructure (now Transport NSW), March 2010

## 2.4.2 Adjustments to Sydney Taxi Growth Model for 2011/12

As a result, the following adjustments have been applied to the Taxi Growth Model components and weightings:

The table below outlines the weightings of components used in the 2010/11 and the adjusted weightings for the 2011/12 release.

**Table 11 Comparison between 2010/11 and 2011/12 model weightings**

	2010/11 weighting in model	Recommended 2011/12 weighting in model
<b>State final demand (NSW economic activity)</b>	20%	20%
<b>Sydney population size</b>	5%	10%
<b>Unemployment rate</b>	5%	0%
<b>Sydney Airport passenger numbers</b>	10%	10%
<b>Total network bookings</b>	10%	10%
<b>Value of licences</b>	10%	10%
<b>Plate lease costs</b>	10%	10%
<b>Annual average pick up time (mins)</b>	10%	10%
<b>Percentage of pickups within 15 mins</b>	10%	10%
<b>Percentage of 'no cars available'</b>	10%	10%

It is recommended to consider for the 2012/13 determination whether there is merit in replacing or adding to the current components (based on secondary market data) to include annual licence release bid values or bid as a proportion of licences released.

### 2.4.3 Outcome of the 2011/12 model

The drivers of taxi demand used in the model reflect key aspects considered by the Director General in the determination of licences to release and their effect on the model reflect changes in components over the year 2010/11 to 2011/12:

#### *Likely passenger demand and latent demand for passenger services:*

- In the 2011/12 model, NSW Government projections for economic activity and population are factors used to indicate likely passenger demand. Historical taxi network bookings and Sydney Airport passenger numbers and are used to understand latent demand over the past year. Broadly, all of these indicators have increased, suggesting an increase in likely passenger demand and latent demand
- A benefit of retaining 'indirect' demand measures in the model such as state final demand and Sydney population is that these provide an indication of the potential market size for the industry. Using current, direct measures as the only indicators of demand may increase the risk of limiting industry growth and loss of market share against other competitors such as hire cars
- Whilst only representing 20-40% of total taxi jobs, network bookings is considered the most reliable proxy available at this stage (without access to all network's meter swing data over a two year period). Network bookings have increased by 1.9% between 2009 and 2010. This represents a change from last year, when growth of -1.1% was included the 2010/11 model, and indicates greater demand for pre-booked taxi services.

#### *Industry viability and sustainability and demand for new licences*

- In the 2011/12 model, viability and demand for new licences is measured by considering historical data for changes in the transfer value of transferable unrestricted licences and plate lease costs. These secondary market values of licences and plate lease costs are considered to represent the best current proxies for not only recently Government issued plates, but also those ordinary plates existing in the market. When at least two years of data is available on the bid values/bid numbers for the annual licence releases, there will be opportunity to incorporate annual licence values into the model (i.e. for the 2012/13 release)
- The transfer value of unrestricted licences has increased 4.0% between 2009 and 2010, though this is a lower increase than the 9.6% measured in the 2010/11 model. Plate lease costs have also increased 9.2% between 2009 and 2010. These increases suggest demand for new licences and also indicate an industry viability issue from higher licence costs

#### *Performance of existing taxi services*

- Existing taxi performance can be measured by industry performance data. In the 2011/12 model taxi industry performance is represented by average pickup time, percentage of pickups in 15 minutes and percentage of no cars available. If average pickup time or percentage of no cars available increase, this may indicate inability of the industry to serve customer demand
- Actual data indicates that the percentage of no cars available has increased by 13.2% between 2009 and 2010. This component has had a significant impact on the model due to the large percentage increase.

The growth in likely passenger demand from 2010/11 to 2011/12, the demand for taxi licences in 2010 and performance of the industry in 2010 have been used to estimate the number of growth taxi licences to release in Sydney during 2011/12.

Based on the model and approach outlined above the recommended number of growth taxi licences to be released in Sydney during the 2011/12 year is 197.

The outcome of the 2011/12 model is shown below (also see detailed table of the model components and inflators in Appendix C). After adjusting for the number of WATs released, attrition of licences and the final staged release of demand backlog, the recommended number of taxi licences to be released in Sydney during 2011/12 is 197.

**Table 12 Outcome of the 2011/12 model**

Key drivers of taxi demand	Component	Weighting		Growth	Contribution to growth 2011/12 model
<b>Likely passenger demand</b>	State final demand (NSW economic activity)	20%	50%	3.5%	0.700%
	Sydney population size	10%		1.2%	0.118%
	Unemployment rate	0%		-4.8%	0.000%
	Sydney Airport passenger numbers	10%		6.5%	0.654%
	Total network bookings	10%		1.9%	0.185%
<b>Industry viability and sustainability and demand for new licences</b>	Value of licences	10%	20%	4.0%	0.403%
	Plate lease costs	10%		9.2%	0.924%
<b>Performance of existing taxi services</b>	Annual average pick up time (mins)	10%	30%	0.2%	0.020%
	Percentage of pickups within 15 mins	10%		4.3%	-0.427%
	Percentage of 'no cars available'	10%		13.2%	1.321%
<b>Taxi fleet growth</b>					<b>3.9%</b>
<b>Number of new annual taxi licences</b>					<b>215</b>
<b>Adjustments</b>	(1) Number of WATs released (representing a portion of standard jobs)				-40
	(2) Attrition of licences				1
	(3) Staged release of demand backlog				21
<b>Number of new annual taxi licences</b>					<b>197</b>
<b>Total Taxi Fleet growth</b>					<b>3.6%</b>

The fleet growth of 3.6% as suggested by the model is at the lower end of the long term average demand growth of 3-5% which is based on an economy

growing at trend and relative stability in the market share of taxis, hire cars and tourist vehicles.<sup>39</sup>

### 2.4.4 Additional replacement licences to release

In addition to fleet growth, the Table 14 presents the total licence release, including replacement of existing short-term licences due to expire in 2011/12 (short-term licences can no longer be issued in Sydney, therefore a new annual licence is to be issued to ensure no reduction in services). In 2011/12, there are 30 licences due to expire:

- 24 PALs
- 1 unrestricted licence
- 5 FALs (Richmond Windsor)

**Table 13 Impact on 2011/12 total licence releases from annual release and replacement**

Key drivers of taxi demand	Component	Contribution to total licence release
<b>Number of new annual taxi licences</b>		<b>197</b>
<b>Replacement licences due to expire in 2011/12</b>	Peak availability licences	24
	Unrestricted licences	1
	Fringe area licences	5
<b>Number of new annual taxi licences</b>		<b>227</b>

<sup>39</sup> This range used in the 2010 determination considered different estimates of the demand growth for taxis including:

- An IBIS World estimate of revenue growth of 2.7% pa over the five years to 2013/14.
- A 2006 Australian study that analysed the relationship between household incomes and percentage of income spent on transport. The study concluded that an income elasticity of 1.31 applies for Australian transport. Hence with average earnings in NSW growing at 3.8% pa over the past 10 years implies that demand growth for taxis of 4.9% pa.
- Growth rates in the radio booking market, of 3% and 4% over the five years to 2007
- Taxi demand growth at the key rank market at Sydney Airport rose from around 7 million in 2002 to around 10 million in 2008, marking a compound annual growth rate of around 6%.

Source: *Development of a proposed licence fee, Report to NSW Transport and Infrastructure (now Transport NSW), Cabinet-in-confidence, November 2009*

## 2.5 Recommendations

1. Based on the model and approach proposed for the 2011/12 Sydney Taxi Growth Model, the recommended number of to be released in Sydney during the year commencing 1 July 2011 is:
  - 197 new growth annual taxi licences (3.6% fleet growth)
  - An additional 30 licences to replace those expiring in 2011/12
  - Total of 227 growth and replacement licences.
2. It is recommended that Transport NSW collect meter swing data from each network on an annual basis (beginning with the years 2009/10 and 2010/11 for possible incorporation in the 2012/13 determination), in order to provide a more comprehensive measure of passenger demand than the current 'network booking' measure in the Model.

## 3 Number and class of annual licences for authorised taxi drivers

Section 32C(2) of the PTA 1990 also provides for the Director-General to determine *'the number and class of annual licences that are to be issued to authorised taxi-cab drivers who are also accredited taxi-cab operators or who have applied for such accreditation'*.

This chapter considers stakeholder comment and data from licence releases during 2010/11 to consider the number and class of driver only licences

### 3.1 Taxi licences in Sydney

Within Sydney, non-transferable annual licences, renewable up to a maximum of nine times, have replaced ordinary and short-term licences. Existing transferable licences can continue to be sold on the open market and short-term licences will be replaced by non-transferrable annual licences as they expire as part of the annual licence release determination.

Prior to the first annual taxi licence determination in 2010/11, the Director General of Transport NSW issued 100 new unrestricted annual taxi licences by tender in Sydney as an interim measure to get more taxis on the road. This represented a 1.9% increase in the taxi fleet.

On 30 March 2010, the Director-General determined that 316 annual taxi licences be issued during the year commencing 1 July 2010, comprised of 167 growth licences (unrestricted) identified from the 2010/11 Sydney Taxi Growth Model – representing a 3.2% fleet growth; and 149 replacement licences made up of 52 unrestricted licences, 90 PALs and 7 FALs.

Of the 167 growth licences, it was determined that 90 would be available to eligible taxi drivers only. However, taxi drivers were able to apply for a licence(s) in both the taxi driver only and open categories.

The licences were tendered in two stages so that there would not be a significant overlap of additional taxis on the road prior to the expiry of short-term licences in the second half of 2010/11. The Stage 1 tender comprised all 167 growth licences and 83 replacement licences.

Data on these tenders, including successful bid prices and, separately, the names of successful bidders is published on the Transport NSW website. The Stage 2 tender was for the remaining 66 replacement licences

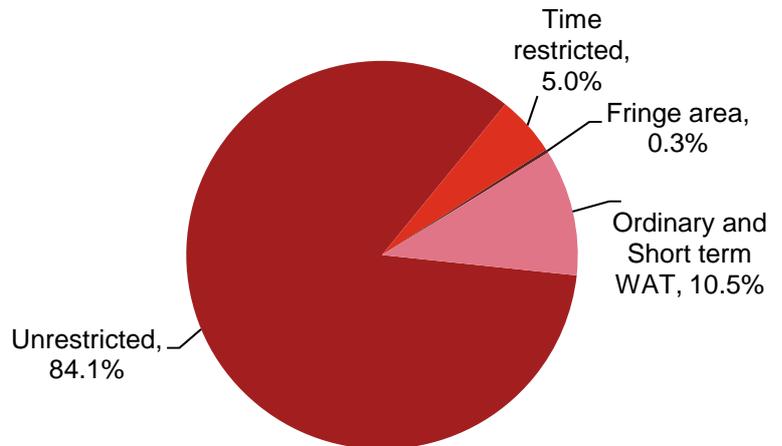
As at 1 January 2011 there were 5,454 taxi licences in Sydney, comprising:

- 4,587 Unrestricted licences: 84.1%
- 275 time restricted licences (night-time only and peak availability): 5.0%
- 19 fringe area short term licences: 0.3%
- 573 ordinary and short term WAT licences: 10.5%.

Prior to the first annual taxi licence determination in 2010/11, 100 new unrestricted annual taxi licences were issued by tender as an interim measure to get more taxis on the road and a first step to meeting the historical backlog of unmet growth in demand. This represented a 1.9% increase in the Sydney taxi fleet.

The distribution of licence classes as at January 1, 2011 is outlined in Figure 3 below.

**Figure 3 Distribution of taxi licence types in Sydney, at 1 January 2011**



Source 6 Transport NSW, 11/03/11 Number of licences at 1 January 2011

### 3.2 Release of licences in 2011/12

There are some views in the industry that no additional licences should be released due to market saturation (NSW TDA). While the model output for growth is largely based on an increase in NCAs, the data does not indicate the extent to which this is during peak or off-peak periods – currently there is a lack of reliable data or evidence to support the claim of market saturation.

When determining the class of licence types to be released in Sydney, there are two decisions to be made by Transport NSW:

1. Whether to release taxi driver only licences. These licences allow drivers (satisfying certain criteria) to obtain licences and encourage ongoing, active participation in the industry
2. The class of licence type: whether licences should be unrestricted or PAL.

In light of economic fundamentals, PwC's view is that the choice between utilising the taxi at different times during the day should be the decision of industry, not a regulator.

### 3.2.1 Objectives of 'taxi driver only' licences

The allocation of 90 'taxi driver only' licences in the 2010/11 release allowed for eligible taxi drivers to obtain licences and encourage active participation in the industry. A key objective of the taxi licensing reform is to provide a career path for taxi drivers and retain experienced taxi drivers in the industry.<sup>40</sup>

In the Stage 1 release, criteria to be eligible for a 'Driver only' licence included:<sup>41</sup>

- The taxi driver must hold a current NSW taxi driver authority for a minimum period of four years from the tender closing date and have actively worked as a taxi driver within NSW for a minimum of 48 shifts over 12 consecutive months in that period
- The current NSW taxi driver authority must have remained continuously in force for the last four years from the tender closing date
- Must also be an accredited taxi operator, or have applied to become an accredited taxi operator, before a taxi licence can be issued.

The objective of the eligibility criteria was to help create a career path for experienced taxi drivers who have a good driving record. This objective is supported by numerous stakeholder groups such as the NSW Taxi Council, as there is benefit in attracting and retaining people who want to make a commitment to the industry and serve the public.

There are also calls to strengthen the criteria to include a 'points based' (NSW TC) or 'seniority' type allocation mechanism, and to ensure that bidders of these licences are monitored to ensure their continued activity in the industry. The ATDA called for further restrictions on 'taxi driver only' licences to require that the taxi be driven by the licensee for a minimum of four shifts a week for at least 45 weeks a year (subject to extenuating circumstances).

While it is reasonable to require eligibility criteria to apply for a licence in any taxi driver only allocation, additional licence conditions for licence holders in this category may be a disincentive for taxi drivers to seek a licence in this category, while also increasing the monitoring and compliance burden for Transport NSW,.

### 3.2.2 Number of taxi driver only licences

The portion of taxi driver only licences released can reflect:

- The demand for the licences as indicated by the number of bids received for this type of licence (as a portion of total bids) in the most recent release)
- A desired portion of the total taxi fleet, as exogenously determined by the Director General of Transport NSW
- Any other aspect considered relevant.

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<sup>40</sup> 2010/11 Stage 1 Taxi Annual Licence Tender, 'Taxi Driver only' tender, Transport NSW, available at <http://www.transport.nsw.gov.au/sites/default/file/taxi/TNSW-2010-010-Tender-package-Taxi-Driver-Only.pdf>

<sup>41</sup> 2010/11 Stage 1 Taxi Annual Licence Tender, 'Taxi Driver only' tender, Transport NSW, available at <http://www.transport.nsw.gov.au/sites/default/file/taxi/TNSW-2010-010-Tender-package-Taxi-Driver-Only.pdf>

In the Stage 1 release, there were 346 tenders received by taxi drivers for the 90 available taxi driver only licences (representing a ratio of 3.8 applications for every licence). Given that taxi drivers were only able to place a single bid in this category, this may indicate a level of excess demand for these licences.

The Stage 1 tender involved release of these unrestricted licences available to eligible taxi drivers only, and also involved release of unrestricted licences, PALs and FALs open to all (some of these being new growth licences, and some replacement licences). 36% of the total licences issued in the Stage 1 release were taxi driver only licences; of the 167 growth licences, it was determined that 90 (54%) would be allocated as taxi driver only. This indicates that there was excess demand for a driver only licence. There was strong demand for a licence from taxi drivers in all categories.

While it is not possible from the Stage 1 results to understand driver demand for new growth licences only, considering bids for all licences, taxi drivers (including the categories drivers and drivers/operators) comprised:

- 48% of tenders received for all licences were submitted by taxi drivers
- 78% of the total licences issued were allocated to taxi drivers.

This level of interest may suggest that a range between 50-70% of the total growth licences would be appropriate to reserve for taxi drivers only in the 2011/12 release.

### 3.3 Peak availability licences

Also referred to as 'time restricted', peak availability licences (PALs) seek to provide a taxi service in periods of high demand and can only operate between 12 noon and 5 am every day. As at January 2010, prior to the implementation of taxi licence reforms, PALs represented approximately 5.1% of the total taxi fleet.

A number of stakeholder submissions to this review supported a focus on PALs in the annual licence release to address shortage of taxis during high demand times and to reduce the impact of the traditional 3pm/3am taxi changeover period. It was also recommended that these PALs should be restricted to one licence per applicant and that the licence holder be required to drive the taxi for a minimum period each year. However, one industry submission supported re-issuing PALs on a replacement-only basis as existing licences expire,

Within the metropolitan area, there are reports that the '*current supply on Friday and Saturday nights does not cater for demand*' (City of Sydney). It was suggested that a new type of peak licence be released, where the lease price is only sufficient to cover issuing and enforcement costs borne by Transport NSW (ATDA). This type of licence may provide incentives to take up this restricted time licence.<sup>42</sup>

The ATDA, supports increasing the supply of PALs to address the shortage of taxis during high demand times. Additional plates would be '*restricted to peak times only, as defined as from 12.00 Midday to 5.00am seven days a week*'.

While it is clear that there should be sufficient taxis to service passengers at periods of high demand, vehicles operating with these licences are affected by the same operational, network affiliation and insurance costs borne by those taxis with unrestricted class licences. On the other hand, PALs are operated

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<sup>42</sup> Obtained in consultation with ATDA, 16 February 2011

during the time of highest demand, which may be more profitable outcomes for holders of these licences.

In a pure sense, it may be better not to restrict the operation of taxis (thereby letting the industry participants decide when they operate) and not release PALs (other than to replace expiring short-term PALs). In the absence of restriction on operating times, the industry is likely to continue to change over shifts at the current time (between 3 and 5pm). This is commonly indicated as a period when passenger demand is not satisfied. Additional PALs may address this issue.

Furthermore, the average successful bid value for PALs in the Stage 1 release was \$22,000, which is lower than the average bid for unrestricted licences (\$36,000).<sup>43</sup>

In 2010/11 PALs were issued to replace short term PALs expiring during the year. In 2011/12, the number of licences released can seek to:

- Replace the number of PALs expiring in 2011/12 (similar approach to 2010/11), or
- Replace the number of PALs expiring in 2011/12 and release additional PALs.

The distribution of PALs released in 2011/12 could reflect the demand for the licence in the Stage 1 release (most recent data available).

Bids for replacement PALs in the Stage 1 tender represented 35% of all bids – a ratio of over 10 bids for every PAL and the highest level of demand in all categories. Taxi drivers represented 53% of all applications and 67% of successful bids for the PALs indicating a higher level of interest in PALs from taxi drivers than other applicant types. For the open licence release categories in Stage 1, 21% of all bids by applicants excluding taxi drivers and taxi driver/operators<sup>44</sup> were for PALs.

Arguments supporting the release of driver only licences as PALs include:

- As PALs are often single-shifted, they may be well-suited to owner/drivers. It might therefore be appropriate to allocate all PALs (growth licences and replacement licences) to a taxi driver only category where there is a limit of one licence per applicant and that the licence holder be required to drive the taxi for a minimum period each year (ATDA)
- PAL fleet growth may improve the availability of taxis during the traditional 3pm/3am changeover as PALs do not typically changeover during this period.

Hence, Transport NSW may determine to release taxi driver only licences as either peak or unrestricted licences. On the basis of economic fundamentals, PwC recommends all growth licences and taxi driver only licences should be unrestricted so to allow operators/drivers the opportunity to determine the most viable time to operate. However, we acknowledge other arguments supporting the release of taxi driver only licences as PALs. PALs may help to address the shortage of taxis at changeover periods and may be suited to drivers operating a single-shift only.

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<sup>43</sup> *Interim 2010-11 Stage 1 Tender data (updated)*, 13/01/11, Transport NSW

<sup>44</sup> Includes taxi operators only, Individuals, Networks and Corporations (not networks)

### 3.4 Fringe area licences

The objective of a FAL is to provide areas on the metropolitan fringe, such as Helensburgh and Richmond-Windsor, with a level of taxi service equal to the benchmarks set for metropolitan areas. These licences may be suited to the regional focus of several Sydney networks, including RSL, Manly, and St. George, as networks could offload bookings to other networks if the request out of their primary area of service (as highlighted by Dr. Peter Abelson).<sup>45</sup>

Annual FALs for the Helensburgh (3) and Windsor/Richmond (4) areas that were due to expire in 2010/11 were released in the 2010/11 Stage 1 and Stage 2 releases, respectively. Conditions attached to this class of licence can include restriction on the area of operation, monthly reporting on performance against selected performance indicators, and licence renewal subject to meeting of, or progress towards, established benchmarks.<sup>46</sup>

Stakeholders indicated that the tender conditions, such as '*the 3 fringe area licences are being offered as a package to a single applicant*' and '*All 3 fringe area taxis must be connected to the same authorised Metropolitan Transport District taxi network*<sup>47</sup>', may have biased the tender in favour of taxi networks (NSW TDA).

Overall, there appeared to be little consensus on the validity of incorporating additional FALs in the 2011/12 licence release. On one hand, as with PALs, some indicate that these taxis will be subject to the same overhead costs and the choice of service area should not be restricted. On the other hand, the licences could address stated issues relating to universal or equal access to taxi services in suburban Sydney areas (Disability Council of NSW, Council of Social Services).<sup>48</sup>

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<sup>45</sup> Comment of Dr. Peter Abelson during the Inquiry into the NSW Taxi Industry, 3 February 2010, *Uncorrected Proof, Report of Proceedings Before Select Committee on the NSW Taxi Industry*,

<sup>46</sup> *2010/11 Stage 1 Taxi Licence Tenders, Tender No. TNSW 2010/013*, Transport NSW, available at <http://www.transport.nsw.gov.au/201011-stage-1-taxi-licence-tenders>

<sup>47</sup> *2010/11 Stage 1 Taxi Licence Tenders, Tender No. TNSW 2010/013*, Transport NSW, available at <http://www.transport.nsw.gov.au/201011-stage-1-taxi-licence-tenders>

<sup>48</sup> Obtained in consultation with Disability Council of NSW and Council of Social Services, 16 February 2011

Also see discussion by Peter Abelson on universal or equal access to taxi services in *Short Additional Response to Questions Posed by the Committee*, directed to the Select Committee on the NSW Taxi Industry, Peter Abelson, 16 February 2010

## 3.5 Recommendations

3. Based on results of the 2010/11 Stage 1 release, the number of licences issued to eligible, authorised taxi drivers only should represent between 50-70% of the new growth licences released in 2011/12
4. The remaining growth and replacement licences should be open to anyone to apply
5. All growth licences are preferably unrestricted (i.e. no restriction on time of operation) to allow the market to decide on the hours of operation and the price for a licence based on this. However, there may be grounds to release a portion of taxi driver only licences as peak availability licences given the suitability of these licences for owner drivers and the role such licences can play to vary traditional changeover times.

## 4 Potential limit on the number of licences granted to an single or related applicant

The third matter that the Director-General may consider is whether there is merit to *'limit the number of annual licences that may be granted to the same applicant or related applicants if, in the opinion of the Director-General, such a limitation is likely to promote competition that will benefit the public'*.

Currently, the majority of Sydney taxi licence holders own just one or two licences. The largest licence holder owns 5.5% of the Sydney taxi fleet.

When determining the number of licences to release, the Director-General may consider:

- Making a certain number of licences available to authorised taxi drivers only
- Limiting the number of licences granted to the same applicant or related entity, to promote competition.

It is necessary to understand whether a large number of licences in the hands of a few owners can improve taxi industry performance or whether services are better delivered by diverse ownership. There may be a threshold level where an individual entity holding a certain number of licences has no negative impact, but above this level provides for unfair advantage in the industry. Market share dominance may also have implications for network performance and the number of owner-operators present in the industry.

Importantly, there are two aspects of operations relating to market share: horizontal and vertical.

Horizontal integration	Vertical Integration
A taxi licence owner owns more than one licence, but does not operate in other sectors of the taxi supply chain	A taxi licence owner also operates in other parts of the taxi industry – i.e. is also involved in aspects such as driving/depot/operating the taxi

The case for not restricting the number of licences held by an individual rests on the basis of letting market dynamics determine the number of licences that an applicant may hold. However, there are also benefits for passengers and the industry in allowing new entrants to build their share in the industry if it is financially viable to do so. For example, a driver/operator with one licence may wish to build a small fleet and those with a small fleet may wish to grow.

However, the case for intervention is to promote greater competition in the future. For example, greater ownership by individual owner/drivers may offer incentives for drivers to remain in the industry, building their skills and experience, and to provide higher quality services to passengers.

### 4.1 Allocation of taxi licences in 2011/12

The Taxi Council indicated that there may be benefits in distributing licences as wide as possible to ensure a reasonable spread of participants. However, the NSW TDA and ATDA advocated one licence per applicant.

### *4.1.1 Limiting licences allocated to an individual in each release*

Limiting the number of licences allocated to an individual or entity in a single release, according to the ATDA, would *'ensure a trend towards a professional owner / driver model'*. The NSW TC similarly supports a limit of the number of licences allocated to a single applicant in each release, specifically suggesting a portion of about 10%.

A limit on the number of licences allocated to an applicant may restrict the ability to utilise the experience they gain while working in the industry. Stakeholders indicate that new entrants, while they should be encouraged, often do not fully realise the costs of operating a taxi. As a semi-competitive industry, increased knowledge of taxi operating costs may help to increase the long run viability of specific players industry.

Furthermore, the 'Taxi Driver Only' licences issued in the 2010/11 release placed a limit of one licence per applicant. If 'Taxi Driver Only' licences limited to one licence per applicant make up a significant portion of the licences released, then there would be limited opportunity for other entities to gain significant market share through a single licence release.

On the other hand, 30%-50% of the licence allocation to anyone to apply with no limit is still a significant share of the market and encourages competition and market entry opportunities.

### *4.1.2 Limit on total licences held in the market*

The taxi licence market in Sydney is fairly mature and characterised by a fairly large secondary market for licences and leasing. Existing players have been able to establish a presence within the industry.

In the open tender categories for the Stage 1 and Stage 2 2010/11 licence release, there was no limit on the number of licences a single applicant could apply for and be issued. However, for the licences available only to authorised taxi drivers in the Stage 1 release, only one licence could be issued to a successful applicant. This was to encourage take up of these licences by owner/drivers. However, a successful applicant in the 'Taxi Driver Only' category could still apply and be successful in the other open categories.

Preliminary information indicates that taxi drivers have also been successful in obtaining approximately 67% of licences issued to date in the Stage 1 open categories. The outcomes of both the interim and 2010/11 Stage 1 tender indicate that taxi drivers and individuals have taken up a majority of licences.

Given that the largest licence holder (a network) owns 5.5% of the Sydney taxi fleet, the NSW TC suggests that it would need to be demonstrated that existing legislation was insufficient to deal with abuse of market power before constraining market share of licence ownership.

At this time, there does not appear to be any significant abuses of market power or negative effects on the industry as a result of the proportion of total of licences owned in Sydney by an individual or entity.

In consultations, the NSW TDA and ATDA indicate that the allocation of licences within the tender is not as important as the entity which controls the licence. Specifically, an individual may obtain 10 licences and networks will compete to have those licences operated under their company. Similarly, if 10 licences were obtained by 10 different individuals, these licences may be operated under a single network.

In both cases, the end result is that this network is affiliated with 10 more taxi licences. Stakeholders view this as a more important issue than the number of

licences issued to an individual or entity. While these views are important to consider, they relate more to the structure of the industry than the allocation of licences.

## 4.2 Recommendations

### 6. Limit on the number of licences:

- Maintain 2010/11 restrictions whereby the taxi driver only category is limited to one licence per successful applicant
- For the remaining licence categories open to anyone to apply, do not restrict the number of licences that an individual or entity can obtain to promote competition for emerging operators and networks

### 7. Market share of licences

- Based on the current taxi industry structure, it is not considered necessary for the 2011/12 release to restrict the total number of licences or percentage of market share, an individual or entity can own or operate

In the future, this aspect may warrant review if the structure of the taxi industry changes significantly and there are demonstrated abuses of market power from owning or operating a large quantity of licences.

## 5 Method to release taxi licences

As part of the annual licence determination, section 32C(2)(c) of the PTA 1990 allows the Director-General's determination to '*provide for any other matter relating to the issue of annual licences that is prescribed by the regulations*'.

This chapter considers a matter relating to the issue of annual licences as requested specifically by Transport NSW, namely the method to release taxi licences.

Under Section 32JA of the PTA 1990, the licence fee for an annual licence (other than a WAT) can be determined by inviting applicants for the licence to bid for it at public auction or by sealed tender.

The method to release taxi licences may affect the ease of participating in the process and potentially have implications for the price of licences if applicants have not obtained sufficient information to make fully informed decisions at the time of bidding.

### 5.1 Interim taxi licence release (2009/10)

Prior to the first annual taxi licence determination for 2010/11, the Director General of Transport NSW issued 100 new unrestricted annual taxi licences in Sydney by sealed tender as an interim measure to align taxi fleet numbers with some of the historical unmet growth in passenger demand.

#### 5.1.1 Implementation

The annual licence fee for each of these licences was conducted using a paper-based licence application and sealed tender process. Applicants bid the price they were willing to pay for an annual licence and were not provided with information of the price bid by other applicants.

The criterion for complying applicants was to have bid the highest price for that licence. If more than one complying applicant bid the highest price, a random ballot would be conducted to select the highest tender for that licence. The process continued until a highest tender was identified for each licence

A single applicant could obtain a maximum of 10 licences.

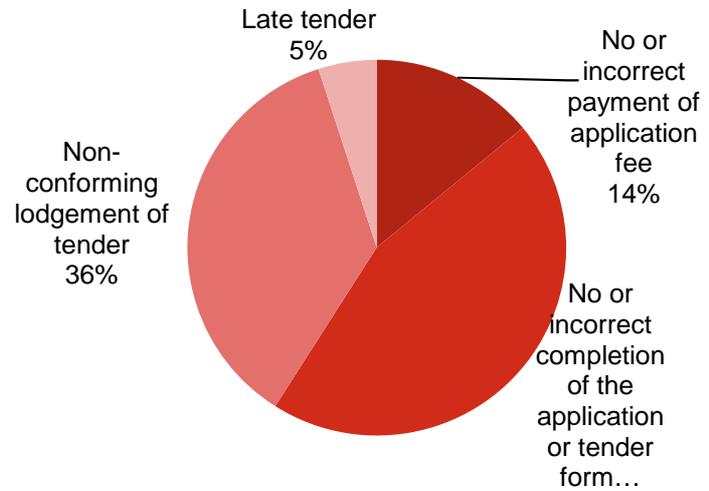
In this method, Transport NSW utilised an end-of-process role, as bids were evaluated and the ability of bidders to pay were confirmed after the bidding had occurred.

#### Compliance of applications

Data provided by Transport NSW indicates that 836 applicants tendered for the 100 licences (representing approximately 8.4 applications per licence), with a majority (61%) from taxi drivers.

Of the total applications and tenders received in the interim licence release, 100 (12%) were non compliant and therefore not able to be considered. The main reasons for non-compliance are shown in Figure 4.

**Figure 4 Interim licence release - Reasons for non-compliance**



Source 7 Transport NSW, 10/12/10 Interim tender analysis

### 5.1.2 Sealed tender process

All annual licence fee bids by applicants were by sealed tender - referred to 'pay-as bid pricing'. Applicants were not provided with information of the price bid by other applicants. The amount bid for a licence by a successful application is the annual licence fee payable for that licence for up to 10 years.

Under this pay-as-bid pricing model, a single bid is taken to illustrate the willingness to pay for a licence.

### 5.1.3 Ability to be issued multiple licences

Applicants were required to make a separate application and bid for each licence - referred to as a 'single bid price'. However, applicants could be successful in obtaining up to 10 annual licences.

A majority of individuals were issued a single licence in the Interim Tender. Only 7 individuals obtained more than one licence, with 2 individuals obtaining 10 licences. Corporations tended to be successful in bidding for between 1 and 9 licences, with one taxi network and two individuals obtaining 10 licences each (Table 14).

**Table 14 Interim Tender - Number of licences per successful bidder**

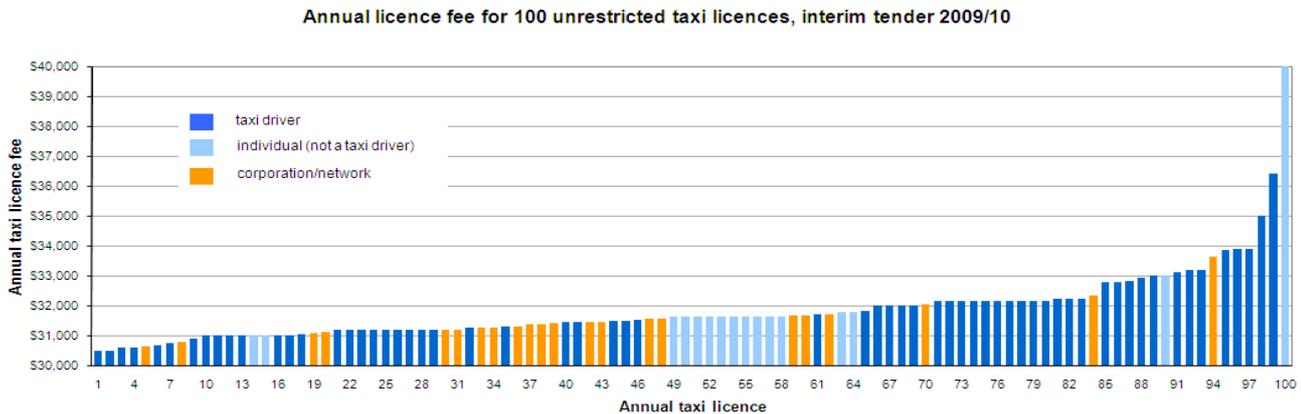
Number of licences	Individual	Corporation (excluding networks)	Network
1 licence	45	2	0
2-5 licences	5	2	0
6-9 licences	0	1	0
10 licences	2	0	1

Source 8 TNSW

### Distribution of successful applications

Of the 100 licences, 62 were allocated to taxi drivers, 16 to other individuals, 12 to corporations and 10 to one network. The majority of licences were valued between \$30,000 and \$31,999 per annum. However, there was more variation in the bids placed by individuals in this price range (Figure 5). The average value of licences was \$31,864 per annum.<sup>49</sup>

**Figure 5 Interim tender - Distribution of successful licence applications by price and entity**



Source 9 Transport NSW

## 5.2 2010/11 annual taxi licence release

The 316 annual licences determined for release in 2010/11 were tendered in two stages:

- 250 licences in stage 1, comprising all 167 new fleet growth licences, of which 90 were available to eligible taxi drivers only, and 83 replacement licences; and
- 66 replacement licences in stage 2.

At the time of writing this Issues Paper, the stage 1 and stage 2 tender processes are not yet complete and therefore only summary information is discussed.

The 2010/11 annual licence release was conducted using a sealed tender bid process, with prices nominated by applicants not revealed to other bidders.

### 5.2.1 Implementation

All unrestricted, peak availability and fringe area licences in the open categories were available to anyone to apply. A further 90 unrestricted licences were also available in Stage 1 to eligible taxi drivers only. In the open categories, there

<sup>49</sup> A list of successful applicants and a separate list of the annual licence fee for each of the 100 licences are available at <http://www.transport.nsw.gov.au/taxireform/>.

was no limit on the number of licences an applicant could apply for or be issued. However, the 'taxi driver only' category limited one licence per applicant.

The only criterion for complying applicants in the open categories was to have bid the highest price for that licence. If more than one eligible applicant bid the highest price, the applicant who *'has held a current taxi driver authority continuously for the longest period will be deemed the highest tender for that licence'*.<sup>50</sup> The process continued until a highest tender was identified for each licence.

In the Stage 1 release, criteria to be eligible for a 'Taxi Driver Only' licence included:<sup>51</sup>

- The taxi driver must hold a current NSW taxi driver authority for a minimum period of four years from the tender closing date and have actively worked as a taxi driver within NSW for a minimum of 48 shifts over 12 consecutive months in that period
- The current NSW taxi driver authority must have remained continuously in force for the last four years from the tender closing date
- The taxi driver must also be an accredited taxi operator, or have applied to become an accredited taxi operator, before a taxi licence can be issued.

In order to reduce the number of non-complying applications and bids (as discussed in the Interim release section above), an electronic tender process was implemented, requiring online lodgement with Transport NSW. This process was developed to guide applicants through each stage of the bid process. Applications and tenders submitted in any other form, such as by mail or email, were not accepted.<sup>52</sup>

### Timeframe of process

The timeframe from tender opening to issue of licences was considerably reduced for the electronic tender process with an average reduction of two weeks in processing time compared to the paper-based process, enabling offers to be made and taxis on the road sooner (Table 15).

**Table 15 Timeframes in Interim, Stage 1 & 2 licence releases (weeks)**

	'Tender open' to 'Tender close'	'Tender close' to start of issuing licences
<b>Interim release</b>	6	2
<b>Stage 1</b>	3.6	2
<b>Stage 2</b>	3	1

Source 10 TNSW

<sup>50</sup> 2010/11 Stage 1 Taxi Annual Licence Tender No. Transport NSW 2010/010, 'Taxi Driver Only' tender, Tender Information and Conditions, Transport NSW, section 5.2, 20/01/2011

<sup>51</sup> 2010/11 Stage 1 Taxi Annual Licence Tender, 'Driver only' tender, Transport NSW, available at <http://www.transport.nsw.gov.au/sites/default/file/taxi/TNSW-2010-010-Tender-package-Taxi-Driver-Only.pdf>

<sup>52</sup> Transport NSW, <http://www.transport.nsw.gov.au/201011-stage-1-taxi-licence-tenders>

## Compliance of applications

In the Stage 1 release, 1,801 applicants tendered for 250 available licences. There were approximately 8.5 applications per licence in the open unrestricted category, 3.8 applications per licence in the 'taxi driver only' category, and 10.4 applications per licence in the peak availability category. Taxi drivers submitted 57.5% of all applications in Stage 1.

The electronic tender process significantly reduced non-complying applications with only four (0.2%) non-complying applications due to late submissions.<sup>53</sup> This represents a significant decrease from the 12% of non-compliant tenders in the Interim taxi licence release.

### 5.2.2 Provision of information

As with the interim taxi licence release, in the 2010/11 licence releases, the winning tender in the open categories was the highest price nominated (assuming the tender was compliant) in a sealed bid process.

It has been suggested by industry stakeholders that overbidding may have occurred, however, this assertion is at best anecdotal as the extent of information and degree to which each bid represents the true value of the licence to each bidder is unknown. In addition, there have been no instances yet of licences handed in for financial reasons.<sup>54</sup> It is acknowledged that currently there is minimal information in the public domain as to the exact costs of running a taxi. As noted by the TWU<sup>55</sup>, in very few (if any) industries does a new entrant know the cost of operating a business prior to entering the sector; it is up to the individual to find out the true revenue and costs of operating a taxi and bid accordingly.

In order to increase the ability of new entrants in the taxi industry and encourage long term viability, some stakeholders suggested it may assist to publish all currently available data relating to the costs of operating a taxi (on Transport NSW's website, or referred to the Taxi Council) so that individuals can seek to better understand potential costs prior to bidding on a taxi licence.

PwC acknowledges that this form of data may assist the industry, however it is expected to be challenging to obtain and publish data in a representative way for all licence types and operating methods of drivers. Many costs are likely to vary by operator/driver e.g. depending on the number of shifts operated, kilometres driven, driver experience, maintenance regime, etc. This would make it challenging to accurately present this information to the industry in a manner useful for all drivers/operators. PwC would suggest however that Transport NSW continue to provide information on the annual licence releases in order to assist in the provision of information relating to demand and other elements of the annual licence releases.

## Pricing of licences

As the Stage 1 licence issue has not yet been fully completed, final detailed information on price is not available in this report. However, indicative average prices for the 'taxi driver only', open unrestricted and PAL categories are shown in (Table 16).

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<sup>53</sup> Information provided by Transport NSW, 20/01/2011; available in *Interim 2010-11 Stage 1 Tender data – updated#2*, 13/01/2011

<sup>54</sup> Information supplied by Transport NSW, Draft report comment v2

<sup>55</sup> Opinion stated in consultation 1<sup>st</sup>6 February 2011

**Table 16 2010/11 Stage 1 annual taxi licence issues to date – indicative average annual licence fee<sup>56</sup>**

Licence class	Indicative average annual licence fee
Unrestricted (open to all)	\$34,991
Unrestricted (taxi driver only)	\$33,730
Peak availability (open to all)	\$25,994

Source 11 Interim 2010-11 Stage 1 Tender data (updated), 13/01/11, Transport NSW

Some stakeholders indicated that some bids were posted by individuals unaware of the true costs of operating a taxi. This lack of information led to overbidding (NSW TDA).

### 5.3 Alternative options for setting 2011/12 annual licence fees

There are three methods currently considered by Transport NSW to release taxi licences:

1. *Electronic tender* (as used for the 2010/11 licence releases) – under this approach, pricing of other bidders is not revealed at time of bidding. This method generally provides a measure of willingness to pay, but can be hindered by bidders not being able to see what others are willing to pay.
2. *Auction / in person / price revealed model* – under this approach, all bidders are present in person for a real-time auction of licences. While this option may provide for more instantaneous outcomes, it is often not feasible to group all interested parties together at one time.

The ‘price revealed’ model provides bidders with the opportunity to respond to prices nominated by other bidders until a threshold of their willingness or ability to pay is reached. This could be implemented by electronic or in-person bidding.

3. *Auction / electronic / price revealed model* – for this approach, an electronic process can use the internet or other secure method and may allow applicants to securely lodge a bid that is immediately received by Transport NSW. This process is suitable to deliver both sealed tender (as in the 2010/11 licence release by e-tender) and auction pricing methods.

An electronic system may necessitate greater time upfront in planning and delivering the system by Transport NSW, but can reduce the time needed to receive and sort applications, as well as to make offers.

It can also allow for each bid price to be revealed to other bidders in real time, before determining compliance, without revealing the other bidders’ identity (similar to e-Bay).

<sup>56</sup> Note that not all licences had been issued at time of writing

### 5.3.1 Advantages and Disadvantages of tender and auction options

Advantages and disadvantages of tender/auction implementation options are outlined in Table 17.

**Table 17 Implementation approaches**

	Advantage	Disadvantage
<b>Electronic sealed tender (pay-as-bid) - as used for the 2010/11 licence issue</b>	<ul style="list-style-type: none"> <li>- applicants provided with a secure bid method and time to research and prepare bid</li> <li>- Transport NSW provided with applications immediately and with minimal paperwork</li> <li>- bidders nominate their own willingness to pay</li> <li>- provides more flexibility in time for lodging applications and bids</li> </ul>	<ul style="list-style-type: none"> <li>- some interested participants may lack accessibility or understanding of technology</li> <li>- lack of price visibility and inability to review or change bid</li> <li>- greater potential for inadequate knowledge of true market price resulting in over-bidding</li> <li>- high variability in bid prices that may not reflect true market price</li> </ul>
<b>Auction - in person bidding</b>	<ul style="list-style-type: none"> <li>- instantaneous bidding and prices revealed to all attending</li> <li>- provides more uniform knowledge among participants of true market price</li> <li>- less variability in bid prices</li> </ul>	<ul style="list-style-type: none"> <li>- logistic requirements of hosting and attending meeting</li> <li>- requires preparation and knowledge of bidder capacity to pay</li> <li>- bid price may be affected by the ability to see other bids</li> <li>- requires attendance at certain time</li> <li>- auction atmosphere may lead to bidders competing, potentially resulting in higher bids</li> </ul>
<b>Auction - electronic</b>	<ul style="list-style-type: none"> <li>- increased price visibility as applicants are able to see all bids (in real time)</li> <li>- provides more uniform knowledge among participants of true market price</li> <li>- less variability in bid prices</li> <li>- successful applicants can be notified immediately</li> <li>- Transport NSW provided with applications immediately and minimal paperwork</li> </ul>	<ul style="list-style-type: none"> <li>- requires significant upfront preparation and testing of program</li> <li>- requires accessibility and understanding of technology by participants</li> <li>- could favour those more familiar with e-auction strategies</li> <li>- bid price may be affected by the ability to see other bids</li> <li>- requires online attendance at certain time and ability to respond quickly</li> </ul>

There are advantages and disadvantages to various methods of releasing licences. The NSW Taxi Council recognises the advantages of using an electronic on-line system due to the speed and efficiency of the process as well as the opportunity for applications to be validated prior to lodgement to minimise errors or mistakes.

However, as noted by the ATDA and Disability Council of NSW, this online mechanism requires adequate knowledge and ability of participants. This knowledge extends to not only knowledge of the application process, but also how to effectively use technical equipment and navigate online programs.

Similarly use of an auction or sealed tender processes involves various tradeoffs:

- Submissions to the provided some negative feedback regarding auctions, in terms of the ability to be physically present at an in-person auction and the different technical abilities of bidders in an electronic auction and the potential for manipulation of market price
- Auction processes provide the advantage for bidders of being able to see other bid (NSW TC), therefore allowing potential bidders who do not know the appropriate price of a taxi licence to respond according to the bids of other applicants
- Tenders generally require less administrative costs in carrying out the process and enable bidders to bid their true value of licence. While there may be variation in bid prices, the possibility for strategic bidding may be reduced.

To assist interested applicants in the 2011/12 release, Transport NSW provided a contact number on the front of the tender package for bidders seeking assistance. Nevertheless, the high compliance rate of the electronic system compared to the paper-based system suggests that it was successful in optimising compliance. The high rate of applications per licence offered also suggests that the online process was not a deterrent to applicants.

Given that an e-tender process was recently implemented by Transport NSW in 2010 the NSW Taxi Council suggests there may be advantages in maintaining consistency of method so that participants have an opportunity to learn and understand the procedures.<sup>57</sup>

### *5.3.2 Pricing of licences*

The recommended sealed bid e-tender process to be used in 2011/12 will allow bidders to nominate the value of a specific licence.

Some stakeholders mention concern over the price of licences and the possible implication for industry viability. In this review, certain recommendations, such as relating the portion of driver only licences to the demand for the licence, will help to reduce licence prices in the future. However, it is unclear over what timeframe that licence prices will decline.

There may be other methods in the licence release process that could also help to reduce licence prices. Although evidence is currently anecdotal, the process used by Victoria may encourage lower licence prices as the licence price is allocated licences based on the lowest successful bid (see discussion of process in Appendix E).

Due to time constraints, this process may not be able to be adopted by Transport NSW in the 2011/12 release. In this case, it is recommended that further discussion around this aspect be considered to inform future licence reviews.

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<sup>57</sup> Submission to the Review of 2011/12 annual taxi licence release for Sydney, NSW Taxi Council, February 2011

## 5.4 Recommendations

8. Retain the 2010/11 release sealed bid, e-tender process as there are no significant issues to justify a change. However, further consideration of alternative methods and their advantages/disadvantages is still warranted for future releases
9. Transport NSW should increase awareness and communication within the bidding process. This includes continuing to provide officer(s) from Transport NSW that are available for bidders to seek procedural advice during the process of submitting an online tender.

## 6 Assessment of low emission/hybrid class licences

As part of the annual licence determination, the PTA 1990 suggests that the Director-General's determination to 'provide for any other matter relating to the issue of annual licences that is prescribed by the regulations'.

This chapter considers a matter relating to the issue of annual licences as requested specifically by Transport NSW, namely considering low emission/hybrid class licences.

LPG taxis, which form the bulk of the Sydney taxi fleet, emit lower levels of greenhouse gases than petrol or diesel fuelled vehicles.<sup>58</sup>

Hybrid vehicles are already being used in NSW and throughout Australia as taxis. Low environmental impact, or 'green', vehicles are not only hybrid class vehicles, but may be low emission or more fuel efficient compared to similar class vehicles. Over the life of a taxi, improved fuel efficiency can lead to savings in fuel costs for operator and/or driver (depending on the bailment arrangement). For example, preliminary data from a hybrid taxi operating in Sydney is that it used 6 litres per 100 kilometres unleaded. IPART has assessed that fuel represents 7.2% of total cost of providing taxi services in urban areas and 13% of driver costs.

Vehicles potentially eligible to operate under a 'green' taxi licence may be one of the vehicles classified under the Commonwealth Government's *Green Vehicle Guide*. There are 58 green vehicle models currently available on the Australian market.<sup>59</sup> Any vehicle registered as a taxi in NSW must meet the Single Uniform Type Inspection (SUTI) specifications.<sup>60</sup>

There are a variety of measures that can indicate the degree of environmental impact of low emission vehicles. For the purpose of the recent Queensland initiative, 'green vehicles' are those that emit less than 140 grams of carbon dioxide (CO<sub>2</sub>) for every kilometre travelled. This is equivalent to a Commonwealth Government's *Green Vehicle Guide* greenhouse gas rating of eight or above.<sup>61</sup>

A further benefit is that a number of green vehicles on the Australian market may have as good or greater luggage and storage capacity than the average conventional LPG taxi, often because of the location of the LPG tank in the boot of the taxi.<sup>62</sup>

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<sup>58</sup> LPG has lower greenhouse emissions per litre of fuel consumed than petrol (Department of Sustainability, Environment, Water, Population and Communities 2010, *Reducing greenhouse gas emissions*, available at: [www.environment.gov.au](http://www.environment.gov.au))

<sup>59</sup> *Greening the Taxi Fleet*, ClimateQ: toward a greener Queensland Fact Sheet, Queensland Government, August 2009

<sup>60</sup> Transport NSW Taxi Vehicle Standards available at <http://www.transport.nsw.gov.au/taxi/vehicle-standards.html>

<sup>61</sup> *Green Vehicle Guide*, Commonwealth Government, <http://www.greenvehicleguide.gov.au/GVGPUBLICUI/home.aspx>

<sup>62</sup> *Greening the Taxi Fleet*, ClimateQ: toward a greener Queensland Fact Sheet, Queensland Government, August 2009

## 6.1 Environmental impact

There are a wide range of vehicles in the *Green Vehicle Guide*, each of these resulting in a range of environmental impacts. The Commonwealth Government's *Green Vehicle Guide* estimates that a typical Ford Falcon fitted with LPG emits 0.24 kg of CO<sub>2</sub> per kilometre. A typical Toyota Prius hybrid vehicle uses less fuel and consequently emits approximately 0.089kg of CO<sub>2</sub> per kilometre.<sup>63</sup>

## 6.2 Possible 'green' licence characteristics

The release of low emission taxi licences could be a separate tender/auction category or be subject to a price advantage to applicants relative to other licences to reflect the higher upfront costs of putting a hybrid or low emission vehicle on the road.

These factors would affect the level of price/other advantage offered by Transport NSW for such licences, as the industry is not likely to demand such licences without considering commercial viability.

## 6.3 Experience in other jurisdictions

### 6.3.1 Queensland

In August 2009, the Queensland government announced funding to encourage the use of low emission vehicles, such as hybrids or small diesel passenger vehicles in the taxi fleet, by giving a preference to tenders for taxi service licences where the operator agrees to purchase and operate a green vehicle.<sup>64</sup>

The Department of Transport and Main Roads (DTMR) will introduce a *15% Preference Rule for Green Taxis* to give preference to tenders for taxi service licences where the taxi operator agrees to purchase and operate a 'green' vehicle for the life of the licence. Price bids for green vehicles will be valued at 15% higher than the amount bid, which will provide a significant financial incentive to prospective taxi operators to operate 'green' taxis.<sup>65</sup>

This initiative aims to reduce the level of greenhouse gas emissions from the Queensland taxi fleet. Although a key driver was the proposed Carbon Pollution Reduction Scheme (CPRS), this scheme may help the taxi industry prepare for potential additional operating costs under similar carbon price schemes in the future.

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<sup>63</sup> *Green Vehicle Guide*, Commonwealth Government, <http://www.greenvehicleguide.gov.au/GVGPublicUI/home.aspx>

<sup>64</sup> *Greening the Taxi Fleet*, ClimateQ: toward a greener Queensland Fact Sheet, Queensland Government, August 2009

<sup>65</sup> *Passenger Transport Policy Determination: Taxi Service Licence Tenders — 15% Preference Rule for Green Taxis*, Department of Transport and Main Roads (Queensland), November 2009, available at [http://www.tmr.qld.gov.au/-/media/2c4b3b6e-1b03-44a2-a5b1-67feddd162c4/pdf\\_green\\_taxis\\_policy\\_determination.pdf](http://www.tmr.qld.gov.au/-/media/2c4b3b6e-1b03-44a2-a5b1-67feddd162c4/pdf_green_taxis_policy_determination.pdf)

Currently, most Queensland taxis are six-cylinder vehicles, particularly those run on LPG. These vehicles have a *Green Vehicle Guide* greenhouse gas rating of 5.5 and emit 240 grams of carbon dioxide per kilometre.<sup>66</sup>

### 6.3.2 Victoria

In April 2009, the Victorian Government announced the offer of 100 metropolitan peak service taxi licences, half of which have been allocated for use on environmentally-friendly hybrid vehicles.<sup>67</sup>

The 'green' taxi licence lease fees were offered at a special rate of \$1,136 per year instead of the \$6,136 fee which is currently paid for a standard peak service licence.<sup>68</sup>

### 6.3.3 Western Australia

In 2007, the Western Australia Government announced an initiative to introduce up to 10 hybrid vehicles into Perth's taxi fleet. Each of the participants in the 'Green Taxi Trial' will benefit from a \$15,000 government funded grant and a 20% reduction in the licence lease rate. The benefits of this scheme were identified as:<sup>69</sup>

- Major reductions in costs, fuel emissions and noise
- No LPG cylinder to partially occupy the available boot space
- Special servicing arrangements provided for participating Green taxi drivers.

Vehicles approved in the scheme must have a five star rating as published in the Commonwealth Government's *Green Vehicle Guide*, be a new vehicle capable of seating 4 passengers, comply with minimum access requirements, have adequate luggage space and be fitted with taxi equipment.<sup>70</sup>

## 6.4 Relevance of a 'green' taxi licence in Sydney

The question of whether to release 'green taxi licences' arises due to the wider economic movement and awareness of the environment environmental awareness. As noted by stakeholders, if 'green' licences were released, through the annual determination process, this would represent a portion of the fleet

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<sup>66</sup> *Greening the Taxi Fleet*, ClimateQ: toward a greener Queensland Fact Sheet, Queensland Government, August 2009

<sup>67</sup> *Peak Service Taxis*, State Government of Victoria, <http://www.taxi.vic.gov.au/DOI/Internet/vehicles.nsf/AllDocs/F399D08A5A79ABFFCA2570A5001D CF21?OpenDocument>

<sup>68</sup> *Submission to the Carbon Pollution Reduction Scheme Green Paper*, Australian Taxi Industry Association, September 2008, available at [www.climatechange.gov.au](http://www.climatechange.gov.au)

<sup>69</sup> *Submission to the Carbon Pollution Reduction Scheme Green Paper*, Australian Taxi Industry Association, September 2008, available at [www.climatechange.gov.au](http://www.climatechange.gov.au)

<sup>70</sup> *Submission to the Carbon Pollution Reduction Scheme Green Paper*, Australian Taxi Industry Association, September 2008, available at [www.climatechange.gov.au](http://www.climatechange.gov.au)

which is itself a growth of the total fleet. Therefore, the NSW TDA suggests it may be more equitable to provide incentives for the entire industry rather than future licence releases only.

Prior to releasing any type of 'green licence' it is necessary for Transport NSW to develop a position on whether uptake of environmentally friendly technology is supported by a policy agenda.

If an environmental policy is supported, Transport NSW can either adopt an active role in encouraging uptake by the taxi industry or let market forces and other wider economic conditions direct the industry.

In consultation, stakeholders expressed support for the notion of environmental awareness within the taxi industry (ATDA, NSW TC, City of Sydney, NSW BC, TWU). As noted, in one submission, the *introduction of excise on LPG and the federal government's commitment to introducing a carbon pricing scheme means that this issue is being dealt with on a much broader scale* and it may be expected that the industry will respond accordingly.

In addition, creating a 'green licence' type, with restrictions on vehicle type, clauses governing the use of non-'green' vehicles (in the case of breakdowns and repairs), as well as other aspects, may increase the monitoring and compliance burden of Transport NSW. Overall, this initiative may be better addressed by wider economic aspects, with Transport NSW facilitating improved knowledge within the taxi industry.

## 6.5 Recommendations

10. It is not recommended at this stage that Transport NSW allocate licences in the annual release specifically for low emission or 'green' licences, nor to provide a discount incentive. If Transport NSW wishes to pursue a policy of actively promoting 'green' initiatives in the taxi industry, PwC suggests the use of subsidies across the entire fleet may be more effective.

## 7 Summary of recommendations

Section 32C(3) of the PTA sets on the matters that the Director-General must consider in making the annual determination relating to availability of annual licences. The relevant matters and recommendations resulting from PwC's review are summarised below:

### Summary of recommendations for the 2011/12 annual licence determination

Matters for consideration	Recommendations for 2011/12
<b>Number of annual licences to be issued</b>	<ol style="list-style-type: none"> <li>1. Based on the model and approach proposed for the 2011/12 Sydney Taxi Growth Model, the recommended number of to be released in Sydney during the year commencing 1 July 2011 is:                             <ul style="list-style-type: none"> <li>– 197 new growth annual taxi licences (3.6% fleet growth)</li> <li>– An additional 30 licences to replace those expiring in 2011/12</li> <li>– Total of 227 growth and replacement licences.</li> </ul> </li> <li>2. It is recommended that Transport NSW collect meter swing data from each network on an annual basis (beginning with the years 2009/10 and 2010/11 for possible incorporation in the 2012/13 determination), in order to provide a more comprehensive measure of passenger demand than the current 'network booking' measure in the Model.</li> </ol>
<b>Number and class of annual licences for authorised taxi drivers</b>	<ol style="list-style-type: none"> <li>3. The number of licences to be issued to eligible, authorised taxi drivers only should represent between 50-70% of the new growth licences released in 2011/12.</li> <li>4. The remaining growth and replacement licences should be open to anyone to apply.</li> <li>5. PwC recommends all growth licences be Unrestricted (i.e. no restriction on time of operation) to allow the market to decide on the hours of operation and the price for a licence based on this. However, there may be grounds to release a portion of taxi driver only licences as peak availability licences given the suitability of these licences for owner drivers and the role such licences can play to vary traditional changeover times.</li> </ol>
<b>Potential limit on the number of licences granted to an applicant or related applicant</b>	<ol style="list-style-type: none"> <li>6. Limit on the number of licences:                             <ul style="list-style-type: none"> <li>– Maintain 2010/11 restrictions whereby the taxi driver only category is limited to one licence per successful applicant</li> <li>– For the remaining licence categories open to anyone to apply, do not restrict the number of licences that an individual or entity can obtain to promote competition for emerging operators and networks.</li> </ul> </li> <li>7. Market share of licences                             <ul style="list-style-type: none"> <li>– Based on the current taxi industry structure, it is not considered necessary for the 2011/12 release to restrict the total number of licences or percentage of market share, an individual or entity can own or operate</li> </ul> <p>In the future, this aspect may warrant review if the structure of the taxi industry changes significantly and there are demonstrated abuses of market power from owning or operating a large quantity of licences.</p> </li> </ol>

Matters for consideration	Recommendations for 2011/12
<b>Other matters relating to the issue of annual licences</b>	<p>Method to release taxi licences:</p> <ol style="list-style-type: none"> <li data-bbox="730 338 1398 499">8. Retain the 2010/11 release sealed bid, e-tender process as stakeholder views suggest that there are no significant issues to justify a change. However, further consideration of alternative methods and their advantages/disadvantages is still warranted for future releases.</li> <li data-bbox="730 510 1398 645">9. Transport NSW should increase awareness and communication within the bidding process. This includes continuing to provide officer(s) from Transport NSW that are available for bidders to seek procedural advice during the process of submitting an online tender.</li> </ol> <p>Low emission/hybrid class licences:</p> <ol style="list-style-type: none"> <li data-bbox="730 683 1398 873">10. It is not recommended at this stage that Transport NSW allocate licences in the annual release specifically for low emission or 'green' licences, nor to provide a discount incentive. If Transport NSW wishes to pursue a policy of actively promoting 'green' initiatives in the taxi industry, the use of subsidies across the entire industry may be more effective.</li> </ol>

# Appendices

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## Appendix A Stakeholder consultation

Consultation process	Stakeholder
<b>Issues paper</b>	Publicly released on TNSW website
<b>Stakeholder forum</b>	<p><b>Attendees:</b></p> <ul style="list-style-type: none"> <li>Peter Ramshaw, NSW Taxi Council</li> <li>Steven Butt, NSW Taxi Council</li> <li>Ann Turner, NSW Taxi Drivers Association</li> <li>Ernie Mollenhauer, NSW Taxi Drivers Association</li> <li>Michael Jools, Australian Taxi Drivers Association</li> <li>Aldina Aljukic, NSW Business Chamber</li> <li>Mitchell Lee, City of Sydney</li> <li>Garth Mullholland, Transport Workers Union</li> <li>Amelia Starr, Disability Council of NSW</li> </ul> <p><b>Unable to attend:</b></p> <ul style="list-style-type: none"> <li>Action for Public Transport NSW</li> <li>Better Regulation Office</li> <li>School of Economics, University of Sydney</li> <li>Tourism and Transport Forum</li> <li>Council of Social Services NSW</li> <li>Sydney Airport Corporation Ltd</li> </ul>
<b>Industry specific consultations</b>	<ul style="list-style-type: none"> <li>Peter Ramshaw, NSW Taxi Council</li> <li>Steven Butt, NSW Taxi Council</li> <li>Ann Turner, NSW Taxi Drivers Association</li> <li>Ernie Mollenhauer, NSW Taxi Drivers Association</li> <li>Michael Jools, Australian Taxi Drivers Association</li> </ul>
<b>Parties who made submissions</b>	<ul style="list-style-type: none"> <li>Dr. Peter Abelson, School of Economics, University of Sydney</li> <li>Ross Rheuben, Taxi Driver</li> <li>Western Sydney Community Forum</li> <li>NSW Taxi Council</li> <li>Australian Taxi Drivers Association</li> <li>NSW Taxi Drivers Association</li> <li>City of Sydney</li> </ul>

## Appendix B Other examples of taxi growth models

Some examples of structured taxi growth models that have either been used or proposed as a means to estimate fleet growth are described below. These models tend to differ in their level of complexity, number and type of model components, and weightings used.

### Queensland model

The model used by Queensland to estimate fleet growth identifies four key drivers of taxi fleet growth.<sup>71</sup>

**Table 18 Components in the Queensland model**

Driver of taxi numbers	Factors
<b>Demographic changes</b>	Population changes <sup>(1)</sup> ; 'appropriate' ratio of taxis to population <sup>(2)</sup>
<b>Industry issues</b>	Number of network bookings per taxi <sup>(1)</sup> ; licence values <sup>(1)</sup> ; performance of taxi company operations <sup>(2)</sup>
<b>Service levels</b>	Satisfaction of response times KPIs <sup>(1)</sup>
<b>Community expectations</b>	Community satisfaction with taxi services <sup>(2)</sup>

Notes:

- (1) 'Objective' inputs based on data collected
- (2) 'Subjective' inputs based on perceptions

Source: *Taxi Licence Model Review*, Draft Final Report, SAHA, 9 December 2009, prepared for Queensland Transport

The relative importance of model components in setting the overall taxi fleet growth appears to be subjective and changeable. In this way, the Queensland model appears to be flexible and provides a degree of discretion, with a key advantage being the simplicity in its approach.

### NSW Taxi Council's proposed model

The Taxi Council proposed a model in 2005 to the Ministry of Transport (now Transport NSW). This was re-evaluated by PwC in the development of the Sydney Taxi Growth Model in 2010. The Taxi Council's model is comprised of six components, as shown below.

<sup>71</sup> *Taxi Licence Model Review*, Draft Final Report, SAHA, 9 December 2009, prepared for Queensland Transport

**Table 19 Components in NSW Taxi Council's proposed model (2005)**

Component	Weighting
<b>Sydney's population growth</b>	30%
<b>Airport passenger numbers</b>	10%
<b>Change in real licence values</b>	10%
<b>Total network bookings</b>	20%
<b>Annual average pickup time</b>	20%
<b>Percentage of 'no cars available'</b>	10%
<b>Total</b>	<b>100%</b>

Source: Information provided by NSW TC to PwC during 2010/11 review

This model places a relatively higher weighting (30%) on population growth, as the Taxi Council considered changes in population size as a main determinant of changes in the demand for taxi services.

### Schaller's proposed US model

A model was proposed by Bruce Schaller in 2005, based on a regression analysis of six potential factors affecting the actual number of taxis across 118 US cities:<sup>72</sup>

- Population size
- Employment
- Vehicle ownership
- Subway rail transit use
- Airport passenger volumes
- Taxi fares.

Schaller concluded that there are three key factors determining taxi demand, being the number of subway commuters, the number of no-vehicle households and the number of air travellers exiting the airport by taxi.

<sup>72</sup> Schaller, B 2005, A regression model of the number of taxicabs in US cities, *Journal of Public Transportation 2005, vol.8 no.5*, pp.63-78

## Appendix C 2011/12 Taxi Growth Model

Component	2010/11 model weighting	2011/12 model weighting		Change 2009 to 2010	Growth 2010/11 to 2011/12	Correlation	Contribution to growth 2011/12
State final demand	20%	20%			3.5%	1.0	0.700%
Sydney population size	5%	10%			1.2%	1.0	0.118%
Unemployment rate	5%	0%			-4.8%	-1.0	0.000%
Sydney Airport passenger numbers	10%	10%	6.5%			1.0	0.654%
Total network bookings	10%	10%		1.9%		1.0	0.185%
Value of licences	10%	10%		4.0%		1.0	0.403%
Plate lease costs	10%	10%		9.2%		1.0	0.924%
Annual average pick up time (mins)	10%	10%		0.2%		1.0	0.020%
Percentage of pickups within 15 min	10%	10%		4.3%		-1.0	-0.427%
Percentage of 'no cars available'	10%	10%		13.2%		1.0	1.321%
<b>Total taxi fleet growth</b>							<b>3.9%</b>
<b>Number of new annual taxi licences</b>							<b>215</b>
<b>Adjustments</b>							
(1) Number of WATs released						-1	-40
(2) Attrition of licences						1	1
(3) Staged release of demand backlog						1	21
<b>RESULT</b>							<b>197</b>
<b>Total Taxi Fleet growth</b>							<b>3.6%</b>
<b>Replacement licences to release</b>							
Number of licences expiring in 2011/12							
peak availability licences						1	24
unrestricted licences						1	1
fringe area licences						1	5
<b>Total replacement licences</b>							<b>30</b>

## Appendix D Detailed description of components in 2011/12 model

Relevant factors	Component	Weighting	Measurement	Description of data
<b>Likely passenger demand</b>	State final demand (NSW economic activity)	20%	Fiscal Year	Forecast growth between 2010/11 and 2011/12: NSW Treasury, Half Yearly Review 2010-11]. Annual data for year ending Jun 30. <sup>73</sup>
	Sydney population size	10%	Fiscal Year	Forecast growth between 2010/11 and 2011/12: NSW Department of Planning population forecasts. Annual data for year ending Jun 30. <sup>74</sup>
	Sydney Airport passenger numbers	10%	Fiscal Year	Historical growth between 2008/09 and 2009/10: BITRE 'total passengers in Sydney'. Annual data for year ending Jun 30. <sup>75</sup>
	Total network bookings	10%	Calendar Year	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. Based on monthly disaggregated taxi network data. <sup>76</sup>
<b>Demand for new licences; viability</b>	Value of licences	10%	Calendar Year	Historical growth between 2009 and 2010: TNSW supplied data for Unrestricted licence transfer values. <sup>77</sup>
	Plate lease costs	10%	Calendar Year	Historical growth between 2009 and 2010: IPART (published annually) data. <sup>78</sup>

<sup>73</sup> *Half Yearly Review 2010-11*, Department of Treasury, NSW Government, released 15 December 2010

<sup>74</sup> *NSW State and Regional Population Projections: 2008 Release*, Department of Planning, available at <http://www.planning.nsw.gov.au/Programsservices/Populationandhousingprojections/tabid/124/Default.aspx>

<sup>75</sup> Data for Sydney airport passenger numbers, including both inward and outbound passengers, is published by the Commonwealth Department of Infrastructure and Transport (BITRE). Airport traffic for the financial years from 1985-86 to 2009-10 is provided on an annual basis, by airport. The most recent addition was published in October 2010. *Airport Traffic Data 1985-86 to 2009-10*, Department of Infrastructure and Transport (BITRE), Airport Passengers, Sydney, available at <http://www.bitre.gov.au/info.aspx?ResourceId=191&NodeId=96>

<sup>76</sup> The total network bookings per month is reported by each network and published by Transport NSW. Aggregate bookings for calendar years 2009 and 2010 were compared, with the percentage change in total number of bookings used in the model. *Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

<sup>77</sup> This component is measured using the average of monthly transfer values for Sydney Metropolitan Ordinary taxi licences over a calendar year. Data is reported monthly, with the most recent data from January 2011. The component is calculated using the change in average value from 2009 to 2010

<sup>78</sup> This component is measured using the annual calendar year plate lease costs for unrestricted licences; data has been supplied by IPART (2010) and Transport NSW. The growth, or change, in plate lease costs between the years 2009 and 2010 is used in the model. *2010 Review of Taxi Fares in NSW*, IPART, June 2010, available at <http://www.ipart.nsw.gov.au/investigations.asp?industry=4&sector=24&show=com>

Relevant factors	Component	Weighting	Measurement	Description of data
<b>Performance of existing taxi services</b>	Annual average pick up time (mins)	10%	Calendar Year	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. <sup>79</sup>
	Percentage of pickups within 15 mins	10%	Calendar Year	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. <sup>80</sup>
	Percentage of 'no cars available'	10%	Calendar Year	Historical growth between 2009 and 2010: TNSW KPI data from January 2009 to December 2010. <sup>81</sup>
<b>Adjustments to the model</b>	(1) Number of WATs released	NA	Calendar Year	Data provided by Transport NSW, as at 17 December 2010. Annual figures provided.
	(2) Attrition of licences	NA	Financial Year	Data provided by Transport NSW.
	(3) Staged release of demand backlog	NA	Financial Year	In the 2010/11 model, an additional model indicated that 42 additional licences were needed to address the backlog in demand over the previous four years (2006 to 2010) In order to stage the release of licences, half (21) of these licences were released in 2010/11, with the remaining 21 licences to be released in 2011/12. <sup>82</sup>

<sup>79</sup> The average pickup time, as reported by networks and published by Transport NSW is calculated by taking the mean of all average pickup times from networks in each calendar year. Monthly disaggregated taxi network data is published quarterly

*Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

<sup>80</sup> The percentage of pickups within 15 minutes is calculated using the total number of pickups in 15 minutes (KPI 6.1) divided by the total number of taxi pickups (KPI 6.4) in each calendar year. Data is published by Transport NSW. Monthly disaggregated taxi network data is published quarterly

*Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

<sup>81</sup> The percentage of NCA is calculated using the number of 'no cars available' (KPI 12) divided by the total number of booking requests (KPI 1). The total number of NCA and number of booking requests by each network are aggregated by calendar year. Monthly disaggregated taxi network data is published quarterly

*Taxi KPIs July 2008 to November 2010*, Transport NSW, provided to PwC 22/12/10, update including December 2010 provided 28/02/11

<sup>82</sup> *Analysis on release of new annual taxi licences from 1 July 2010*, PwC, report to New South Wales Transport and Infrastructure (now Transport NSW), March 2010

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## Appendix E Case study: Licence release process in Victoria

In December 2009, the Victorian Government announced the release of up to 530 fixed term conventional and wheelchair accessible taxi licences. The tender process for release of these licences is described below:

### 1 Implementation of the process

Release of these licences was undertaken as part of a tender process. In terms of compliance requirements, few restrictions were imposed on eligibility, although successful bidders were required to seek accreditation as a licence operator from the Victorian Taxi Directorate before a licence could be issued. This process assesses the applicant's ability to satisfy a series of business and service standards (including fair dealings, record keeping, safety and fair dealings)

### 2 Provision of price information

In terms of the release process, the Victorian Government allocated licences on a competitive basis, inviting applicants to lodge bids outlining the number and type of licences sought (such as a metro or outer-metro full licence or a metro or outer-metro wheelchair accessible licence). Bidders were required to nominate the price they were prepared to pay for those licences. All compliant bids were then pooled and ranked from highest to lowest by bid amount.

The Government identified the price bid for the 200th highest bid, which then became the single price at which the 200 conventional licences would be sold. This meant that all but the 200th highest bidder paid a price lower than the price they bid during the tender process.

The Government repeated the sale process for the wheelchair accessible taxis. The sequential nature of the process allowed bidders for these licences to draw on information made available through the tender process for conventional licences (i.e. the price paid by successful bidders).

### 3 Ability to place multiple bids

The auction process allowed for multiple bids for difference licence types. This was done in the bid documentation (using a bid schedule) rather than using multiple bid forms.



