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***Annual taxi  
licence  
release  
2012/13***  
**Final Report**

15 March 2012



Transport  
for NSW

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# Acronyms

<b>Abbreviation</b>	<b>Full text</b>
ABS	Australian Bureau of Statistics
ACMA	Australian Communications and Media Authority
ATDA	Australian Taxi Drivers Association
BITRE	Bureau of Infrastructure, Transport and Regional Economics
CCN	Combined Communications Networks
CY	Calendar Year
FAL	Fringe Area Licence
FY	Fiscal Year
GSP	Gross State Product
GTC	Generalised Trip Cost
IPART	Independent Pricing and Regulatory Tribunal
KPI	Key Performance Indicator
NCA	No cars available
NCOSS	Council of Social Service of NSW
NSW TC	NSW Taxi Council
NSW TDA	NSW Taxi Drivers Association
PAL	Peak Availability Licence
PDCN	Physical Disability Council NSW
PTA	Passenger Transport Act
PwC	PricewaterhouseCoopers
SD	Statistical Division
SFD	State Final Demand
SMRA	Simultaneous Multiple Round Ascending
STGM	Sydney Taxi Growth Model
TCS	Taxis Combined Services
TfNSW	Transport for NSW
WAT	Wheelchair Accessible Taxi

# Executive Summary

## 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 Transport for New South Wales (TfNSW) must consider in making the annual determination of the number of renewable, non-transferable annual taxi licences for which an annual licence fee is payable.

To assist the determination, PwC has developed a set of recommendations relating to key matters the determination may consider. These are based on the outcomes from the Sydney Taxi Growth Model (STGM), results of stakeholder consultations, and other analysis undertaken by PwC. It is important to note that the STGM outcome and other recommendations are components used to inform the TfNSW determination, but are not definitive and TfNSW may consider other factors in the decision process, and opt to deviate from recommended release numbers.

For the 2012/13 determination, PwC has been commissioned to:

- Conduct an analysis of the factors Transport for NSW is to have regard to when determining the number of annual taxi licences to be issued in the Sydney Metropolitan Transport District (Sydney) for the year commencing 1 July 2012;
- Conduct analysis on other specific issues relating to taxi licences in Sydney, namely:
  - The need for different classes of annual taxi licences, such as unrestricted, fringe area licences (FALs), or peak availability licences (PALs)
  - Offering any or all of the recommended number of licences to authorised taxi drivers only
  - The method to release taxi licences
  - The preferred method or methods of determining annual licence fees for the 2012/13 release;
- Consult stakeholders on the factors considered in determining the number of taxi licences to be released, and other relevant matters; and
- Provide a report to Transport for NSW to inform the 2012/13 annual determination, including analysis and recommendations on other specific issues.

The relevant matters and recommendations resulting from PwC's review are summarised below.

Table 1 Summary of recommendations for the 2012/13 annual licence determination

Matter for Consideration	Recommendations for 2012/13
<b>Number of annual licences to be released</b>	<p>1. Based on the model and approach proposed for the 2012/13 Sydney Taxi Growth Model (STGM), there is no demand for taxi fleet growth and additional annual taxi licences to be released in Sydney during the year commencing 1 July 2012. The output computed by the model is less than zero, with:</p> <ul style="list-style-type: none"> <li>– -89 growth annual taxi licences (-1.57% demand for fleet growth)</li> <li>– An additional 2 licences to replace those expiring in 2012/13</li> <li>– A total of -87 growth and replacement licences</li> </ul> <p>Reflecting that the STGM is a part of the decision process but is not definitive, the NSW Government could consider the following licence release options during the year commencing 1 July 2012:</p> <ul style="list-style-type: none"> <li>– Do not release any new annual taxi licences</li> <li>– opulation55 annual licences to replace existing licences returned to TfNSW in CY 2011, with a further 2 to replace the existing short term fringe area licences due to</li> </ul>

Matter for Consideration	Recommendations for 2012/13
<b>Model components and weightings</b>	<p>expire in 2012/13</p> <ul style="list-style-type: none"> <li>- Release some other positive amount of annual taxi licences based on a broader policy decisions, and taking into consideration that previous tenders have generally been oversubscribed</li> </ul> <ol style="list-style-type: none"> <li>2. Following a review of all aspects of the STGM, no changes to the STGM components, weightings, inflators or adjustments are proposed for 2012/13</li> <li>3. TfNSW collect 'meter swing' data from each network on an annual basis and for at least two years (split by plate type and time of day), in order to develop a more comprehensive measure of direct passenger demand than network bookings alone.</li> <li>4. Consideration should be given to removing or replacing the 'Percentage of No Cars Available' component from the STGM for the 2013/14 annual licence release. This should be discussed during stakeholder consultation prior to the release</li> <li>5. TfNSW take into account the need for data on the number of short trip refusals, the differences in wait times for shorter and longer trips, and customer reasons for the means employed to obtain a taxi, in the design of questions for customer surveys that will be undertaken later this year. The possibility of undertaking the same survey on an annual basis should be considered.</li> <li>6. A transition from measuring Sydney Airport Passenger growth on a financial year basis to a calendar year basis is recommended for the 2013/14 determination.</li> <li>7. The following changes to the STGM could be raised in consultation for consideration during the 2013/14 review: <ul style="list-style-type: none"> <li>- Incorporation of NSW Government rank data at supervised Sydney ranks</li> <li>- Incorporation of bid ratio and price data from past annual licence releases following any further releases</li> <li>- Alternative method for calculating plate lease costs, dependent upon additional data becoming available through the proposed amendment of cl 184 of the Passenger Transport Regulation 2007.</li> </ul> </li> </ol>
<b>Class of annual licences to be released</b>	<ol style="list-style-type: none"> <li>8. Any growth licences to be issued in 2012/13 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 licences as peak availability licences given the role they can play to address taxi availability at traditional changeover times. The portion could be equal to their current representation in the annual licences released to date (28%) to maintain the status quo.</li> </ol>
<b>Offering licences to authorised taxi drivers only</b>	<ol style="list-style-type: none"> <li>9. As there was not one clear position of stakeholders on the issue of eligibility criteria, TfNSW may want to consider relaxing eligibility if a driver has had a short gap in continuity for reasons not related to driver performance. In general, PwC would suggest not to tighten requirements imposed as this may result in a greater proportion of driver only licences not being successfully bid for.</li> <li>10. Based on results of past annual releases (69% of all conforming tenders received were received from taxi drivers and 75% of all licences issued have been issued to taxi drivers), the number of licences issued to eligible, authorised taxi drivers only could represent approximately seventy per cent of the new growth licences released in 2012/13. The remaining growth and replacement licences should be open to anyone to apply.</li> <li>11. Any driver-only growth licences to be issued in 2012/13 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 are grounds to release a portion of licences as peak availability licences given the role they can play to vary traditional changeover times. If peak availability licences are released in the driver-only category, this could occur in the annual licences released to date to maintain the status quo.</li> </ol>
<b>Preferred methods to release taxi licences and determine annual licence fees</b>	<ol style="list-style-type: none"> <li>12. TfNSW could retain the 2011/12 release's sealed bid, e-tender process, as stakeholder views suggest there are no significant issues to justify a change. Alternatively, TfNSW could opt to switch to the Victorian lowest successful bid pricing model, reflecting that benefits would be obtained in line with the form of lower prices for bidders overall.</li> </ol>

Note: The recommendations from this review are for the 2012/13 licence release only and do not represent a recommendation or position for future determinations.

## Outcomes of the 2012/13 Sydney Taxi Growth Model

The STGM is one tool updated on an annual basis to assist the Director-General of Transport for NSW's determination of the number of annual licences to be released each year. Outcomes of the STGM for 2012/13 are presented in Table 2.

Table 2 Outcomes of the 2012/13 Sydney Taxi Growth Model (STGM)

Key drivers of taxi demand	Component	Weighting		Growth 2012/13	Contribution to 2012/13 model
<b>Likely passenger demand and latent demand for passenger services</b>	State final demand (SFD) (NSW economic activity)	20%	50%	3.25%	0.65%
	Sydney population size	10%		1.17%	0.12%
	Sydney Airport passenger numbers	10%		4.34%	0.43%
	Network bookings (excludes rank and hail and direct-with-driver bookings)	10%		-8.57%	-0.857%
<b>Industry viability and sustainability and demand for new licences</b>	Value of licences (secondary market measure of transferrable plates)	10%	20%	4.59%	0.46%
	Plate lease costs (secondary market measure of transferrable plates)	10%		1.66%	0.17%
<b>Performance of existing taxi services</b>	Annual average pick up time (mins)	10%	30%	-2.42%	-0.24%
	Percentage of pickups within 15 mins	10%		-2.69%	0.27%
	Percentage of 'no cars available'	10%		-32.32%	-3.23%
<b>Demand for taxi fleet growth</b>					<b>-2.23%</b>
<b>Demand for new annual taxi licences</b>					<b>-126.5</b>
<b>Adjustments</b>	(1) Number of WATs released (representing a portion of standard jobs)			39	-17.6
	(2) Attrition of previously released annual licences				55
<b>Adjusted demand for total taxi fleet growth</b>					<b>-1.57%</b>
<b>Demand for new annual taxi licences</b>					<b>-89</b>
<b>Replacement licences to be issued 2012/13</b>	Fringe area licences for Windsor/Richmond area				<b>2</b>

Note: the STGM results indicate that there is no demand for additional annual taxi licences.

As indicated in the table above, the STGM indicates negative growth of -1.57% for 2012/13 based on the indicators and components of the model. This percentage change is considerably below a long term average demand growth rate of 3-5%, which could be expected in economy growing at trend and relative stability in the market share of taxis, hire cars and tourist vehicles.

# 1. Introduction

## 1.1 Context to this report

In 2009, the New South Wales (NSW) Government announced reforms to taxi licensing in Sydney. As a result of these reforms, Transport for NSW (TfNSW) now determines the number of renewable, non-transferable annual licences to be released in Sydney each year (excluding Wheelchair accessible Taxis (WATs)) for which an annual licence fee is payable. Taxi licences can also be purchased directly on the secondary market or leased from an existing licensee.

As part of the determination, there are a number of matters outlined in Section 32C(3) of the *Passenger Transport Act 1990* (PTA) that TfNSW must consider in making the annual determination of the number of new annual plates to be released. This report has been prepared to document key factors that may affect the decision, consider stakeholder inputs drawing on a consultation process, and based on updating the Sydney Taxi Growth Model (STGM).

The annual review and release of taxi licences directly contributes to achieving the goals set out in the 'NSW 2021: A Plan to Make NSW Number One' ten year plan, particularly those focused on improving the customer experience with transport services (goal 9) and restoring accountability to government by involving the community in decision making (goal 32).<sup>1</sup> These goals correspond with a commitment by TfNSW that customers are at the centre of every action and decision taken.

## 1.2 Taxi licensing reform in Sydney

The 2009 taxi licensing changes in Sydney had the objectives of:

- Ensuring that the supply of taxis responds closely to growth in passenger demand;
- Balancing the need for a more affordable means of entry into the taxi market with the need to avoid unreasonable impacts on existing licence holders;
- Reducing barriers to entry and encouraging competition;
- Placing downward pressure on fares over time; and
- Simplifying existing taxi licence structures.

As a result of these licensing changes, the issuance of ordinary transferable and short-term non-transferable taxi licences has now been replaced by 12 month non-transferable licences that 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 installments. As existing short term licences expire, they are replaced by equivalent annual licences, to ensure there is no net loss in taxis available for providing passenger services.

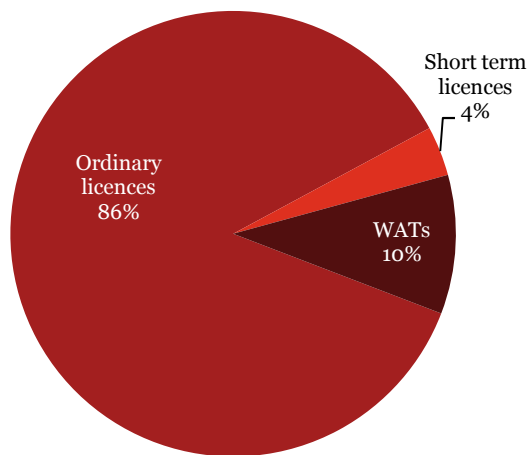
Annual licences now comprise more than 10 per cent of Sydney taxi licences. Figures 1 and 2 show the composition of Sydney taxi licences as at 31 December 2009 and 31 December 2011.

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<sup>1</sup> *NSW 2021 A plan to make NSW number one*, NSW Government, available at: [http://www.2021.nsw.gov.au/sites/default/files/NSW2021\\_WEB%20VERSION.pdf](http://www.2021.nsw.gov.au/sites/default/files/NSW2021_WEB%20VERSION.pdf)

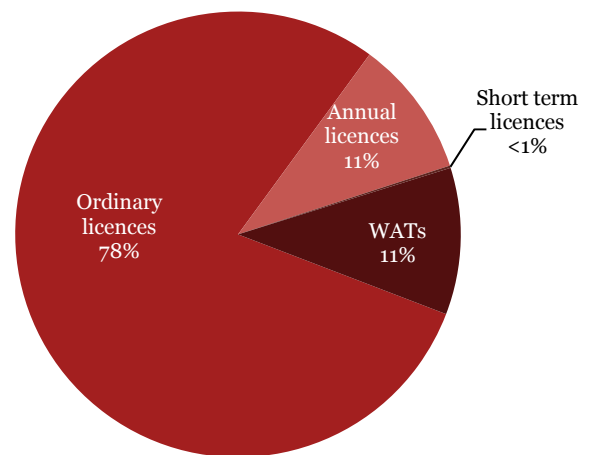


Figure 1 Composition of Sydney taxi fleet as at 31st December 2009<sup>2</sup>



Total number of licences = 5,231

Figure 2 Composition of Sydney taxi fleet as at 31st December 2011<sup>3</sup>



Total number of licences = 5,768

### 1.3 Purpose and scope of this review

The new model for taxi licence release in Sydney requires TfNSW to determine the number of annual taxi licences, excluding WAT licences, to be released each year. In making this determination, TfNSW is to have regard to the following matters, as set out in section 32C(3) of the PTA:

- 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; and
- Any other matters that may be relevant, having regard to the objective of ensuring improved taxi services.

TfNSW may also consider whether it is necessary to:

- Make a certain number of licences available to authorised taxi drivers only, who are, or have applied to become, accredited taxi operators; and
- Limit the number of licences granted to the same applicant, or related entity, to promote competition.

Importantly, the PTA allows for the annual fee for each licence to be set by public auction or sealed tender and be renewable each year at that fee for up to 10 years.<sup>4</sup>

For the 2012/13 annual licence determination, PwC has been commissioned to:

<sup>2</sup> Chart constructed from data provided by TfNSW 2011: 'Number of licences by licence type in Sydney at 1 January 2010.'

<sup>3</sup> Total number of licences includes 643 new and replacement annual licences. This figure is calculated by summing the number of annual licences released in the interim annual licence release (2010), and the number of licences determined for release in both the 2010/11 and 2011/12 annual licence determinations. Chart constructed from data provided by TfNSW 2011: 'Number of licences by licence type in Sydney at 1 December 2011' and data available on the TfNSW website at: <http://www.transport.nsw.gov.au/content/taxi-licences>

<sup>4</sup> Note: In accordance with the PTA S32JA: (1) The amount of the licence fee for an annual licence (other than a licence for a wheelchair accessible taxi-cab) must be determined by inviting applicants for the licence to bid for it at public auction or to submit sealed tenders for it. (2) TfNSW may, in the circumstances specified in the regulations, determine a licence fee for any such annual licence without complying with subsection (1).

- Conduct an analysis of the factors TfNSW is to have regard to when determining the number of annual taxi licences to be issued in the Sydney Metropolitan Transport District (Sydney) for the year commencing 1 July 2012;
- Conduct analysis on other specific issues relating to taxi licences in Sydney, namely:
  - The need for different classes of annual taxi licences, such as unrestricted, fringe area licences (FALs), or peak availability licences (PALs)
  - Offering any or all of the recommended number of licences to authorised taxi drivers only
  - The method to release taxi licences
  - The preferred method or methods of determining annual licence fees for the 2012/13 release;
- Consult stakeholders on the factors considered in determining the number of taxi licences to be released, and other relevant matters; and
- Provide a report to TfNSW to inform the 2012/13 annual determination, including analysis and recommendations on other specific issues.

## ***1.4 Consultation process***

Preparation of this Report has involved the following consultation process to inform TfNSW's determination:

- Release of an Issues Paper to guide public submissions (31 January – 14 February 2012);<sup>5</sup>
- Hosting a forum with taxi industry and customer representatives, and other stakeholders to understand views on the annual release, taxi service performance, the customer experience, and related issues (on 1 February 2012)

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

## ***1.5 Structure of the report***

The remainder of this Report is structured to consider each of the tasks outlined in TfNSW's Request for proposal, Advice on Release of Annual Taxi Licences: 1 July 2012 – 30 June 2013:

- Chapter 2 – considers the number of annual licences to be issued during the year commencing 1 July 2012;
- Chapter 3 – considers the need for different classes of annual taxi licences, such as unrestricted, FALs, or PALs;
- Chapter 4 – considers whether there is merit in offering any or all of the recommended number of licences to authorised taxi drivers only; and
- Chapter 5 – considers the method to release taxi licences and preferred method or methods for determining annual licence fees.

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<sup>5</sup> Refer to <http://www.transport.nsw.gov.au/sites/default/files/b2b/taxireform/2012-13-Annual-Taxi-Licence-Release-Final-Discussion-Paper-PwC.pdf>

## ***2. Number of annual licences to be released***

This chapter considers factors to estimate the number of annual licences to be issued in Sydney during the year commencing 1 July 2012. It provides an overview of the role of the STGM, and discussion of each of the STGM components as they have been applied to the 2012/13 annual licence determination. Included in the discussion are aspects raised by stakeholders during the consultation process, as well as other aspects considered by PwC in the 2012/13 review.

### ***2.1 Role of the Sydney taxi growth model (STGM)***

The Sydney Taxi Growth Model (STGM) was developed by PwC in 2010 has been used in the 2010/11 and 2011/12 licence release processes, and now in 2012/13 to inform the determination of the number of annual licences to be released.

The model was developed to specifically incorporate the matters set out in Section 32C(3) of the PTA that TfNSW must consider in making the annual determination, with these matters forming the key components of the model. The objective of the STGM is to provide transparent measures of the demand for additional taxi licences and fleet growth over time for use as part of the determination process.

The three proxy measures of taxi demand in the model are:

1. Measures of likely passenger demand and latent demand for taxi services;
2. Industry viability and sustainability indicators (licence transfer and lease costs or operator demand for new licences to enter the industry); and
3. Changes in network booking key service performance indicators (KPIs).

The STGM has been developed based on a range of available data with relevance to the three key drivers above. Relative weights of each component in the model have been developed based on stakeholder consultations and judgment of the relative importance of the key drivers of demand for taxis.

Inflators have been identified for each component, drawing on industry and/or publicly available data. The 2010/11 STGM considered these components over the previous three years to establish a trend, and address latent demand over the period to December 2010. The 2011/12 STGM reflected growth over the 12 months from January 2011 to December 2011. Similarly, the 2012/13 model reflects growth over the period from January 2012 to December 2012. Some of the components (SFD and Sydney population size) have been included to reflect forecast growth, and as such are based on projected as opposed to historical growth inflators.

As part of the licence release determination undertaken in 2011/12, the model factors and weightings from 2010/11 were reconsidered. Drawing on feedback from stakeholder engagement, minor refinements were made to model components and their weightings, and updated data was incorporated for each model component. Changes to the 2010/11 approach were only made where there were compelling or material reasons supported by verifiable data, but to otherwise maintain continuity for the ease of comparison of trends over time.<sup>6</sup>

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<sup>6</sup> The single material change to the STGM between 2010/11 and 2011/12 was the unemployment rate is a macroeconomic measure of labour market activity, which is linked to the level of economic activity. This component was included in the 2010/11 STGM but was removed in the 2011/12 version of the model due to the sometimes counter cyclical relationship, and weak correlation it appeared to have with demand for taxi licences. We do not plan to draw on it as a component in the 2012/13 model.

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This approach has again been followed in the 2012/13 STGM review. PwC considered each of the nine STGM components from 2011/12 in turn. Analysis is based on feedback from the stakeholder consultation process, as well as incorporation of updated data for each component. As in 2011/12, changes were only considered in the case of a compelling reason supported by verifiable data. No changes have been made to the STGM components, weightings or inflators in 2012/13. The remainder of this chapter provides discussion and analysis of each of the changes considered, and the reasons each change was not made.

It is important to note availability of reliable data is a key limitation in considering appropriate demand components and their related growth measure. For example, some industry data is not currently collated from an entire industry perspective.

## ***2.2 Recommended components in the 2012/13 STGM***

Table 3 displays the key factors, components and their corresponding weightings, and the inflators recommended for use in the 2012/13 STGM. A description of the data to be applied to each component is also provided.

Table 3 Recommended components, weights and inflators in the 2012/13 Sydney Taxi Growth Model

Relevant factors	Component	Weight	Description of component	Description of inflators and data to be applied
<b>Likely passenger demand (Total weighting 50%)</b>	State final demand (SFD)	20%	A measure of NSW's economic activity from an expenditure view of the economy. It covers expenditure by individuals, businesses and government in NSW. <sup>7</sup>	Real forecast growth between Financial Year (FY) 2011/12 and FY 2012/13 in SFD; based on NSW Treasury annual forecasts for year ending June 30. Source: <i>Half Yearly Review 2011-12</i> , Department of Treasury, NSW Government, released 15 December 2011.
	Sydney population size	10%	Forecast population of the Greater Sydney area.	Forecast growth between FY 2011/12 and FY 2012/13 in Sydney Statistical Division (SD) population size; based on Department of Planning Forecasts (April 2010 Update). Source: Department of Planning, <i>New South Wales Statistical Local Area Population Projections (April 2010) Detailed Summary</i> , available at: <a href="http://www.planning.nsw.gov.au/Programsservices/Populationandhousingprojections/tabid/124/Default.aspx">http://www.planning.nsw.gov.au/Programsservices/Populationandhousingprojections/tabid/124/Default.aspx</a>
	Sydney Airport passenger numbers	10%	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.	Historical growth between FY 10 and FY 11 in airport passenger numbers; based on Sydney Airport Passenger Statistics. Source: Bureau of Infrastructure, Transport and Regional Economics (BITRE), <i>Airport Traffic Data 1985-86 to 2010-11</i> , available at: <a href="http://www.bitre.gov.au/info.aspx?ResourceId=191&amp;NodeId=96">http://www.bitre.gov.au/info.aspx?ResourceId=191&amp;NodeId=96</a>
	Network bookings (excludes rank and hail and direct-with-driver bookings)	10%	Network bookings can represent on average between 20-40% of the total Sydney market depending on the area of trip origin. The greatest proportion of trips are by hail and rank and direct with driver booking. In the absence of an evidence based measure of total passenger demand, network booking data is currently the only reliable proxy for taxi demand.	Historical growth between CY 2010 and CY 2011 in the number of network bookings; based on TfNSW KPI data. (Monthly disaggregated data provided by taxi networks.) Source: <i>Taxi KPIs July 2008 to December 2011</i> , provided to PwC by TfNSW.

<sup>7</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 (for example coal exports).

Relevant factors	Component	Weight	Description of component	Description of inflators and data to be applied
<b>Demand for new licences and viability (Total weighting 20%)</b>	Value of licences (secondary market measure of transferrable plates) <sup>8</sup>	10%	Changes in transfer value (open market sale price) of transferable unrestricted licences. Represents industry viability and demand to enter the industry. An increase in licence values suggests capacity for additional taxis in the industry, and indicates demand for new licences.	Nominal, historical growth between CY 2010 and CY 2011 in average transfer value; based on TfNSW supplied data for unrestricted licence transfer values. <i>Source: Average monthly transfer values – unrestricted licences in Sydney, January 2000 to November 2011, provided to PwC by TfNSW.</i>
	Plate lease costs (secondary market measure of transferrable plates)	10%	Plate lease costs represent an important cost to taxi operators who lease their plates (it comprises 14% of the IPART Taxi Cost Index, <sup>9</sup> which impacts the pay-in levels for drivers). An increase in lease costs indicates an increase in demand by operators to lease taxis and capacity for additional taxis in the industry.	Nominal, historical growth between April – March CY 2011 and April – March CY 2012 in average monthly plate lease costs for Sydney Metropolitan Ordinary taxi licences; based on lease fee data reported by two taxi networks, and provided to PwC by the NSW Taxi Council. <sup>10</sup> <i>Source: Lease figures 2011, provided to PwC by NSW Taxi Council.</i>
<b>Performance of existing taxi services (Total weighting 30%)</b>	Average pick up time (minutes)	10%	The time from when the booking is accepted by the network booking service to the time the driver turns the meter on. <sup>11</sup> – for network bookings.	Historical growth between CY 2010 and CY 2011 in average pickup time; based on TfNSW monthly network KPI data. <i>Source: Taxi KPIs July 2008 to December 2011, provided to PwC by TfNSW.</i>
	Percentage of pickups within 15 minutes	10%	The number of recorded pickups within 15 minutes (KPI 6.1) divided by the total number of recorded taxi pickups (KPI 6.4) in a calendar year. <sup>12</sup> – for network bookings.	Historical growth between CY 2010 and CY 2011 in the percentage of pickups within 15 minutes; based on TfNSW monthly network KPI data. <i>Source: Taxi KPIs July 2008 to December 2011, provided to PwC by TfNSW.</i>
	Percentage of 'no cars available'	10%	A reliability measure calculated as the number of times a network is unable to fulfill a booking (KPI 12) divided by the number of booking requests to a network (KPI 1) in a calendar year. – for network bookings.	Historical growth between CY 2010 and CY 2011 in the percentage of 'no cars available'; based on TfNSW monthly network KPI data. <i>Source: Taxi KPIs July 2008 to December 2011, provided to PwC by TfNSW.</i>

<sup>8</sup> All licence values are nominal.

<sup>9</sup> 2012 Review of Taxi Fares in NSW, IPART, December 2011.

<sup>10</sup> Note: The STGM has in the past used the inflator published in the NSW Independent Pricing and Regulatory Tribunal (IPART) annual taxi fare review for this component. The IPART inflator may not be published this year, depending on the outcome of IPART's 2012 Taxi Fare Review, which is still underway as at the time of this report. PwC has worked with IPART and the NSW Taxi Council to ensure the methodology for calculating this year's plate lease cost component in the STGM is consistent with IPART's calculations of their plate lease cost inflator since 2008.

<sup>11</sup> Taxi Performance Data Definitions, Transport NSW.

<sup>12</sup> Taxi Performance Data Definitions, Transport NSW.

Relevant factors	Component	Weight	Description of component	Description of inflators and data to be applied
Adjustments to the model	(1) Number of wheelchair accessible taxi (WAT) licences released	Not applicable	<p>45% of the net annual change in the number of WAT licences in Sydney is subtracted from the STGM's calculation of the number of new annual growth licences to be released (as the WAT licences are already catering for part of the demand predicted by the model).</p> <p>The figure of 45% is calculated assuming that 90% of the jobs a WAT performs are standard jobs – where wheelchair accessibility is not required – and as WATs are not permitted to change over in the 12pm-5pm period that the majority of WAT licences are single shifted (i.e. operate 50% of the time of a standard licence). Therefore, one WAT licence can be counted as 45% (90% x 50%) of a standard or equivalent taxi licence.</p>	<p>Data provided by TfNSW for number of WAT licences on issue; as at 31 December 2011.</p> <p>Note: In the period between 31 December 2010 and 31 December 2011, the net change in Wheelchair Accessible Taxi (WAT) licences was 39. This is equivalent to approximately 18 standard or conventional taxi licences.</p> <p>Source: <i>Taxi Stats</i> – as at 1<sup>st</sup> working day in January, provided to PwC by TfNSW.</p>
	(2) Attrition of licences of previously released annual licences	Not applicable	<p>The STGM's calculations are based on the number of annual licences released (assumed to be the number of annual licences in operation). Hence the attrition of licences returned to TfNSW is not accounted for by the STGM and an adjustment is required in the form of 'adding back' these licences.</p>	<p>Data provided by TfNSW for CY 2011.</p> <p>Between 1<sup>st</sup> January and 31<sup>st</sup> December 2011, 55 annual licences were surrendered to TfNSW by taxi operators.</p> <p>Source: <i>Taxi tender plates surrendered 1 January 2011 to 31 December 2011</i>, TfNSW. Provided to PwC 14/03/2012.</p>
	(3) Staged release of demand backlog	Not applicable	<p>In the 2010/11 determination, analysis beyond the STGM 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. This adjustment for backlog is now complete and it will not be an element included in the 2012/13 STGM.</p>	<p>Source: Analysis on release of new annual taxi licences from 1 July 2010, PwC, report to New South Wales Transport and Infrastructure (now TfNSW), March 2010.</p>

Each factor / driver of taxi demand is considered in turn below in terms of the aspects that were raised during stakeholder consultation, and other factors considered by PwC due to changes in data available for use in the STGM.

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

### **Issues raised by stakeholders**

The majority of stakeholders in attendance at the 1 February 2012 forum suggested that there had been a reduction in passenger demand between CY 2010 and CY 2011.

There were no specific suggestions for changing the relative weightings applied to each component within this category. One written submission received from Dr Peter Abelson of the University of Sydney critiqued the use of some of these components used as proxies for likely passenger demand. He also suggested that the weights applied were somewhat arbitrary. There were however some suggestions for changing the components included in the category.

The key issues raised by stakeholders in regards to the passenger demand components of the STGM can be summarised under the following headings:

- *The positive correlation of some variables may result in double counting in the model*

Dr Abelson suggested that treating Sydney population size (and also to some extent, Sydney Airport patronage) as separate components in the model results in double counting when SFD is also incorporated. This submission suggests that growth in population is a driver of SFD, and so if population is included, then the correct variable to use is SFD per capita. Similarly, he argues that airport passenger numbers should not be included in the model as they are closely correlated with growth in SFD.

PwC agrees with Dr Abelson's submission that a more accurate taxi growth model would be one based on regression analysis of the possible factors influencing the passenger demand for taxis, and determining the predictive power of these factors on taxi numbers. However, this approach requires measurement of the total passenger demand for taxis and substantial data requirements going back at least ten years for each possible demand driver. Unfortunately, much of this information is unavailable.

PwC also acknowledges that due to the nature of the STGM, some variables in the model are likely to have a positive correlation with SFD. However, the inclusion of both components has benefits in that it includes SFD (the most significant model component) in order to include a measure of general NSW expenditure activity, but then emphasises particular elements of NSW's economic activity seen as key to driving latent demand for taxi services: in this case Sydney Airport demand, Sydney population. If SFD per capita was included as opposed to SFD - a further suggestion by Dr Abelson - this may dilute the model inflator for economic activity and may overstate the role of population alone as a driver of expenditure.

- *Incorporation of queuing at both the airport and at taxi ranks could be considered as a passenger demand component in the STGM*

At the stakeholder forum, taxi queuing time (at the airport and at taxi ranks) was raised as a possible component for inclusion in the STGM to represent reduced passenger demand over the past year. Anecdotal observations were put forward that queuing times for taxis at the airport and at various taxi ranks in Sydney have increased between 2010 and 2011.

With an alternate view, the Physical Disability Council of NSW suggested that there are still issues hailing taxis or queuing at ranks, in particular during peak periods.

PwC does not consider that queuing and wait time for taxis and passengers at Sydney Airport is a relatively more reliable measure of passenger demand for inclusion in the STGM compared to existing components. Firstly, it is not possible to separate taxi waiting time due to reduced demand, with waiting time caused by

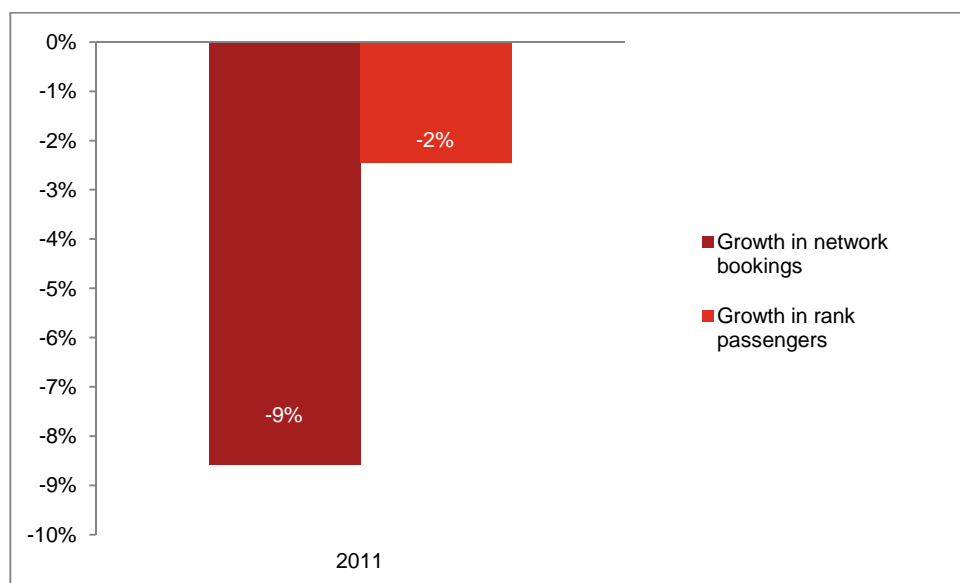


airport or other access problems. In their written submission the NSW Taxi Driver’s Association (TDA) acknowledges that *‘the issue is one of access and congestion, largely under the control of Sydney Airport Corporation, not one of supply’*. Additionally, demand for taxis at the airport is already incorporated into the STGM in the form of airline passenger numbers, and based on published Sydney Airport data.

The potential to include a change in taxi (or passenger) waiting time at authorised taxi ranks as a measure of demand in the STGM could be considered. At the stakeholder forum, The City of Sydney (CoS) suggested that rank observations suggest an improvement in passenger queue times at ranks between CY 2010 and CY 2011. In addition, CoS asserted that they did not receive any complaints from the public about the availability of taxis during December 2011 (the month in which peak taxi demand generally occurs and complaints tend to occur).

Written submissions from both Manly Council and the NSW TDA identified that some rank data may be available for use as a possible model component. As a result of this suggestion, PwC obtained the following data from TfNSW: annual counts of the number of taxi passengers using particular ranks in Sydney that are supervised on Friday and Saturday nights. The ranks where consecutive calendar years of data was available were Coogee, Cronulla, Hornsby, Kings Cross (x2), Manly (x2), Penrith, Surry Hills and Sutherland. There was limited data available from some ranks that detailed average and maximum passenger wait times, and the number of taxis leaving the rank, however none of this data was available over more than a one year period.

Figure 3 Growth in network bookings compared to growth in supervised rank passengers (2010 to 2011)



As illustrated in the figure above, the rank data indicates that passenger use of the surveyed ranks decreased in 2011, though by a much smaller amount than network bookings (-2% compared to -9%). This indicates that growth in network bookings (representing only 20% to 40% of taxi demand) does not necessarily move precisely in line with the growth in other methods of taxi hiring.

However, as the rank data is only for particular locations and at particular times of the day and days of the week (i.e. Friday and Saturday nights), it is not clear how representative it would be of all taxi demand in Sydney. The data illustrated variations in patronage at individual ranks – some increased between 2010 and 2011, while others decreased. In addition, the role of competition from other modes may in part explain some of the reduction in rank use in 2011, as opposed to reduced passenger demand to travel. (For example, CoS indicated at the forum that a new bus service has commenced at Kings Cross, which is competing with taxis. Notably the ranks in this area experienced the greatest reduction in demand in 2011 relative to the others: -27% and -47% relative to the average of -2%).

Moreover, if meter swing data is obtained for use in the STGM in future years, it could replace network bookings as a measure of current direct demand (although measures of likely and latent demand as required by the legislation would remain). However, absent this data, there is merit in ensuring continuity in the model. Refer to NSW Taxi Council's comments below, for additional details on the possibility of obtaining and including meter swing data.

- *The impact of losing mode share to other modes on passenger demand for taxis could also be considered as passenger demand component*

A number of industry stakeholders both at the forum and in written submissions (taxi network representatives<sup>13</sup>, CoS, NSW Taxi Council (NSW TC), NSW TDA, and John Fan – individual), suggested that taxi services have been losing mode share to alternative forms of transport including hire cars, mini buses, night ride buses and extended train services. The same stakeholders suggest this is of particular relevance at Sydney Airport where there is thought that taxis have been losing mode share to the Airport Link rail service, increased parking facilities for private cars, airport shuttle busses, and hire cars.

PwC acknowledges there is a possibility that taxis may be losing mode share to other modes. However, this may be due to any of a number of factors including relative value, road travel times, or comfort and convenience of taxi services versus that of other modes. However, PwC suggests that if this was incorporated into the STGM (e.g. with the number of plates decreased in line with increased trips by other modes), this may only serve to further reduce the competitiveness of taxis with other modes by not enabling the number of taxis to increase). Both one of the taxi network representatives at the forum and Dr Peter Abelson in his written submission, made the case that there should be some way for the STGM to take into account the price or availability of substitute trips. PwC suggests this would be challenging to estimate across modes, trip types, and times of day though it may warrant further consideration in future reviews.

It is also a useful to reflect that the objectives of the new taxi licensing arrangements include reduced pressure on fare increases and to provide a more affordable means of entry to the industry – and if this occurs, more competitive fares would likely assist taxi competition with other modes. Improved competitiveness will also support industry viability and sustainability in the long term.

## Other issues considered by PwC in the 2012/13 review

Other issues pertaining to the passenger demand components of the STGM that were considered by PwC in the 2012/13 review were:

- *Network bookings not being representative of overall passenger demand for taxis in Sydney*

It has been acknowledged in previous reviews, and by a number of stakeholders during the forum and in written submissions, that the 'network bookings' component is limited in its ability to represent overall current direct passenger demand for taxis in Sydney. These bookings are estimated to be between only 20-40% of all taxi hirings, dependent upon the area of trip origin or network. The majority of taxi trips in Sydney are rank, hail, and bookings made direct with drivers. Given the small proportion of total trips that are booked through the network, the year on year change in network bookings does not necessarily provide an accurate estimate of the change in overall passenger demand. However, complete data readily available on an 'industry-wide' basis and across trip types is not available.

Some stakeholder comments include:

- Dr Abelson's written submission was critical of the lack of a specified dependent variable in the model such as taxi trip kilometres. He suggested that network bookings are a function of not only

<sup>13</sup> An attendee at the stakeholder forum was representing South Western Cabs, Taxis Combined Services, Yellow Cabs of Sydney, Silver Service, and Mact Network.

the total demand for taxi services but also the competitiveness of bookings versus hailing, and thus should not be used as an independent determining factor in the model.

- The Australian Taxi Drivers Association (ATDA)'s view is that network bookings proxy as a measure of demand is a fundamental flaw in the model.

PwC and some stakeholders suggest that meter swing data would be able to provide a more comprehensive measure of changing taxi demand each year:

- CoS's view was that meter swing data is the most reliable, with only a small percentage of taxi trips not using meters CoS also raised a concern that collection and release of the data may encourage less use of the meter. PwC notes that it is illegal for a taxi driver not to use the meter for a taxi trip.

A number of the taxi networks did however flag issues with meter swing data:

- St George Cabs suggested that meter swing data would not help to measure the component of taxi hirings that were made direct with drivers. However, the meter is required to be used on all hirings, including those made direct with drivers.
- Premier Radio Cabs argued that while meter swing data is available, it was not certain that it could be provided on a historical basis, or that the data would be accurate and reliable.
- In its written submission, the NSW TC contends that meter swing data recorded by taxi networks would vary from a true measure of demand due to a number of factors:
  - > “Not every meter on/off activation represents a passenger journey, as taxi drivers will activate and deactivate the meter in situations where they think it provides an advantage to them within the dispatch system;
  - > Strategies are adopted by taxi drivers to avoid the dispatch system being aware of when the meter is activated, so they can still be offered bookings whilst they are hired;
  - > At busy times, dispatch systems prioritise tasks so that transmission and processing capacity is allocated to the most important tasks associated with bookings and lower priority tasks are suspended. This means meter swings are not recorded at all for various periods of time. The amount of time that systems revert to this state is variable and the amount of time when meter swings are not recorded is not generally monitored or reported by the system;
  - > Taxi drivers who have regular passengers and do regular work, may not activate the taxi meter for regular journeys; and
  - > The NSW Government has determined that journeys provided under the Assisted School Transport Program are not taxi journeys for the purpose of the Passenger Transport Regulations and hence metered fares do not apply and taxi meters are not used.”

The NSW TC propose instead to work TfNSW to investigate ways in which information can be provided in a more robust manner than meter swing data to reflect changes in utilisation of the taxi fleet, e.g. by engaging dispatch system experts to develop a system with the intended purpose in mind so a robust and common methodology can be applied across each authorised taxi networks' dispatch system.

PwC acknowledges that it is unlikely the meter swing data will be free from error, but suggests there is merit obtaining it for use in the model in order to at a minimum obtain an understanding of taxi trips and utilisation that relates to more than 20-40% of trips. It seems likely that that year on year, the percentage of errors and understated meter activations would be relatively constant. This would not affect the model's use of the data, principally to estimate a percentage change on the previous year.

While there would be a number of benefits from a system designed for the sole purpose of data collection pertaining to taxi utilisation, the amount of time and cost to design and implement such a system are unknown. As such PwC suggests that meter swing data be requested and obtained from networks for incorporation in the STGM.

If meter swing data is unable to be obtained for future releases, TfNSW may need to investigate alternative proxy measures for the volume of taxi trips, such as the use of annual odometer readings (distance travelled per annum).

- *Errors in reporting of network bookings data*

Original network bookings data provided to PwC indicated an annual decline in network bookings between CY 2010 and CY 2011 of -15.47%. Upon further investigation, PwC was advised through the Taxi Council that a number of networks had changed the communications system used to record network bookings, resulting in the incorrect reporting of the change in this KPI in some instances. Updated figures for two networks were provided to PwC in March 2012. These revised figures varied from the original figures by up to 36% in some months.<sup>14</sup> This large discrepancy raises questions about network data more generally. PwC has no visibility over the reporting systems used and no control over network reporting procedures.

This data issue also directly affects the ‘Percentage of No Cars Available’ component in the model, as the calculation of this component involves both the reported number of no cars available and the reported number of network bookings. PwC understands that the revised network booking data provided is generated from a separate system to the corresponding NCA data. This raises questions over the accuracy of the NCA component in the model.

These data issues highlight the reliance of the model on data voluntarily reported by taxi networks (representing only 20% to 40% of total taxi trips). This reinforces the necessity of obtaining meter swing data to use as an alternative to network bookings data as a proxy for total current passenger demand for taxi services. As meter swing data is estimated to include significantly higher proportion of taxi trips, it would increase the robustness of the model, and provide a higher level of confidence in the model’s result.

Due to the uncertainty around network bookings data, PwC has performed some sensitivity testing on the model result for variations in the network bookings component and the percentage of no cars available component. Refer to section 2.4.

- *Replacing the ‘number of airline passengers’ component with the ‘number of taxi passages through the airport’*

Data on taxi passages through the airport had not previously been available, but has now been provided by Sydney Airport to Transport for NSW on a commercial in confidence basis, for taxi passages through the airport beginning January 2009. As such, PwC considered replacing the ‘number of airline passengers’ component in the STGM with the ‘number of taxi passages through the airport’ for the 2012/13 determination.

Table 4 displays a comparison of the rates of growth in airport passengers and in taxi passages for FY10 to FY11.<sup>15</sup>

Table 4 Comparison of annual growth rates in Sydney Airport passenger numbers to growth in taxis passing through Sydney Airport

<b>Year of annual growth</b>	<b>Current model component: Growth in Sydney Airport passenger numbers (annual growth between fiscal years)</b>	<b>Potential model component: Growth in taxis passing through Sydney Airport (annual growth between calendar years)</b>
FY10 to FY11	4.3%	2.7%

Source: BITRE Airport Traffic Data 1985-86 to 2010-11, available at:

<http://www.bitre.gov.au/info.aspx?ResourceId=191&NodeId=96>; and Data supplied by Sydney Airport Corporation Limited (SACL) to TfNSW on a commercial in confidence basis. Growth rates only provided to PwC 18/01/12.

Table 4 shows that taxi passage growth in the period between FY10 and FY11 (year ending June 2011) is lower than overall passenger growth.

There were a number of stakeholder comments on the two sets of data, including:

- Increase in the use of other modes, including hire cars, airport link rail line, and increased car parking capacity at the airport (NSW TC, an an individual’s submission);

<sup>14</sup> Calculated based on information provided by the NSW Taxi Council to PwC via email communication, 9<sup>th</sup> March 2012.

<sup>15</sup> Note: CY10 to CY11 data is available for taxi passages but not passenger numbers

- Relatively high price of taxi services compared to other forms of ground transport at the airport (NSW TDA, Erin OBrien – individual); and
- The ranking set up and challenges coordinating traffic flow at Sydney Airport acting as an obstruction to taxi accessibility (NSW TDA, Physical Disability Council of NSW (PDCN)).

PwC acknowledges the various stakeholder comments on this issue. It is difficult to determine the specific cause(s) for the difference in growth rates. In addition, airline passenger growth is correlated to tourism activity levels, with tourists being more active taxi users, so provides indication of the total market share and latent demand for taxis to access at Sydney Airport. Considering these factors, PwC recommends the continued use of airline passenger growth as a component in the STGM for the 2012/13 annual licence determination, particularly to provide supply to support a retention of market share.

Note: As in past annual licence determinations, PwC has used the annual growth in airline passengers measured by financial year as an input to the STGM for 2012/13. Sydney Airport has recently begun publishing monthly passenger movement statistics with a reduced time-lag, which allows for the possibility of calculating the annual growth in Sydney Airport passenger numbers between calendar years. In order to make an appropriate adjustment in the STGM, two years of monthly data is required. In order to incorporate the latest information, PwC recommends a transition from measuring the growth in this component on a financial year basis to a calendar year basis starting from next year.

- *Changing the data source for population growth forecasts*

In past annual licence determinations, population projections from the NSW Department of Planning and Infrastructure have been used as the input to the STGM. This has allowed the STGM to be forward looking in terms of the ‘population’ component’s contribution to taxi licence growth in Sydney. These projections were last updated by the Department of Planning in 2010 for NSW’s statistical divisions (SDs), based on 2008 data. For the 2012/13 determination PwC considered the merits of substituting these projections for the five-year (FY05 to FY10) annual average population growth rate for the Sydney region, reported by the ABS.

Table 5 displays the difference in projected Department of Planning and Infrastructure population rates and ABS estimated historical population growth rates.

Table 5 Population growth rates considered for use in the STGM for 2012/13

<b>Data source</b>	<b>Population growth rate figure</b>	<b>Explanation</b>
Department of Planning and Infrastructure (projections)	1.17%	Calculated from population projections (persons) for Sydney SD for FY 2006 to FY 2036, April 2010 update.
ABS (historical estimates)	1.51%	5 year (between FY05 and FY10) average annual growth rate in Sydney’s estimated resident population

While acknowledging the continued use of the Department of Planning and Infrastructure forecasts may slightly understate the model results, as a change to ABS data would result in a material change in the purpose of this component to factor future possible growth, PwC recommends the continued use of the Department of Planning forecast growth rates for input into the STGM for 2012/13. Once these NSW Government planning projections have been updated, PwC recommends update of the source of data at that point.

## Summary of recommended passenger demand STGM model inputs for the 2012/13 determination

- No changes to the STGM components, weightings or inflators are proposed for this model factor in 2012/13.
- A transition from measuring Sydney Airport Passenger growth on a financial year basis to a calendar year basis is recommended commencing for the 2013/14 determination, in order to incorporate the latest data into the STGM.
- There may be merit further considering the incorporation of NSW Government rank data at supervised Sydney ranks as a component, following consultation on this in next year's determination. This would not be required if meter swing data can be obtained (though could, along with network booking data, be used to sense check meter swing outputs).
- It is recommended that TfNSW collect meter swing data from each network on an annual basis (for at least two consecutive years), to enable estimation of total taxi trip data for incorporation in the STGM as a direct measure of passenger demand.
- There may be merit obtaining other potential STGM model components from the meter swing data at the same time, such as: kilometres travelled per trip, proportion of time/kms taxis are utilised, revenue (\$ excluding tolls), waiting time (minutes) between trips (potentially also with data obtained separately by taxi plate type).

### 2.2.2 Demand for new taxi licences and viability of the taxi industry

#### Issues raised by stakeholders

The majority of stakeholders in attendance at the 1 February 2012 forum suggested that there had been a reduction in demand for new taxi licences between 2010 and 2011, and several assertions were made that the industry was becoming less viable.

There were no specific suggestions for changing the relative weightings applied to each component within this category. There were however some suggestions for changing/adding to the components included.

The issues raised by stakeholders in regards to the new licence demand / industry viability and sustainability components of the STGM can be summarised under the following headings:

- *An increased number of existing ordinary plates are currently without an operator, which demonstrates the taxi industry is becoming unviable*

A number of stakeholders (NSW TC, Premier Cabs, a representative of a number of networks, Australian Taxi Driver's Association (ATDA)) raised the issue that an increasing number of ordinary taxi licence plates are unable to be leased, and remain with networks but are 'without an operator' (therefore not on the road). The NSW TC estimates in their written submission that between 5 and 10 times more taxi licences were without operators in January 2012, compared to January 2011. Premier Cabs stated that they had 23 ordinary plates that they were planning on 'placing on hold' in February 2012. Formal notification to TfNSW is required when a plate is temporarily placed on hold (no longer operated). Data provided by



TfNSW indicated that as at 22<sup>nd</sup> February 2012, there were 83 licences ‘on hold’ in Sydney. This is an increase from approximately the same time last year, where at 15 March 2011, 59 plates were on hold.<sup>16</sup> The stakeholder forum representative of a number of networks (South Western Cabs, Taxis Combined Services, Yellow Cabs of Sydney, Silver Service, and Mact Network) suggested that there should be a means for incorporating the time these plates are not operational into the STGM.

PwC acknowledges that unutilised plates are an indication of a lack of demand for licences at a particular price point (their current lease price). However, it would be challenging to incorporate data on the number of licences without operators into the STGM, given that data is only available for specific points in time, price points may vary for different plates, and no information on the length of time a plate is on hold is available.<sup>17</sup> As the STGM is an annual model, this would be difficult to incorporate in a meaningful way. While PwC acknowledges that there is likely to be some lag, the market is expected to be able to adjust over time. For example, plate lease prices could be expected to decrease as a result of plates being ‘without an operator’ for a significant period of time, until an equilibrium is reached and the plates are taken up again but at a lower price. In this respect, plate lease costs are already included in the STGM, so an adjustment for plates ‘without an operator’ is considered to already be incorporated in the model. PwC has incorporated the most recently available plate lease data (to March 2012) provided by the NSW TC on plate lease costs in Sydney into the STGM. While the increase in lease costs was lower than in previous years, there was no nominal decrease in lease costs between 2010 and 2011.

- *Only the ‘real’ change in licence values should be included in the model*

In their written submission, the NSW TC suggest that it is important that changes in licence values are adjusted to take account the impact inflation has on values. The NSW TC’s argument for the use of real values is that investors would expect licences to maintain their value in real terms and therefore only changes in real values would reflect changes in underlying demand for licences. Thus, licence numbers should not be adjusted simply because licence values have moved in line with the effects of inflation.

PwC acknowledges this argument but recommends the use of nominal growth in licence prices as the most appropriate input for the STGM. As the impact of inflation on the licence values is not known, and the model is used to measure the change in values over a year, the nominal growth rate is more likely to be a consideration for investors when deciding whether or not to invest in a taxi licence. This is consistent with the approach employed in the STGM (and by IPART) in measuring the growth in plate lease costs. This nominal approach was also used in both the 2010/11 and 2011/12 growth models. PwC realises that the label ‘real value of licences’ had been included in one table in each of these years, however can confirm that it was in fact the nominal growth rate that was used. PwC acknowledges this mistake as a typographical error in the 2010 and 2011 PwC reports.

- *Correlation exists between the ‘plate lease costs’ and ‘value of licences’ components in the STGM*

Both Dr Peter Abelson and John Fan (an individual) note in their written submissions that the value of licences and plate lease costs are correlated and should therefore not be included as two separate variables in the STGM. Dr Abelson states that “*the value of licences is a function of present and expected plate lease costs*”.

PwC acknowledges that this correlation exists, but has included both of these components in the STGM due to the availability of data for plate lease costs. Currently this data is supplied by the NSW TC for a sample of two networks. Given that 80 per cent of taxi licences in Sydney are leased, data from two networks is not considered representative. Hence, the value of licences is also included as a component in the STGM to support the plate lease cost component. The change in plate lease costs and the change in the value of licences are both measured nominally in the STGM.

<sup>16</sup> Information provided by TfNSW to PwC via email communication, 22<sup>nd</sup> February 2012.

<sup>17</sup> Information provided by TfNSW to PwC via email communication, 22<sup>nd</sup> February 2012.

- *A number of other indicators exist that demonstrate the taxi industry is becoming less viable, those being low /unsustainable levels of driver earnings, reduction in number of drivers, and limited increase in driver pay-ins*

At the stakeholder forum, a number of industry stakeholders suggested that the taxi industry has become less viable over the last 12 months. Low / unsustainable driver earnings (NSW TC, ATDA), a reduction in the number of drivers (NSW TDA), and the inability of taxi operators to negotiate higher market rates for pay-ins for several years (NSW TC) were referenced as evidence for this.

The NSW TC made reference to the draft results published from IPART's recent survey of drivers and operators for their review of taxi fares, which imply annual driver revenue of \$74,798 (not including GST) per taxi cab in the Sydney urban area. Based on the estimate that each standard taxi in Sydney is on the road for 10 shifts per week, this leads to the conclusion that a permanent driver driving 5 shifts per week could expect to receive around half of this annual total.<sup>18</sup>

In the NSW TDA's written submission, evidence of taxi drivers leaving the industry was presented. In 1999 there were 20,097 authorised Sydney taxi drivers and 4,458 taxi licences on issue.<sup>19</sup> This represents a ratio of 4.5 drivers to each licence. In 2011, there were 18,943 authorised Sydney taxi drivers<sup>20</sup> and 5,768 taxi licences in Sydney.<sup>21</sup> This represents a ratio of 3.3 drivers to each licence. The NSW TDA argues that any further plate releases would dilute the earnings per taxi driver and result in more drivers leaving the industry. The NSW TC argues that taxi operators have been unable to negotiate higher market rates for pay-ins from drivers for several years, despite increases in regulated maximum fares.

PwC acknowledges these comments, but suggests that the STGM model even with the current viability / new licence demand components retained will capture some of these effects if licence values and plate lease costs start adjusting as a result. If the number of drivers is falling, then it might be expected that the market adjusts and pay-ins fall to attract more drivers. This could lead to a reduction in plate values as returns are lower.

There are limitations in being able to use the information above as inputs to new components (for example: reliable revenue and pay-in data is not available year on year, the ratio of drivers per licence may reflect the increase in peak availability/WAT taxi plates that drive less shifts so require less drivers per plate). As noted above, it is useful to reflect that one of the objectives of the new taxi licensing arrangements is to reduce pressure of fare increases and provide a more affordable means of entry to the industry.

## Other issues considered by PwC in the 2012/13 review

In addition to the above, PwC considered one further issues relating to demand for taxi licences and industry viability and sustainability in the 2012/13 review. This was:

- *The possibility of including trends from past annual licence releases in the STGM*

As there has now been an interim release of 100 licences and two annual determinations since the commencement of the annual licence release process, there is potential that some of the outcomes of these releases (in particular bid prices and/or ratio of bids to licences) could be captured in the STGM as an additional measure of demand for new licences. The lack of multiple time period data and the small

<sup>18</sup> IPART, 2012 *Review of Taxi Fares in NSW*, December 2011, pg. 37.

<sup>19</sup> IPART, 1999, *Review of the Taxi Cab and Hire Car Industries*, Final Report, pp. 15 and 81.

<sup>20</sup> TfNSW, 2012, 2011/2012 *Annual Taxi Licence Tender No. TfNSW 2012/002*, Attachment 3: Profile of taxi industry and overview of the regulatory environment, available at: <http://www.transport.nsw.gov.au/sites/default/files/b2b/taxireform/tender-tfnsw-2012-002.pdf>

<sup>21</sup> Total number of licences includes 643 annual licences. This figure is calculated by summing the number of annual licences released in the interim annual licence release (2010), and the number of licences determined for release in both the 2010/11 and 2011/12 annual licence determinations. The remainder of the 5768 licences are calculated with data provided by TfNSW 2011: 'Number of licences by licence type in Sydney at 1 January 2012'.



number of licences released (as a proportion of the total Sydney taxi fleet) has previously prevented the use of bid values in this way.

Data is now available;<sup>22</sup> although it is still currently over a relatively short period with a relatively small number of comparable values (annual licences only represent 10% of all taxi licences in Sydney). It would also be challenging to incorporate when the trends in bid levels and prices have varied for different plate types released.

The stakeholder response to the inclusion of past annual licence release prices and bid-to-licence ratios in the STGM was in general not supportive of this suggestion:

- CoS, NSW TC, and NSW TDA expressed reservations about the use of this data.
- CoS’s view was that the market for annual licences is not necessarily rational yet given the early stage of the process.
- NSW TC stated in their written submission that although data from previous releases may provide an indication in the change in demand for licences, the data should be treated with caution due to flaws in the implied underlying assumptions of the operation of efficient market mechanisms. They also noted that the use of original bid prices may introduce an upward bias, as some licences, potentially at the high end of the bid range, have been returned.
- The NSW TDA raised an issue about the inclusion of bid-to-price ratio data. They presented the argument that a large number of applicants do not necessarily signify a large number of new entrants seeking to join the taxi industry. Where there is a prospect of acquiring a replacement plate for an existing licence at a lower price, it is likely that a large number of current licence holders would enter the tender. They suggest therefore that it is not valid to claim that these tenderers reflect latent demand for additional taxi licences.

Based on the reservations for including data from past annual licence releases expressed above, particularly those stemming from the fact that the annual licence release process is relatively new, PwC recommends that this data not be included in the STGM for the 2012/13 annual licence release. It is however suggested that this recommendation be revisited in future years when more data becomes available.

## Summary of recommended industry viability and sustainability STGM model inputs for the 2012/13 determination

- No changes to the STGM components, weightings or inflators are proposed for this model factor in 2012/13.
- If there is additional data available, it is recommended to consider again in 2013/14 and in future determinations, whether there is merit in incorporating data from past annual licence releases (either in the form of bid values or bid-to-licences released ratios) into the STGM.
- The method for calculating plate lease costs should be reviewed in 2013/14, dependent upon additional data becoming available through the proposed amendment of cl 184.

<sup>22</sup> Table 10 in Chapter 4 displays the average and median annual licence fees and the ratio of number of bids to number of licences released, for each licence category and release. Also displayed are trends in the movement of licence prices between releases.

### 2.2.3 Performance of existing taxi services

#### Issues raised by stakeholders

There was one stakeholder suggestion that the weighting for performance of existing taxi services should be increased in relation to that of passenger demand (John Fan – Individual) and some suggestion to change the measurement or focus of the individual components (NSW TC, John Fan – Individual, NSW TDA). Issues raised by stakeholders in relation to the performance of existing taxi services can be summarized by the headings below:

- *The NCA KPI is not representative of no cars being available*

A number of stakeholder submissions (NSW TDA, Dr Peter Abelson, Edward Ellis – Individual, John Fan – Individual, NSW TC) expressed limitations and issues with the ‘percentage of no cars available’ component in the STGM:

- The NSW TDA asserts that the ‘percentage of no cars available’ KPI is not indicative of there being no car available to service a booking, but is instead an indicator that no driver is willing to take that booking.

However, PwC suggests that regardless of which factor is more prominent in the indicator, both indicate that customer needs are not being met, so an increase in this reliability measure may demonstrate a need for additional licences.

- Dr Peter Abelson and the Council of Social Service of NSW (NCOSS) suggest anecdotally that taxi service performance is worse than indicated by reported network KPIs, such as the number of no cars available reported. Peter Abelson argues that network service KPIs only indicate performance for a small proportion of the total Sydney taxi fleet, and that many people do not order taxis through a network booking, especially in peak hours, because of the uncertainty of the service. This corresponds with evidence by NCOSS, that members of the NCOSS Transport Policy Advice Group continue to report that short trip fare refusals are a problem for their members and / or clients, as short trips do not attract a large enough fare.

PwC acknowledges these arguments. As described under the heading ‘*Errors in reporting of network bookings data*’ in section 2.2.1 above, the reliability of the data for the NCA component has been called into question. PwC also considers that the use of the NCA data as a component in the model is problematic in that, as explained by the NSW Taxi Council, there is no black and white rule for when a booking is treated as an NCA, and it is based on the discretion of individual networks.<sup>23</sup>

- Additionally, changes in the ‘percentage of no cars available’ component appear to be significantly volatile year on year, representing the largest driver of an increase in annual licences released in 2011/12 and the largest driver of a decrease in the number of licences to be released in 2012/13. In order to determine the level of influence that the NCA component has on the results of the model, PwC performed the following test on the 2011/12 and 2012/13 model result: The NCA component was assigned a zero weighting and its 10% redistributed evenly to the other taxi service performance components. The results are illustrated in table 6.

<sup>23</sup> Information provided to PwC by TfNSW, email communication, 22<sup>nd</sup> February 2012.

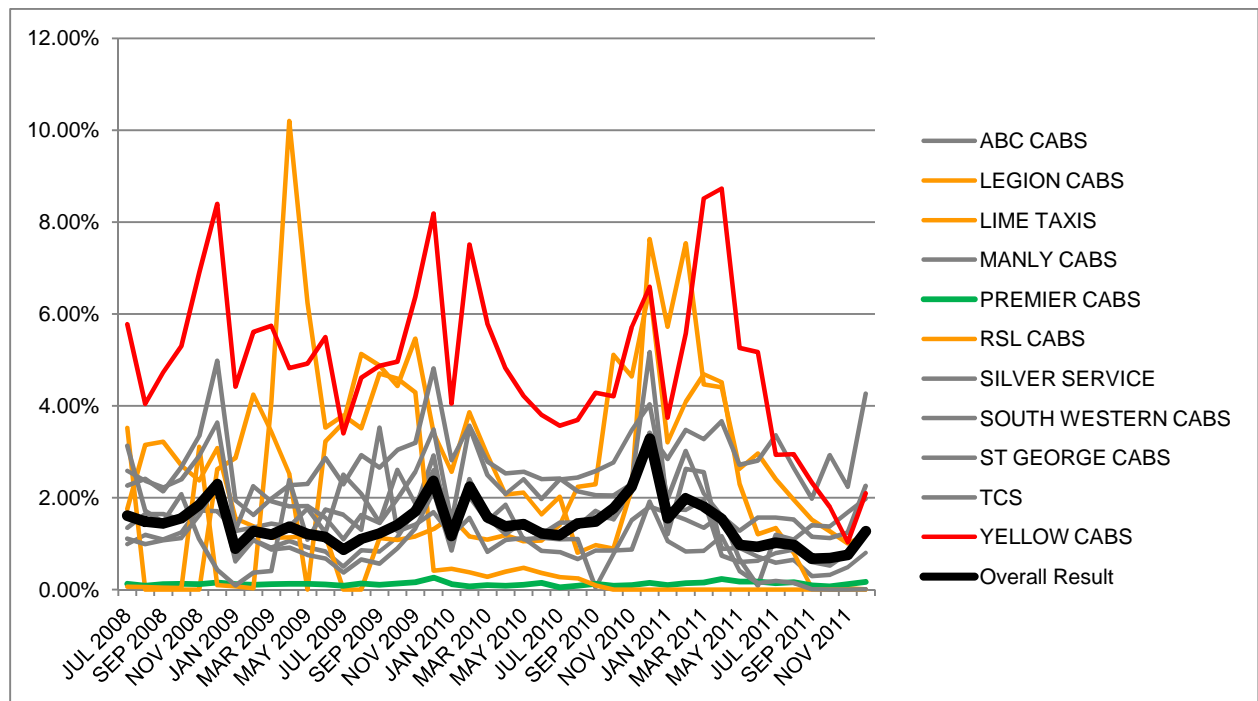
Table 6 Results from zero-weighting the NCA component

Annual Determination	Model result (# of licences to be released)	Model result with redistributed weighting (# of licences to be released)	Difference
2011/12	197	113	-84 (-43%)
2012/13	-116	56	+172 (+148%)

This demonstrates the volatility of this component and its considerable influence on the model result.

There also exist considerable differences between the networks in the results reported for the NCA KPI. Figure 4 shows the percentage of ‘no cars available’ on a monthly basis by network from July 2008 to December 2011. The figure illustrates that some networks report next to no NCAs (e.g. Premier Cabs in green), some are significantly higher than the average (e.g. Yellow Cabs in red), and a number of them vary considerably, month on month (e.g. especially Legion Cabs, Lime Taxis and RSL Cabs in orange).

Figure 4 Percentage of NCAs monthly, by network



Due to the limitations and data issues in the % of NCA model component, PwC has performed sensitivity testing on the model result for changes in this component. Refer to section 2.4. PwC recommends that consideration be given to the removal of this component from the STGM for the 2013/14 annual taxi licence release. This should be discussed during stakeholder consultation period prior to the release.

PwC also recommends that for potential use in the 2013/14 review, TfNSW include questions to gather data on customers’ current and historical experience of obtaining a taxi in its taxi customer surveys planned for later in 2012. Specifically, this data could include information on the number of short trip refusals, the differences in wait times experienced for shorter and longer trips, and the reason for the means employed to obtain a taxi. While survey results may be used to inform future annual releases, only survey data available on an annual comparative basis could be input in the STGM.

- *M3 data should be considered for inclusion in the STGM*

M3 data refers to taxi network KPI-5 – the number of recorded passenger ‘no shows’. This is a measure of the number of times a taxi arrives within a 6 minute interval of the time recorded in the booking request, and the passenger is not at the stated location. At the stakeholder forum, RSL Cabs asserted that this was a fairer measure of taxi performance to include in the STGM than the NCA component.

PwC acknowledges that M3 data could potentially be used as an alternative to NCA data. However, in the interests of continuity in approach, and the core focus on customer needs of the annual licence release process, PwC suggests that the ‘percentage of no cars available’ component is more relevant for inclusion in the model as a measure of taxi service performance.

## Summary of recommended existing taxi service performance STGM model inputs for the 2012/13 determination

- No changes to the STGM components, weightings or inflators are proposed for this model factor in 2012/13.
- Consideration should be given to removing or replacing the ‘Percentage of No Cars Available’ component from the STGM for the 2013/14 annual licence release. This should be discussed during stakeholder consultation prior to the release.
- It is recommended that TfNSW takes into account the need for data on the number of short trip refusals, the differences in wait times for shorter and longer trips, and customer reasons for the means employed to obtain a taxi, in the design of questions for customer surveys that will be undertaken later this year. The possibility of undertaking the same survey on an annual basis should be considered.

### 2.2.4 Other model adjustments

#### Annual change in the number of WAT licences on issue in Sydney

The STGM includes an adjustment for the net annual change in the number of WAT licences in operation in Sydney. This adjustment is made because an increase in WAT licences means that some proportion of any additional demand estimated by the STGM will be serviced by these additional WAT licences already in operation. This is based on the assumption that WAT licences have the ability to undertake standard and wheelchair accessible jobs.

The assumption that one WAT licence is equivalent to 45% of a standard taxi licence was based on the following logic: around 90% of a WAT’s work is estimated to be standard work, and 10% wheelchair accessible work. Most WATs are single shifted (i.e. operate approximately half the time of a standard licence). Therefore they are equivalent of  $90\% \times 50\% = 45\%$  of a standard taxi.

Several stakeholders (NSW TC, NSW TDA, Edward Ellis – Individual) proposed that WAT licences should be equal to 100% of a standard taxi licence. The NSW TC estimates in their written submission that the average number of journeys for passengers who use wheelchairs in Sydney is approximately 5 per week per WAT.

This does however contradict information available on the NSW TC website that the centralised WAT booking number ‘receives around 4,000 bookings each week, which is in addition to more than 15,000 private weekly bookings’.<sup>24</sup> Applying these figures to the number of WATs in operation in Sydney as at 31 December 2011 (606

<sup>24</sup> NSW TC 2012, *Information: Wheelchair accessible taxis*, available at: <http://www.nswtaxi.org.au/subpage.php?id=27>

as provided by TfNSW), the average number of wheelchair accessible jobs performed by a WAT each week is approximately 31.

The PDCN suggested in their written submission that the number of wheelchair accessible taxi jobs performed may be higher than suggested by available data. According to the PDCN, people with a disability tend to be loyal to a particular taxi driver if he/she provides reliable, professional and respectful service, and in some cases WAT drivers perform jobs requiring wheelchair accessibility in more than 55% of cases as they have a group of customers who use them on a regular basis.

PwC suggests that there is limited data available to resolve these discrepancies on the usage patterns of WATs. While surveys undertaken for IPART's current review of taxi fares do not appear to have obtained data on the number of standard and WAT trips per WAT, the analysis undertaken does make use of the assumption that WATs are single shifted, albeit based on anecdotal evidence.<sup>25</sup>

In the absence of any resolute data to indicate the percentage of standard versus wheelchair accessible jobs performed by WATs, PwC recommends the continued use of the assumption that one WAT licence is equivalent to 45% of a standard taxi licence.

### Attrition of annual licences

The STGM also includes an adjustment for the attrition of annual licences. As the model's calculations are based on the number of annual licences released by TfNSW, and not the net annual change in the number of annual licences in operation, the model does not account for cases in which an annual licence is returned to TfNSW. Therefore, an adjustment is required to the STGM in the form of 'adding back' those licences that have been handed in.

A number of stakeholder submissions (ATDA, NSW TC, Edward Ellis – Individual) cited the return of annual licences as an indicator of reduced industry demand for taxi licences. However, given that there is no requirement for annual licences to be renewed, it is reasonable to expect that some proportion of annual licences will be returned over time. This may occur for a variety of reasons, such as successful acquisition of a cheaper licence, or a driver's decision to no longer operate a licence.

From the period 1st January 2011 to 31st December 2011, 55 annual plates were handed back to Transport for NSW. The 55 returned plates in 2011 were comprised of the licence classes set out in table 6 below.

Table 7 Plates returned to Transport for NSW (FY12 to 6 Dec 2011)

Period of release	Licence type	Available to:	No. of licences handed back	% of licences released
2010 Interim Release	Unrestricted	All bidders	1	1%
2010/11 release: Stage 1 (Aug-Sep 2010)	Unrestricted	Driver only	16	23%
		All bidders	32	33%
	Peak Availability	All bidders	5	8%
2010/11 release: Stage 2 (Nov 2010)	Unrestricted	All bidders	1	3%
<b>Total</b>			<b>55</b>	13% (of all plates released: interim and 2010/11)

<sup>25</sup> See for example: Fitzgerald, R., 2005, *Report to the Wheelchair Accessible Taxi Taskforce*, p. 17.

## Summary of recommendations for model adjustments

- It is recommended that in the absence of any further data on the usage patterns of WATs, that they continue to be treated as equivalent to 45% of a standard Sydney taxi licence.
- It is recommended that all returned annual plates are re-issued, as in previous determinations, to ensure no net loss in taxi availability for passengers.

## ***2.3 Outcomes of the 2012/13 model***

The STGM is a tool updated on an annual basis to assist Transport for NSW's determination of the number of annual licences to be released each year.

The outcome for the 2012/13 STGM is shown in table 7 below. As indicated in this table, the STGM indicates negative growth of -1.57% in demand for new taxi licences for 2012/13 based on the indicators and components of the model. This percentage change is considerably below a long term average demand growth rate of 3-5%, which could be expected in economy growing at trend and relative stability in the market share of taxis, hire cars and tourist vehicles.

Table 8 Outcomes of the 2012/13 Sydney Taxi Growth Model (STGM)

Key drivers of taxi demand	Component	Weighting		2012/13		Previous (2011/12)	
				Growth 2012/13	Contribution to 2012/13 model	Growth 2011/12	Contribution to 2011/12 model
<b>Likely passenger demand and latent demand for passenger services</b>	State final demand (SFD) (NSW economic activity)	20%	50%	3.25%	0.65%	3.5%	0.700%
	Sydney population size	10%		1.17%	0.12%	1.2%	0.118%
	Sydney Airport passenger numbers	10%		4.34%	0.43%	6.5%	0.654%
	Network bookings (excludes rank and hail and direct-with-driver bookings)	10%		-8.57%	-0.86%	1.9%	0.185%
<b>Industry viability and sustainability and demand for new licences</b>	Value of licences (secondary market measure of transferrable plates)	10%	20%	4.59%	0.46%	4.0%	0.403%
	Plate lease costs (secondary market measure of transferrable plates)	10%		1.66%	0.17%	9.2%	0.924%
<b>Performance of existing taxi services</b>	Annual average pick up time (mins)	10%	30%	-2.42%	-0.24%	0.2%	0.020%
	Percentage of pickups within 15 mins	10%		-2.69%	0.27%	4.3%	-0.427%
	Percentage of 'no cars available'	10%		-32.32%	-3.23%	13.2%	1.321%
<b>Demand for taxi fleet growth</b>				<b>Less than zero (-2.24%)</b>		<b>3.90%</b>	
<b>Demand for new annual taxi licences</b>				<b>-126.5</b>		<b>215</b>	
<b>Adjustments</b>	(1) Number of WATs released (representing a portion of standard jobs)				-17.6		-40
	(2) Attrition of previously released annual licences				55		1
	(3) Staged release of demand backlog				N/A		21
<b>Adjusted demand for total taxi fleet growth</b>				<b>Less than zero (-1.57%)</b>		<b>3.60%</b>	
<b>Demand for new annual taxi licences</b>				<b>-89</b>		<b>197</b>	

Note: the STGM results indicate that there is no demand for additional annual taxi licences.

## 2.4 Sensitivity Analysis

The components that are the greatest drivers of the result are:

- Percentage of no cars available; and
- Network bookings.

Both of these components use network KPI data in their calculation. This highlights the sensitivity of the model result to data that applies to between only 20 and 40 per cent of total taxi usage. Sensitivity testing was performed on each of these components as described below.

## Network Bookings

As discussed in section 2.2.1, errors found in the network bookings data raised questions over the accuracy of this model component. The following sensitivity tests were performed in order to determine the influence of this component on the overall model result:

1. **Input zero growth in network bookings into the STGM:** Given the uncertainty surrounding the data provided for this component, and the relatively smaller year on year percentage decrease in rank passengers, it could be expected that zero growth in network bookings could represent an upper bound.
2. **Input ‘total taxi pickups’ into the STGM instead of ‘booking requests’:** ‘Total taxi pickups’ data may be more accurate than ‘booking requests’ data, as it is less likely for a pickup to be double counted. It could be expected to move in line with passenger network demand for taxis.

Table 9 Sensitivity testing – network bookings

Test	Description of model input	% change in model component (2010 to 2011)	Model result (adjusted number of new annual taxi licences)
Current input	CY change in KPI-1 Number of booking requests	-8.57%	-89
1	CY change in KPI-1 Number of booking requests = zero	0.00%	-41
2	CY change in KPI-6.4 Total taxi pickups	-1.96%	-51

## Percentage of No Cars Available

Due to issues described in section 2.2.1 and section 2.2.3, the following sensitivity tests have been performed in order to determine the influence of this component on the overall model result:

1. **Input zero growth in % of NCAs into the STGM:** Given the uncertainty surrounding the data provided for this component, it could be expected that zero growth in ‘no cars available’ could represent an upper bound.
2. **Input figures originally provided by CCN for network bookings into the STGM for calculation of this component only:** This will allow data from the same system to be used in the calculation of the component, potentially providing greater comparability and accuracy.



Table 10 Sensitivity testing – % of NCAs

Test	Description of model input	% change in model component (2010 to 2011)	Model result (adjusted number of new annual taxi licences)
Current input	CY change in number of NCAs as a proportion of total network bookings (revised CCN network booking figures input)	-32.32%	-89
1	CY change in % of NCA component input as zero	0.00%	94
2	CY change in number of NCAs as a proportion of total network bookings (original CCN network booking figures input)	-27.07%	-59

### Network bookings + percentage of no cars available

In order to determine the combined effect of these two components on the model result the following sensitivity tests were performed:

- Input zero growth in both components into the STGM**
- Input zero growth in the % of NCAs component and input ‘total taxi pickups’ into the STGM instead of ‘booking requests’**

Table 11 Sensitivity testing – network bookings + % of NCAs

Test	Description of model input (network bookings component)	Description of model input (% of NCAs component)	Model result (adjusted number of new annual taxi licences)
Current input	CY change in KPI-1 Number of booking requests	CY change in number of NCAs as a proportion of total network bookings (revised CCN network booking figures input)	-89
1	CY change in % of NCA component input as zero	CY change in % of NCA component input as zero	142
2	CY change in KPI-6.4 Total taxi pickups	CY change in % of NCA component input as zero	132

These sensitivity tests show the large impact that each of these components have on the result of the STGM. These results reinforce PwC’s recommendations that meter swing data needs to be obtained to use as an alternative to network bookings data as a proxy for total current passenger demand for taxi services, and the % of NCA component should be reconsidered for the 2013/14 annual taxi licence release.

TfNSW may also wish to take into account the results of these sensitivity tests in the decision pertaining to the determination of the number of annual licences to be released in Sydney in 2012/13.

## 2.5 Additional replacement licences to release

In addition to fleet growth, Table 12 presents the number of existing short term licences due to expire in 2012/13 (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). In 2012/13 there are 2 fringe area licences due to expire.

Table 12 Replacement licences to be released in 2012/13

Driver of taxi demand	Component	Contribution to total licence release
Replacement of short term licences due to expire in 2012/13	Peak availability licences	0
	Unrestricted licences	0
	Fringe area licences	2
Number of replacement annual taxi licences for 2012/13		2

## 2.6 Possible approaches for TfNSW

The STGM is one approach used to help determine the need for and number of annual taxi licences to be issued in Sydney each year. Given the result computed by the STGM for 2012/13, TfNSW may want to consider one of the following options for its determination of the number of annual licences to be released in Sydney for 2012/13:

- 1. Release no annual taxi licences.** While the 2012/13 STGM does not indicate growth in demand for taxi licences, it would not be practical for TfNSW to 'take back' licences released in the past. Therefore, the minimum number of licences released could be considered to be zero. A further implication of this option is that it would result in taxi fleet loss relative to the 2011/12 annual licence determination, therefore potential impact on customers due to reduced services. There would also be a lack of continuity for industry participants in a bid process that they are still becoming familiar with.
- 2. Release 55 annual taxi licences to replace those licences that were returned to TfNSW in the period 1 January 2011 to 31 December 2011, and a further 2 to replace the fringe area licences due to expire in 2012/13.** This approach would entail no net fleet loss, and ensure that the number of licences previously determined in 2010/11 and 2011/12 remain available for operation, therefore this approach may result in a better outcome for customers. It will also allow a small licence release in 2012/13 in which industry may participate, thereby maintaining their familiarity with the process.
- 3. Release some other positive amount of annual taxi licences based on a separate policy decision.** This approach could allow TfNSW to release licences based on support for customer services goals set out in the 'NSW 2021: A Plan to Make NSW Number One' ten year plan. It may however require explanation to stakeholders that the role of the STGM is only one part in the decision process for annual licence release, and that the NSW Government now has a stronger focus on achieving excellent customer service quality.

## 2.7 Recommendations

### Number of annual licences to be released

1. Based on the model and approach proposed for the 2012/13 Sydney Taxi Growth Model (STGM), there is no demand for taxi fleet growth and additional annual taxi licences to be released in Sydney during the year commencing 1 July 2012. The outputs computed by the model is less than zero, with:

- -89 growth annual taxi licences (-1.57% demand for fleet growth)
- An additional 2 licences to replace those expiring in 2012/13
- A total of -87 growth and replacement licences

Reflecting that the STGM is a part of the decision process but is not definitive, the NSW Government could consider the following licence release options during the year commencing 1 July 2012:

- Do not release any new annual taxi licences
- Release 55 annual licences to replace existing licences handed back in CY 2011, with a further 2 to replace the fringe area licences due to expire in 2012/13
- Release some other positive amount of annual taxi licences based on a broader policy decisions, and taking into consideration that previous tenders have generally been oversubscribed

### Model components and weightings

2. Following a review of all aspects of the STGM, no changes to the STGM components, weightings, inflators or adjustments are proposed for 2012/13
3. TfNSW collect 'meter swing' data from each network on an annual basis and for at least two years (split by plate type and time of day), in order to develop a more comprehensive measure of direct passenger demand than network bookings alone.
4. Consideration should be given to removing or replacing the 'Percentage of No Cars Available' component from the STGM for the 2013/14 annual licence release. This should be discussed during stakeholder consultation prior to the release.
5. TfNSW take into account the need for data on the number of short trip refusals, the differences in wait times for shorter and longer trips, and customer reasons for the means employed to obtain a taxi, in the design of questions for customer surveys that will be undertaken later this year. The possibility of undertaking the same survey on an annual basis should be considered.
6. A transition from measuring Sydney Airport passenger growth on a financial year basis to a calendar year basis is recommended for the 2013/14 determination.
7. The following changes to the STGM should be raised in consultation for consideration during the 2013/14 review:
  - Incorporation of NSW Government rank data at supervised Sydney ranks
  - Incorporation of bid ratio and price data from past annual licence releases following any further releases
  - Alternative method for calculating plate lease costs, dependent upon additional data becoming available through the proposed amendment of cl 184 of the Passenger Transport Regulation 2007.

### 3. Need for different classes of licences

Transport for NSW must determine the number of taxi licences to be released annually in Sydney, and also the number and class of licences that are reserved for drivers only. This does not preclude TfNSW from considering the licence class of all growth licences as part of the annual licence release.

#### 3.1 Number and class of Sydney taxi licences

A comparison of the class distribution of **all taxi licences in Sydney** (ordinary, short term, WATs and annual) with the class distribution of **annual taxi licences in Sydney only** (as at 31 December 2011) is presented in figures 3 and 4.<sup>26</sup>

Figure 4 Class distribution of all Sydney taxi licences (ordinary, short term, WATs & annual) as at 31st December 2011<sup>27</sup>

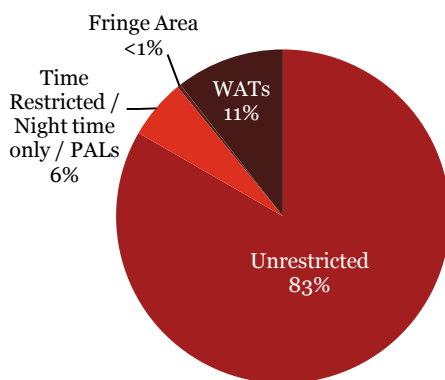
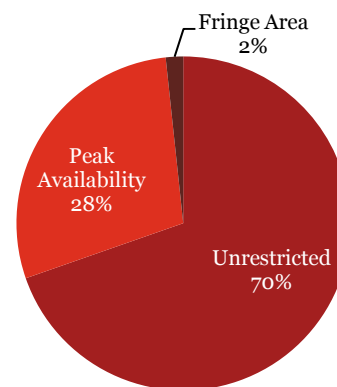


Figure 5 Class distribution of annual Sydney taxi licences only (excl. WATs) as at 31st December 2011<sup>28</sup>



The figures show that while unrestricted licences continue to make up the vast majority (83%) of total Sydney taxi licences, the proportion of PAL licences is increasing through the annual licence release process. Table 13 summarises the annual licences released by Transport for NSW to date, by licence class and category of eligible bidder.

<sup>26</sup> Total number of licences includes 643 annual licences. This figure is calculated by summing the number of annual licences released in the interim annual licence release (2010), and the number of licences determined for release in both the 2010/11 and 2011/12 annual licence determinations.

<sup>27</sup> Chart constructed from data provided by TfNSW 2011: 'Number of licences by licence type in Sydney at 1 December 2011' and data available on the TfNSW website: 2010/11 annual taxi licence determination; 2011/12 annual taxi licence determination & 'Annual taxi licence release results', available at: <http://www.transport.nsw.gov.au//content/taxi-licences>

<sup>28</sup> Chart constructed from data provided by TfNSW 2011 and data available on the TfNSW website: 2010/11 annual taxi licence determination; 2011/12 annual taxi licence determination, 'Annual taxi licence release results', available at: <http://www.transport.nsw.gov.au/content/taxi-licences>

Table 13 Number of annual licences released by class (including growth and replacement licences) as at 31 December 2011

Licence class	Release	Number of annual licences released	Percentage of all Sydney annual licences (exc. WATs)
Unrestricted <sup>29</sup> (available to all applicants)	2010 Interim Release	100	45%
	2010/11 stage 1	96	
	2010/11 stage 2	33	
	2011/12	60	
Unrestricted (available to eligible taxi drivers only)	2010/11	90	25%
	2011/12	69	
Peak Availability Licence <sup>30</sup> (available to all bidders)	2010/11 stage 1	61	18%
	2010/11 stage 2	29	
	2011/12	25	
Peak Availability Licence (available to eligible taxi drivers only)	2011/12	69*	11%
Fringe Area Licence <sup>31</sup>	2010/11 stage 1	3	2%
	2010/11 stage 2	4	
	2011/12	4	
<b>Total</b>		<b>643</b>	<b>100%</b>

Source: Transport for NSW website: <http://www.transport.nsw.gov.au/content/taxi-licences>

Note: Totals may not sum due to rounding.

### 3.2 Successful bid price trends: 2009/10 to 2011/12

Successful bid prices have tended to fluctuate over the releases. The change in average prices between like-licence categories is presented in Table 11.

For licence categories that are able to be compared, bid prices decreased between the 2010/11 stage 2 release and the 2011/12 release by an average of 3 per cent. This may be an indication that prices are stabilizing as the market becomes better informed.

From the successful bid prices, it can be seen that peak availability plates have been valued at about 75% of the price of unrestricted plates. The hours of operation for those holding PALs is restricted to peak hours only (between 12 noon and 5am). This is when the highest level of demand is expected to occur.

#### Trends in the ratio of bids to the number of licences released: 2009/10 to 2011/12

The ratio of bids to the number of licences released has decreased across each of the plate categories. The driver only peak availability category was the only under-subscribed category, in its initial tender in 2011. However, the subsequent re-tender of these licences in February 2012 was oversubscribed.

<sup>29</sup> Annual unrestricted licences can operate anywhere in Sydney, at any time of day. These can be issued to eligible taxi drivers only or be available to all applicants.

<sup>30</sup> Annual 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. These can be issued to eligible taxi drivers only or be available to all applicants.

\*Note: 69 PALs were released to eligible taxi drivers only in 2011/12, but only 23 were issued. The remaining 46 undersubscribed licences were recently released for tender. Tender applications closed Friday 3<sup>rd</sup> February 2012. There were a 3.4 bids for each licence released. Full tender results have not yet been finalized.

<sup>31</sup> The objective of Annual Fringe Area Licences (FALs) is to provide areas on the metropolitan fringe with an equal level of taxi service to metropolitan areas. FALs in past annual releases have been issued separately or in a package to a single applicant and have only been issued as replacement licences to date.

Table 14 Ratio of conforming bids to annual licences released (2009/10 to 2010/11)

Licence class	Release	Total licences to be released		Ratio of conforming/eligible bids to no. released		Average Licence Fee	Trend between releases	Median Licence Fee
		To all bidders	To drivers	All bidders	Drivers			
Unrestricted (all applicants)	Interim Release	100	62	7.4	11.9	\$31,864		\$31,616
	2010/11 stage 1	96	63	8.5	5.7	\$34,968	+10%	\$34,554
	2010/11 stage 2	33	28	9.8	8.8	\$35,791	+2%	\$35,500
	2011/12	60	37	3.7	2.6	\$34,652	-3%	\$34,865
Unrestricted (driver only)	2010/11	90	90	3.8	3.8	\$33,636		\$33,393
	2011/12	69	69	1.8	1.8	\$32,521	-3%	\$32,526
PALs (all bidders)	2010/11 stage 1	61	41	10.4	8.1	\$25,994		\$25,800
	2010/11 stage 2	29	20	7.3	6.0	\$27,706	+7%	\$27,380
	2011/12	25	14	3.0	2.4	\$26,786	-3%	\$26,780
PALs (driver only)	2011/12	69	69	0.6	0.6	\$24,248		\$23,752
	2011/12*	46	TBA*	3.4	TBA*	TBA*		TBA*
FALs <sup>32</sup>	2010/11 stage 1 (Helensburgh)	3 (packaged)	0	2.0	0	\$2,002		\$2,002
	2010/11 stage 2 (Windsor / Richmond)	4	0	4.5	10/0	\$20,020		\$20,020
	2011/12 (Windsor / Richmond)	4	0	3.25	6/0	\$28,241		\$28,654

Source: Transport for NSW website: <http://www.transport.nsw.gov.au/taxi-licences> (accessed 12/01/2012). Data also provided by Transport for NSW: Taxi Licence Release analysis (various dates).

\*TBA when tender is complete. Price data is unreliable at this stage.

### 3.3 Need for different classes of licences in 2012/13 determination

#### Issues raised by stakeholders

Stakeholder feedback on the release of different classes of licences ranged from support for releasing unrestricted licences only (NSW TDA, Edward Ellis – Individual, John Lewis - Individual), to support for establishing/maintaining targets for the proportion of unrestricted and PAL licences (NSW TC, PDCN, Premier Radio Cabs, Fred Lukabyo), to support for introducing additional classes of plates to service demand on Friday and Saturday nights (Manly Council). No specific comments were made on limiting the number of licences available to a single applicant, and general agreement appeared to exist that FALs should be released on an as needed basis.

The main issues discussed by stakeholders (both at the forum and in written submissions) in regards to the need for different classes of licences can be summarised under the following headings:

\* Re-release of undersubscribed licences

<sup>32</sup> Note: Price differential between FALs reflects different operating areas.

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### *The merits of unrestricted licences versus the merits of PALs*

There was a level of support from some stakeholders for the release of unrestricted licences only. The NSW TDA based their reasoning for this on their view that PALs are not viable for the industry and do not best serve the customer. The following arguments are presented in their written submission:

- The PAL restriction to a 17 hour day is insufficient to run two profitable shifts but as a single shift the hours are too long for one driver / operator to run safely;
- The fixed overheads, including insurance costs and network fees, are not reduced in proportion to a PAL's diminished earning capacity; and
- PALs offer less flexibility for drivers / operators to monitor and respond to fluctuations in supply and demand (for example, in the case of a special event such as the arrival of a cruise liner), thereby resulting in situations where passengers and drivers are not best served.

The PCDN's written submission makes the case that if all licences are issued as unrestricted, it will result in longer waiting times for customers during specific periods of the day that coincide with traditional taxi shift changeover times. The issue of PALs guarantees that there will be certain numbers of taxis on the road at changeover times to respond to customer demand. The PCDN therefore supports the establishment of targets for unrestricted and PAL/FAL licences that will be of greatest benefit to customers.

The NSW TC recommended new PALs be issued in line with their current proportion in the fleet, in the absence of any evidence to support the contrary.

On the basis of economic fundamentals, PwC has in previous reviews recommended that all growth licences be issued as unrestricted, to allow operators / drivers the opportunity to determine the most viable time to operate. However, PwC acknowledges that there are a number of arguments supporting the release of at least a certain proportion of PALs on the basis that making all licences unrestricted would harm customer satisfaction.

### *The merits of introducing a new licence class to meet peak demand on Friday and Saturday nights only*

Stakeholders at the forum recognised the lower availability of taxis to serve the level of demand in Sydney City from midnight on Fridays and Saturdays. In their written submission, Manly Council outlined a similar problem in the Manly entertainment precinct involving long customer queues for taxis between 12 midnight and 4am on weekends. This was supported by rank data obtained from TfNSW. Despite passenger numbers at ranks overall decreasing by an average of 2% between the 2010 and 2011 calendar years, Manly's two ranks experienced increases of 25% and 47% over the same time period.

At the forum, CoS described their understanding of a solution implemented in Perth to solve the problem of excess customer demand for taxis on Friday and Saturday nights. 'Temporary' taxi licences were introduced, for operation during the hours of midnight to 6am only. The licences were issued on a one-off basis for a nominal fee, and there was no requirement for the applicant to hold taxi operator accreditation.

In response to this, some stakeholders provided their views that there may be merit introducing taxi licences that compel taxis to service late night entertainment precincts on Friday and Saturday and nights.

PwC acknowledges that issuing 'temporary' taxi licences may help to serve excess demand on Friday and Saturday nights at popular Sydney nightspots. However, as raised by NSW TDA, the introduction of 'temporary' taxi licences may result in unintended consequences, such as increased safety risks to taxi customers and taxi drivers, for example in the instances of "*nonchalant drunks obtaining lifts from disreputable strangers*". The NSW TDA's argument is that using ordinary vehicles and inexperienced taxi drivers will not provide the "state



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*of the art security, training and resources that are only found in properly licenced and monitored taxi cabs and drivers.”*

An alternative method suggested at the stakeholder forum for encouraging more taxis to service late night entertainment districts, was the introduction of pre-paid fares after midnight, and surcharges for being physically sick or damaging the inside of a taxi.

At this stage, PwC recommends not to add further complexity to the release process or compliance with the addition of more licence classes.

### *The merits of attaching licences to specific networks*

At the stakeholder forum, one focus of the discussion surrounding different licence classes, was the possibility of releasing licences that are attached to a certain network, based on the area in which that network operates. Manly Warringah Cabs argued that this would allow licences to be more evenly spread geographically through Sydney, and help to avoid the build-up of taxis in the city centre, while other areas experienced under-supply.

St George Cabs (traditionally an area-based taxi network) provided support for this plan. They asserted that through the new annual licence determination process, more plates are being obtained by, or affiliated as members with the larger networks, with the smaller networks (such as St George) losing out. This occurs when drivers / operators who previously leased plates from a network, apply for and obtain their own annual taxi licence. The new annual licence holders may then choose to leave their current network and sign on to a new one. St George’s argument is that this results in smaller networks losing their market share, and a lack of licences operating in particular geographical areas in Sydney.

The counterargument to this is provided in the NSW TDA’s written submission. In the opinion of the NSW TDA, annual licences are a form of “portable” plate that offers their owners the opportunity to switch between networks and thus provides them the ability to negotiate more favourable treatment from networks. The submission states:

*“the typical current network lease contract includes a measure of third line forcing such that in order to get access to a plate the operator is obliged to purchase accompanying network services at inflated prices...Only government issued plates, or plates held directly by operators, empower operators to shop for networks services and in turn to put downward pressure on (the currently unregulated) network fees.”*

The NSW TDA argues that issuing plates attached to networks deprives operators the privilege of being able to shop around for network services. The submission goes further to say that if a network attracts more taxi passengers then that will help it to attract more operators. If a network’s market share is protected by a quota system then the incentive for networks to better meet passenger needs is lost.

On the basis of economic and market fundamentals, PwC does not support the release of licences that are attached to particular taxi networks. Competition for drivers provides networks with the incentive to increase customer service levels in the hope of attracting additional customers, and therefore additional drivers. Driver representatives in attendance at the stakeholder forum attested that drivers are mobile around all parts of Sydney, regardless of the location of their associated network. Customer demand was identified as sufficient incentive for a driver to operate in any specific geographical area within the Sydney Metropolitan Transport District.



Moreover, increased variety of licence classes and / or conditions adds to the complexity of the licence release process. This makes it more difficult and time consuming for industry stakeholders to participate in the application process for annual taxi licences.

Future availability of data on network booking performance at peak times and off-peak times and geographic location would assist in future advice on demand for PALs or other types of area of operation restricted licences. In the absence of data showing direct causality between a reduction in network market share and a reduction in geographically based customer service levels, PwC does not support issuing licences that are attached to a specific taxi network.

### **3.4 Recommendations**

8. Any growth licences to be issued in 2012/13 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 licences as peak availability licences given the role they can play to vary traditional changeover times. The portion could be equal to their current representation in the annual licences released to date (28%) to maintain the status quo.

## 4. Offering licences to authorised taxi drivers only

Transport for NSW must determine the number and class of licences available to eligible authorised taxi drivers only.

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

The allocation of 'taxi driver only' licences and their corresponding eligibility criteria allow eligible taxi drivers to obtain licences, and encourage active participation in the industry. A key objective of the licensing reform is to provide a career path for drivers and encourage attraction and retention of experienced and quality drivers in the industry.<sup>33</sup>

### 4.2 Eligibility criteria for 'taxi driver only' licences

In the 2011/12 annual release of licences, criteria to be eligible for a 'driver only' licence included:<sup>34</sup>

- The applicant has held a current NSW taxi-cab driver authority for a minimum period of four years; and
- The current taxi-cab driver authority has, in that period, remained continuously in force;
- The applicant has actively worked as a taxi driver for a minimum of 12 months in the last four years;
- The applicant is required to provide evidence, within seven calendar days from the date of the notice, of having actively worked as a taxi driver in NSW for a minimum of 48 shifts over 12 consecutive months in the last four years; and
- The applicant holds a current driver's licence issued by the Roads and Traffic Authority of the kind required under clause 29(2)(b) of the PTA and that driver's licence has remained continuously in force for a minimum period of four years.

The objective of the eligibility criteria is to help create a career path for experienced taxi drivers who have a good driving record. There is benefit in attracting and retaining people who want to make a commitment to the industry and serve the public.

For the taxi-driver only licences released in the 2011/12 determination, TfNSW received a total of 168 applications. Out of these applications, 35 (or 21%) were assessed as ineligible.<sup>35</sup> While these tenders conformed with the application process, the applicants did not meet all of the specified eligibility criteria.

The predominant reason that applicants were assessed as ineligible for a driver-only licence was due to some temporary suspension of their current driver's licence (for example due to loss of demerit points or non-payment of fines), and the driver may not have been aware of the suspension.<sup>36</sup>

<sup>33</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>34</sup> TfNSW, *Eligibility Criteria: Applicants for taxi-cab licences in the taxi-cab drivers only category*, available at: <http://www.transport.nsw.gov.au/sites/default/files/b2b/taxireform/tender-tfnsw-2012-002.pdf>

<sup>35</sup> Refer to the final column in

**Table 15** for a breakdown of non-eligible bids by licence class.

<sup>36</sup> Information provided to PwC by TfNSW, email communication, 22<sup>nd</sup> February 2012.

As part of the 2012/13 consultation process, TfNSW sought stakeholder comment on the reasons why the proportion of non-eligible applications was so high, and whether there was cause for the eligibility criteria to be changed.

## Issues raised by stakeholders

The main issues and arguments raised by stakeholders in regards to the eligibility criteria for driver-only licences can be summarised under the following headings:

### *Some criteria were too strict and resulted in unfair exclusion of competent applicants*

A number of stakeholders (NSW TC, NSW TDA, John Fan – Individual) suggested that certain aspects of the eligibility criteria for taxi-driver only licences were too strict, leading to the unfair exclusion of competent drivers from obtaining these licences.

- The NSW TC and John Fan suggest that taxi drivers who have their taxi driver authority suspended for a short period of time for administrative reasons – such as failure to renew a visa on time, or failure to renew a driver's licence on time – should not have this counted against them for the purpose of assessing their eligibility for a driver-only licence. They consider it fair and reasonable that in the instance where the suspension is not related to driver performance, applicants should still be considered eligible.
- The NSW TDA argues that the criterion for the applicant's current driver's licence to have remained continuously in force for four years is not fair or reasonable. As the demerit points system is time based rather than distance based, and an average taxi driver may cover in one year the same distance that an average motorist covers in five or ten, the NSW TDA contends that it is difficult for taxi drivers to avoid temporary licence disqualifications.

An alternative view point was however canvassed by some of the network representatives at the stakeholder forum, with suggestions that only the most experienced drivers be provided with the opportunity to purchase an annual plate, to encourage sustainable career development in the industry.

PwC suggests that TfNSW consider relaxing eligibility in cases where a driver has had a short gap in continuity for reasons not related to driver performance.

### *The nature of the criteria could be altered to create incentives for higher service levels and for drivers to remain in the industry*

Comment was received from stakeholders (NSW TC, ATDA, Premier Radio Cabs, Action for Public Transport) in regards to a number of possible alterations of the criteria for driver-only licences that would create incentives for drivers to aim for higher levels of service provision, and to remain in the industry in the long term.

The ATDA contends that the issue of taxi-driver only licences should be conditional upon the registered taxi being driven only by the registered licensee, their registered operator, or by the employee of the licensee or operator. Their position is that this would re-introduce the professional owner / driver as the mainstay of the industry, and lead to increased service levels for passengers. A similar proposal from the NSW TC supports a condition being placed on driver-only licences that requires the applicant to operate the licence themselves. It is argued that keeping drivers in the industry is achieved more directly if on-leasing of the licence is prevented.

At the stakeholder forum, there was an indication of support for a system that rewards drivers based on seniority or experience in the industry. For example, Premier Radio Cabs suggested the allocation of driver-only

plates at a reduced price to drivers who met criteria such as a certain number of years of experience, and a good driving record. The NSW TC also indicated support in its written submission for higher discounts being offered on licences issued to taxi drivers with a good record of service in the industry.

As outlined above there was not one clear position of stakeholders on driver eligibility requirements, however PwC would suggest that requirements imposed should have the aim of encouraging driver bids, as providing a career path to drivers and decreasing driver turnover are worthwhile objectives in that they assist in improving service quality.

Some comment was also made by stakeholders in the forum regarding the introduction of additional licence conditions that require holders of a driver-only licence to drive the taxi for a minimum number of shifts per week for a certain number of weeks each year. While it is reasonable to require eligibility criteria to apply for a licence in any taxi driver only allocation, additional licence conditions of this nature may act as a disincentive for taxi drivers to seek a licence in this category, while also increasing the monitoring and compliance burden for TfNSW.

### *The financial costs for taxi drivers of applying for a driver-only licence are too burdensome*

In its written submission, the NSW TDA put forward an argument that many drivers, while competent at their job, were unable to apply for a driver-only licence due to the financial commitment involved. In order to meet the eligibility criteria, applicants must hold a current NSW taxi-cab driver authority. To obtain an authority, applicants must successfully complete an approved taxi-cab driver training course. The combined cost of the training course and the application fee payable to TfNSW for the authority is approximately \$1,000.<sup>37</sup> An additional requirement to obtain the authority is to successfully pass an English language competence examination or assessment in both written and spoken format.<sup>38</sup> The NSW TDA argues that this results in additional costs to many applicants, as additional training in English literacy could be required. In order to help achieve the objective of creating a career path for experienced taxi drivers, the NSW TDA advocates the provision of training and support, and access to low interest loans for eligible taxi drivers who wish to apply for driver-only licences.

PwC suggests that TfNSW consider this stakeholder view, though if drivers are making a transition from shift driver to plate operator-driver, reasonable experience on a NSW taxi-cab driver authority appears to be important.

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

Table 15 shows the number of driver only licences released as part of the annual release process to date (note that eligible drivers were able to apply for one licence in the driver only categories but all drivers were also able to apply for licences in the open categories for which there was no limit).

<sup>37</sup> Cost of training course of \$900 sourced from The Sydney Taxi School website, available at: <http://www.thesydneytaxischool.com/courseinformation.htm>. TfNSW application fee of \$100 sourced from TfNSW, *Application for an Authority to Drive Taxi-Cab or Private Hire Vehicle*, available at: <http://www.transport.nsw.gov.au/sites/default/file/taxi/taxi-hirecar-driver-app.pdf>

<sup>38</sup> TfNSW, *Taxi Driver Authorisation Package June 2011*, available at: <http://www.transport.nsw.gov.au/sites/default/file/taxi/driver-authorisation-package.pdf>

Table 15 Taxi driver only annual licences

Period of release	Licence class	No of licences released:	% of total driver only licences	Total bids	Non-eligible bids (% of total bids)
2010/11 release	Unrestricted	90	39%		
2011/12 release	Unrestricted	69	30%	126	27 (21%)
	Peak Availability	23*	10%	42	8 (19%)
	Peak Availability	46**	20%	156	
<b>Total</b>		<b>228</b>	<b>100%</b>		

Source: TfNSW website: <http://www.transport.nsw.gov.au/content/taxi-licences>

In the 2010/11 Stage 1 tender there was strong demand for licences in the taxi driver only category with 3.8 complying applications 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.

Considering bids for all licences in the 2010/11 stage one release only, 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>39</sup>

In the 2011/12 tender the demand for licences in the taxi driver only categories was not as strong as the previous year, with 1.8 successful bids for each of the 69 unrestricted licences on offer, and only 0.4 successful bids for each of the 69 PALs on offer. This resulted in the peak availability driver only category being under-subscribed, with the 46 unallocated licences recently re-released for tender (applications closed on February 3<sup>rd</sup> 2012).

Considering bids for all licences in 2011/12 taxi drivers comprised 64% of all applications (44% of all applications for the licences open for anyone to apply) and were successful in obtaining 80% of all licences issued (62% of all licences open for anyone to apply). The ratio of conforming bids by drivers to the number of licences issued to drivers in each category, provides an indication of the categories that drivers were most interested in (refer Table 14 in section 3.2).

For the 2011/12 release, this ratio was the highest in the unrestricted (available to all bidders) category (2.6) followed closely by the PAL (available to all bidders) category (2.4).

While it appears that taxi-driver demand overall remained strong in the 2011/12 release, it must be noted that in this release, 61% of all licences tendered were available to taxi drivers only, a large increase on the 36% available to taxi drivers only in the 2010/11 stage one release. Nevertheless, 62% of licences in the open categories were also issued to drivers.

The results of past licence releases indicate that a considerable proportion of the demand for annual taxi licences has come from taxi drivers. Overall, when the results of all past annual licence releases are combined (excluding the current re-tender for the 46 unsubscribed driver-only PALs):

- 69% of all conforming tenders received were received from taxi drivers; and

\* A total of 69 licences were released for tender in this class at this time. However, the release was undersubscribed and only 23 licences were issued.

\*\*The remaining 46 licences from the undersubscribed tender were recently re-tendered. Initial results are available but the number of non-eligible bids was not known at time of publication.

<sup>39</sup> Note: Not all taxi drivers applying for licences in the open categories were eligible to apply for a licence in the taxi driver only category.

- 75% of all licences issued have been issued to taxi drivers.

Given that taxi drivers can also apply for licences in the open category, the lower bound on licences to be reserved for taxi drivers only, could be as low as zero. However, due to the level of interest, PwC suggests that the appropriate proportion of growth licences to reserve for taxi drivers only in the 2012/13 release could be approximately 70%.

## Issues raised by stakeholders

### *Operator experience of taxi driver shortage*

The main issue relating to driver-only annual plates that was discussed in the stakeholder forum was the suggestion that previous releases of these plates may be contributing to a shortage of drivers for operators of ordinary plates. For this reason RSL and Manly Warringah Cabs expressed preference for no release of annual plates to drivers. Drivers who had previously driven ordinary plates operated through these networks, were now operating their own plates instead. According to the network stakeholders, this caused the operator of the ordinary plate to lose not one driver, but two, as each driver who obtained their own annual plate would take another driver with them to share driving shifts for the new plate.

Anecdotal evidence presented by stakeholders indicates that this phenomenon is resulting in a decline in the ratio of the pool of taxi drivers to the number of taxi plates in the Sydney market. Potential flow-on effects include plates not being operated or being put on hold. In an efficient market, this result does not make sense. In theory, any driver vacancies caused by existing drivers becoming operators of annual plates should be filled by new drivers entering the market.

PwC suggests that while the anecdotal evidence presented by stakeholders suggests that this phenomenon may be occurring, overtime this may correct via a market response to this problem in the form of a price adjustment. The reduction of driver pay-ins could attract more drivers to the industry.

## **4.4 Class of taxi driver only licences**

As described above, in the Stage 1 2010/11 release, all taxi driver only licences were offered as unrestricted class licences, while in the 2011/12 release they were offered in both the unrestricted and PAL classes taking into consideration submissions made.

The release of unrestricted annual licences to drivers allows drivers the opportunity to determine the most viable times of day to operate. However, the fact that PALs are often anecdotally single-shifted has in the past provided an argument in support of releasing driver-only licences as PALs.

Although the number of successful bids per licence decreased across all licence types from 2010/11 to 2011/12, the under-subscription of the 2011/12 stage one release of 69 PALs for taxi drivers only, provided one indication that there may not be sufficient demand among taxi drivers to support the further release of driver only PALs. However, the re-release of these licences has now been fully subscribed.

Stakeholders in attendance at the forum were divided on this issue. On one side network stakeholders (Premier Radio Cabs, multiple networks representative) argued that there was undoubtedly a need for some driver-only PALs, and the result of the 2011/12 under-subscription was an anomaly that might be explained by an uninformed market. On the other side driver stakeholders (NSW TDA) argued that the under-subscribed tender clearly indicated a lack of demand for driver only PALs.

Initial results from the recent re-tender of the 46 undersubscribed driver-only PALs shows that 156 applications were received from drivers, resulting in a ratio of 3.6 bids to each licence on offer. While information of successful bid prices is not yet available, this initial result supports the theory that PALs are an attractive option for the driver-only segment of the market.

On the basis of economic fundamentals, PwC recommends that all growth licences, including those allocated to drivers only, be issued as unrestricted, to allow operators / drivers the opportunity to determine the most viable time to operate. However, PwC acknowledges that there are a number of arguments supporting the release of at least a certain proportion of PALs on the basis that making all licences unrestricted may harm customer satisfaction, and that demand for PALs exists in the driver-only market.

## 4.5 Recommendations

9. As there was not one clear position of stakeholders on the issue of eligibility criteria, TfNSW may want to consider relaxing eligibility if a driver has had a short gap in continuity for reasons not related to driver performance. In general, PwC would suggest not to tighten requirements imposed as this may result in a greater proportion of driver only licences not being successfully bid for.
10. Based on results of past annual releases (69% of all conforming tenders received were received from taxi drivers and 75% of all licences issued have been issued to taxi drivers), the number of licences issued to eligible, authorised taxi drivers only could represent approximately seventy per cent of the new growth licences released in 2012/13. The remaining growth and replacement licences should be open to anyone to apply.
11. Any driver-only growth licences to be issued in 2012/13 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 are grounds to release a portion of licences as peak availability licences given the role they can play to vary traditional changeover times. If peak availability licences are released in the driver-only category, this could occur in the annual licences released to date to maintain the status quo.



## 5. Preferred methods to release taxi licences and determine annual licence fees

As part of the annual licence determination, section 32C(2)(c) of the PTA allows Transport for NSW to ‘provide for any other matter relating to the issue of annual licences that is prescribed by the regulations’.

This chapter considers the matters relating to the issue of annual licences as requested specifically by Transport NSW, namely the method to release taxi licences, and the method to determine annual licence fees.

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 Potential methods to release annual licences

The following three methods have been identified as methods to release taxi licences:

- *Tender* – 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 impacted by bidders not being able to see what others are willing to pay.

A tender could be by electronic tender (as used for the 2010/11 and 2011/12 annual licence releases) or sealed tender (as used for the initial 2009/10 issue of 100 new unrestricted annual taxi licences). It appears that stakeholders in NSW 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. The high compliance rate of the electronic system (with only 4 out of 1,801 applications non-compliant in 2010/11 and all applications compliant in 2011/12) compared to the paper-based system suggests that it was successful in optimising compliance.

- *Auction / price revealed model* - under this approach, all bidders are present in person for a real-time auction of licences. 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. While this option may provide for more instantaneous outcomes, it is often not feasible to group all interested parties together at one time.

An auction method could also be implemented by electronic or in-person bidding. An electronic system may necessitate greater time upfront in planning and delivering the system, but could reduce the time needed to receive and sort applications, as well as to make offers. Some submissions to the 2011/12 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 the market price.

- *Ballot* – under this approach, the price, number and any conditions of a licence are published by the regulatory authority. Given these factors, all parties who wish to obtain a licence, must register their details to participate in the ballot. The ballot is conducted as a random draw with all applications entered.

In the case of a ballot, the standard approach is for application numbers to be drawn one at a time, and a record kept of all the numbers drawn in the order in which they are drawn. Licences are then offered according to the order of the numbers drawn. (The random draw can be thought of to be made in a similar manner to a televised lotto draw). A ballot offers a random approach to the allocation of licences, as an alternative to a market based mechanism.

Key advantages and disadvantages of the release methods outlined above are presented in Table 16.

Table 16 Comparison of licence release methods

Approach	Advantage	Disadvantage
Tender	<ul style="list-style-type: none"> <li>• Applicants provided with a secure bid method and time to research and prepare bid</li> <li>• Transport for NSW provided with applications immediately</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 (for electronic approaches)</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>
Auction	<ul style="list-style-type: none"> <li>• Instantaneous bidding and prices revealed to all attending</li> <li>• 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 (for in-person)</li> <li>• Accessibility and understanding of technology by participants is required (for electronic approaches)</li> <li>• Could favour those more familiar with auction strategies</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 a certain time</li> <li>• Auction atmosphere may lead to bidders competing, potentially resulting in higher bids</li> </ul>
Ballot	<ul style="list-style-type: none"> <li>• All participants in ballot have an equal chance of success</li> <li>• Participants in ballot know the price of the licence before deciding whether or not to enter the ballot</li> </ul>	<ul style="list-style-type: none"> <li>• Non-market mechanism, therefore no guarantee that licences go to parties who exhibit the highest willingness to pay (and therefore resources are not allocated efficiently)</li> <li>• Could create long waiting lists of unsuccessful applicants</li> <li>• Has the potential to create unemployment if skilled taxi drivers are unsuccessful in the ballot</li> </ul>

Source: PwC analysis of publicly available information and case studies presented in this chapter.

## **5.2 Annual licence release method for the 2012/13 determination**

### **Issues raised by stakeholders**

Two issues were raised by stakeholders in regards to the method of release for annual licences. One stakeholder submission (ATDA) suggested a radical change to releasing taxi licences, and another (NSW TDA) argued against the requirement for online submission of the tender application.

#### *Suggested new method for licence release*

The ATDA proposes in its written submission that there be no limit on the number of annual taxi licences released in Sydney to taxi drivers of more than four years active participation in the industry. Conditions to be imposed on the licences include that the registered taxi can only be driven by the registered licensee, their registered operator or by an employee of the licensee or operator. The fee for each licence is to be set at \$1,000 per year.

The ATDA argues that this release and pricing method will have a large impact on the value of ordinary plates, and remove a major cost item (lease fees) from the operations of taxi services and impacts on fares. It will result in drivers obtaining a reasonable income, and re-introduce the professional driver / operator as the mainstay of the industry. Supply and demand would determine the final number of taxis in the Sydney taxi fleet.

TfNSW has previously explored options of a 'set fee' approach to the release of taxi licences. A set fee, with continuation of the existing policy of unlimited licence supply was considered in the original licensing proposal put to Parliament in November 2009. However, this model was amended to a preferred industry model of limited licence supply and market pricing by tender or auction. It is not appropriate for TfNSW to regulate both supply and price of licences.

#### *Requirement for online submission*

The NSW TDA claimed in its written submission that the requirement for tender applications to be submitted online excluded a large proportion of taxi drivers who are not computer literate, from participating in the application process. However, the evidence from past tender processes offers a counter to this claim. The number of non-conforming applications in the 2010/11 annual release (undertaken through e-tender) was significantly less than the number in the 2010 interim release (which used a paper based sealed tender process). When e-tender was used for the second time in 2011/12, no non-conforming applications were received by TfNSW. To maintain consistency in method, PwC recommends the continued use of the e-tender process for any annual taxi licences released in 2012/13. This will allow participants to become increasingly familiar and comfortable with the procedures involved.<sup>40</sup>

## **5.3 Potential methods to determine annual licence fees**

As part of the 2012/13 annual licence release, Transport for NSW is seeking advice on a preferred method or methods of determining annual taxi licence fees. Section 32JA(1) of the PTA states that the annual fee for an annual licence (other than a WAT licence) must be determined by inviting applicants for the licence to bid for it via public auction or sealed tender.

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<sup>40</sup> *Submission to the Review of 2011/12 annual taxi licence release for Sydney*, NSW Taxi Council, February 2011

However, S32JA(2) states that TfNSW, in circumstances that may be specified in regulation, may determine a licence fee for any such annual licence without complying with subsection (1). Thus, it is not mandatory for fees to be set by auction or a tender process, if TfNSW determines otherwise.

Table 17 outlines potential licence fee methods for various release approaches:

Table 17 Potential methods to determine annual licence fees

Release approach	Pricing approach
Sealed tender	<ul style="list-style-type: none"> <li>Lowest successful bid (as used in Victoria)</li> <li>Pay-as-bid pricing model, with (compliant) bids selected from highest to lowest price bid (as used in NSW)</li> </ul>
Auction	<ul style="list-style-type: none"> <li>Revealed price</li> </ul>
Ballot	<ul style="list-style-type: none"> <li>Price set by Transport for NSW (as used in ACT, NT, and San Francisco)</li> </ul>

Source: PwC analysis of publicly available information and case studies presented in this chapter.

## Release and pricing approaches in other jurisdictions

A survey of available literature, analysis of legislation, and interviews conducted with taxi licence divisions from different Australian jurisdictions, revealed two approaches for the release of non-transferable taxi licences. The first, as applied in Victoria, is undertaken via a sealed tender with the price determined through the tender process. The second approach, as employed in the Northern Territory and Australian Capital Territory (ACT) is undertaken via ballot with a set pricing method used. There was no evidence available from other Australian jurisdictions on the use of auction and revealed price methods for release of taxi licences. The aforementioned taxi licence release models and their pricing methods are further discussed below.

## Case Study: Licence release and pricing process in Victoria

In December 2009 the Victorian Government announced the initial release of up to 530 Fixed-Term conventional and wheelchair accessible taxi (WAT) licences in Greater Melbourne. Licences for release were transferrable but not assignable, and valid for a fixed term of 10 years from the date of the licence grant. On expiry, the fixed-term licences cease to operate and cease to be valid. The conventional and WAT licences are divided into: Metropolitan Taxi-Cab Zone and Outer-Suburban Taxi-Cab Zone.

### Objective of taxi release process

The objective of the taxi licence release process was to increase the Greater Melbourne taxi fleet and to increase the proportion of WATs in the fleet. These objectives were articulated in the recommendations of the Essential Services Commission's 2008 investigation into taxi fares. Furthermore, the rationale was to reward career taxi drivers and provide more timely and efficient taxi services for users, especially people with special needs.

### Description of release process

200 conventional licences and 330 WAT licences were to be released in Melbourne between September 2010 and September 2011. The licences were released through a sealed tender process, with applicants being invited to lodge bids, and stipulate the number and type of licences sought.

### Information provided to applicants

The new regulatory structure and release process was overseen by the Victorian Taxi Directorate under an Order of the Minister. The Victorian Taxi Directorate issued an Application Information Booklet to interested applicants that contained information about the application process, timelines, and criteria, as well as background information about the taxi-cab industry and regulatory environment.

### Application process and eligibility criteria

Stage 1 of the licencing process constituted submission of an application form. 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. The objective of this process was to verify that the applicant satisfied a series of business and service standards (including fair dealing, record keeping, safety and fair dealings).

### Pricing method

Stage 2 of the licencing process entailed establishing the licence fee. The pricing method, formulated by the Victorian Department of Transport, allocated licences on a competitive basis through inviting applicants to lodge bids. For conventional licences applicants were required to specify, as their bid amount, the maximum they were willing to pay in advance as to the total licence fee (for the full 10 year period of the licence's operation). For WAT licences, applicants were required to specify as the bid amount the maximum they were willing to pay for the licence for the first year only (WAT licence fees were payable in 10 annual instalments with each instalment indexed in accordance with inflation). In both categories, all compliant bids were pooled and ranked from highest to lowest by bid amount. For conventional licences the 200th highest bid became the single price at which the 200 conventional licences would be sold. The price of a WAT licence was determined by the value of the 330th highest bid – the top 330 bidders were then issued a licence at the same instalment price.

### Results of the tender

The over-subscription to the tender process showed that taxi drivers/owners were receptive to the new licence release method. However, not all licences were released before the statutory deadline of September 2011 (in total 198 conventional and 286 WAT licences were issued). The reason for this was that a number of successful bidders reneged on their bid amount, resulting in second, third and fourth round offers. Additionally, there was some delay with the availability of vehicles for conversion into WATs. From this it may be inferred that some bidders placed bids they were not prepared to follow through with, and adopted a strategy of reneging on their bid if the 'lowest clearing' price determined by the tender was higher than they anticipated.

### Sources:

Victorian Taxi Directorate, Greater Melbourne Taxi Licence Release, Application Information Booklet, 2012.  
Victorian Taxi Directorate, Greater Melbourne Taxi Licence Release – Update, 2012.

## Case Study: Licence release process in the Northern Territory

From 1 January 1999, the NT Government deregulated entry into the taxi-cab industry by buying back all privately owned taxi licences. Taxi licensing in the Northern Territory moved to a system of non-transferrable licences for standard and multipurpose taxis, released through a set-price ballot in October 2004. Following this, subsequent ballots were held in August 2006, November 2007, November 2008, November 2009 and July 2010.

### Objective of release process

The stated objective for this release method was to maintain the ratio of taxi licences to the population. Furthermore the involvement of more owner-operators into the industry was a driving force behind the deregulation.

### Description of release process

Taxi licences for plates in Darwin and Alice Springs are allocated by way of a ballot which is held at least annually and subject to licence availability. Availability in Darwin is determined by monitoring the ratio of licences to the population, with a set target of 1 taxi licence to every 900 people. Due to insufficient population, in Alice Springs the number of taxi licences is set at 36 taxis (this includes both standard and multipurpose). In both jurisdictions, when licences get handed back they are included in the next annual ballot. The ballot is conducted as a random draw where all ballot applications are pre-numbered and application numbers entered into the random draw. Subsequently, licences will be offered in order of the numbers drawn. The ballot is advertised at least 3 weeks in advance and is conducted publicly under the scrutiny of the Taxi Ballot Steering Committee.

### Information provided to applicants

Information packages containing ballot eligibility, entry information and application forms were made available through the Commercial Passenger Vehicles Branch. Those entering the ballot were made aware of the process through general advertising in newsprint media, industry groups and contacts and the Commercial and Passenger vehicles (Department of Transport) website.

### Application process and selection criteria

The licence ballot is open to individuals who:

1. Are Australian citizens or have permanent resident status (as defined by the Department of Immigration and Citizenship).
2. Have current accreditation as a Commercial Passenger Vehicle (CPV) operator or are able to become accredited, in accordance with Part 3 of the Commercial Passenger Road Transport Act, to operate Commercial Passenger Vehicles in the Northern Territory of Australia prior to the issue of a licence.

### Pricing method

The current fee for a Standard taxi licence in Darwin is \$18,400 per annum and in Alice Springs is \$14,950 per annum. The price of Multipurpose licences is half that of the standard licences, at \$9,200 in Darwin and \$17,475 in Alice Springs. If owner-operators choose to extend the duration of their licence after the initial 10 months then they are able to extend it pro rata at either 3, 6, 9 or 12 month periods.

The fee for a taxi licence was originally established in the late 1990s after the Government buy back of privately owned licences. At the time, stakeholder engagement was undertaken, and industry costs taken into account. The three main factors considered

### Industry feedback

Industry feedback after each ballot is collated and reviewed for consideration in the next ballot process. Recently, further to the standard and multipurpose (unrestricted) non-transferrable licences, a pilot program was rolled out for Peak-Period licences in July 2010. However, this program has been put on hold and the Department advises that future ballots will return to Standard and Multipurpose licences only.

### Sources:

Northern Territory Transport Group, Commercial Passenger Vehicles, accessed Feb 2012, <http://www.transport.nt.gov.au/taxi/>  
Northern Territory Transport Group, Information for intending applicants, accessed Feb 2012, <http://www.transport.nt.gov.au/transport/taxi/pdf/ballot/10/infopack.pdf>

## Case Study: Licence release process in the Australian Capital Territory

Prior to the implementation of a ballot system, the Australian Capital Territory (ACT) had 218 perpetually owned licences in operation. In August 2006 the ACT moved towards a ballot system for the release of new non-transferrable Conventional and WAT licences. Subsequent ballots were conducted in May 2007, May 2008, October 2008 and April 2011.

### Objective of release process

The objective of instituting a ballot release process for taxi licences was to provide greater equity for prospective owner-operators of taxis. Territory and Municipal Services, the taxi licensing body at the time, sought to provide access to all sectors of the community to be able to operate a taxi licence.

### Description of release process

The ACT government released 41 non-transferable conventional taxi licences by ballot on 13th April 2011. These 41 licences consisted of 25 new licence plates and 16 plates that had been handed back to the Registration Office of the Justice and Community Safety Directorate. When plates are returned to the Registration Office, they are held and released at the next ballot.

The ballots are not conducted at regular intervals but on recommendation by the Minister. In determining the number of licences that are to be determined, the Minister engages in both demand estimates and a process of stakeholder consultation with bodies such as the Canberra Business Council. The ballot itself is publically conducted and takes place in the function room of the Justice and Community Safety Directorate.

### Information provided to applicants

Information about the ballots is provided to applicants in the Canberra Times Newspaper (information was provided through the public notes section for the 2 weeks prior to the ballot). The Directorate also issues notice of the ballot and application process to taxi networks operating in the ACT. Additionally, legislation pertaining to taxi licence ballots and the application process is available on the Territory and Municipal Services website.

### Application process and selection criteria

The application process involves submitting an application to enter the ballot to the Road Transport Authority of the Department of Territory and Municipal Services, completing the process of becoming accredited to operate a taxi service, and obtaining and fitting out a vehicle in accordance with the vehicle standards for taxis under the Road Transport (Vehicle Registration) Regulation 2000.

### Pricing method

The prices for the licence were set slightly lower than the approximate annual cost of leasing a perpetual taxi licence from a plate owner. This was based on the best information that the Department was able to obtain at the time. Currently the non-transferrable leased taxi licences are leased from the Government for \$20,000 per annum for a period of 6 years. Owner-operators who return their non-transferrable licences to the Registration Office are given a pro rata refund of their \$5,000 per quarter licence fee.

### Results of ballot

As the first round of licences released (in 2006) are soon due to expire, the Directorate recently legislated the decision to extend the period of those licences for an indefinite amount of time.

### Sources:

Australian Capital Territory Department of Territory and Municipal Services, Defined Rights for Non-Transferrable Leased Taxi Licences, accessed Feb 2012,

[http://www.tams.act.gov.au/data/assets/pdf\\_file/0005/118778/Defined\\_rights\\_conditions\\_April\\_2011\\_ballot.pdf](http://www.tams.act.gov.au/data/assets/pdf_file/0005/118778/Defined_rights_conditions_April_2011_ballot.pdf)

Australian Capital Territory Department of Territory and Municipal Services, Road Transport (Public Passenger Services) Regulation 2002, accessed Feb 2012,

<http://www.legislation.act.gov.au/sl/2002-3/current/pdf/2002-3.pdf>

Australian Capital Territory Department of Territory and Municipal Services, Taxi Licence Ballot, accessed Feb 2012,

[http://www.tams.act.gov.au/move/public\\_transport/taxi\\_services\\_and\\_information/taxi\\_licence\\_ballot2](http://www.tams.act.gov.au/move/public_transport/taxi_services_and_information/taxi_licence_ballot2)



## Case Study: Commonwealth allocation of radio spectrum

Radio spectrum in Australia is a limited supply sovereign asset which is administered by the Australian Communications and Media Authority (ACMA), an independent Statutory Authority within the Commonwealth Government's Communications portfolio. Supply of particular types of spectrum is generally allocated through an application process and an over the counter annual fee is charged. However, if demand is expected to greatly exceed the supply of spectrum, then the spectrum licence (which lasts for a period of 15 years) is auctioned. The auction is for a particular band in a discrete parcel known as a spectrum lot (defined by geographic area and frequency bandwidth).

Two methods of auction have been used to date, the Open-Cry (English) Auction and the Simultaneous Multiple-Round Ascending Auction (SMRA auction). SMRA Auctions were first used by ACMA in 1995 and last used in 2007. They were used at times of high demand, due to the fact that they avoid the 'Winners Curse' – the case in which the winning bid exceeds the market value of the auctioned asset – a feature often seen in conventional Open-Cry auctions.

The SMRA format auction for spectrum lots is conducted when there are multiple spectrum lots to be allocated together. In this format, which is conducted online during 'bidding window' timeframes, all lots are simultaneously on offer over multiple rounds of bidding. At the end of each round high bids are disclosed and all bidders can bid in the next round to become the highest bidder. The benefit of this system is that bidders can gather information pertaining to the value of individual lots and can consequently change their bidding strategy by shifting the bidding to another (lot) combination if one becomes too expensive.

The SMRA auction process could potentially be applied to releasing annual taxi licences in Sydney. It could provide the benefits of no 'winner's curse', and a transparent price discovery process – that is, a sizeable collection of buyers, a liquid bidding and settlement process, and available information for buyers that is timely, relevant, and reliable. However, this case study of the radio spectrum market provides limited further assistance for the annual taxi licence release process, due to the differences between the buyers involved and the goods on offer. Buyers in the radio spectrum market are generally corporations or high net worth individuals both in Australia and internationally. Spectrum lots are unique and so the auction process is conducted for a collection of heterogeneous products concurrently. Due to these complexities, it is difficult to ascertain whether this auction method would be appropriate for the release of annual taxi licences in Sydney. A potential disadvantage of applying this process is that it may cause confusion for buyers.

## Key advantages and disadvantages of pricing approaches

Key advantages and disadvantages of the pricing approaches outlined above are presented in Table 18.

Table 18 Comparison of annual licence fee setting methods

Approach	Advantage	Disadvantage
Pay-as-bid, with bids selected from highest to lowest bid price (current model)	<ul style="list-style-type: none"> <li>Bidders nominate their own willingness to pay</li> <li>Less chance of higher bids as a result of competition as in revealed price case</li> <li>Reflects market price</li> </ul>	<ul style="list-style-type: none"> <li>May result in what is seen as an inequitable outcome, as each bidder pays a different price for the same item</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>
Lowest successful bid (as per Victorian model described above)	<ul style="list-style-type: none"> <li>Can be seen as more equitable than pay-as-bid as all successful bidders pay the same price for an identical item</li> <li>Could reduce attrition rate of licences</li> <li>Reflects market price</li> <li>Lower probability that industry will pay too much</li> </ul>	<ul style="list-style-type: none"> <li>Lack of price visibility and inability to review or change bid</li> <li>High variability in bid prices that may not reflect true market price</li> <li>Could lead to market distortion from applicants bidding more than prepared to pay, to be successful</li> </ul>
Revealed auction price (not aware of existing case studies)	<ul style="list-style-type: none"> <li>Instantaneous prices revealed to all attending</li> <li>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>Bid price may be affected by the ability to see other bids</li> <li>Revealed prices may lead to bidders competing, potentially resulting in higher bids</li> </ul>
Set price (as used in ACT and NT)	<ul style="list-style-type: none"> <li>Price is known upfront before applicants decide whether or not to enter ballot</li> </ul>	<ul style="list-style-type: none"> <li>Non-market mechanism, therefore no guarantee that licences go to parties who exhibit the highest willingness to pay</li> <li>Less certainty for applicant of a successful application</li> </ul>

## 5.4 Method for determining annual licence fees for the 2012/13 determination

### Issues raised by stakeholders

There were two key issues raised by stakeholders in regards to the method for determining annual licence fees for the 2012/13 determination. These can be summarised by the following headings:

#### *Ideal preference to use revealed auction pricing method*

The preferred position of a number of stakeholders in attendance at the forum (Representative of multiple networks, Premier Radio Cabs) was for the use of a revealed price auction method. One suggestion was to use an online method of auction with 'bidding windows' as used for the allocation of radio spectrum by the Commonwealth (refer to case study presented in section 5.3). This method allows all bidders to see what their competitors are bidding, and provides more timely information to the market.

While there was considerable support for this pricing method, it was also acknowledged by stakeholders that there was benefit in continuing with the current approach, in order to maintain consistency with past releases, and therefore allow participants to become increasingly familiar with the process.

#### *Concern about the 'lowest successful bid price'*

The NSW TC raised concerns about using the Victorian ‘lowest successful bid’ method to determine licence prices. The argument presented was that this approach may attract unrealistic bids as people aim to get onto the list of successful bidders. This will lead to gaming activity where bidders offer more than they are willing to pay in order to be offered a licence, whilst they assume the final price they have to pay will be lower. There is little risk to applicants in adopting this strategy if they are able to renege on their bids in the event of failure. For this reason, the NSW TC supports continuation of the pay-as-bid approach.

PwC understands that this phenomenon may have occurred in a small number of cases in Victoria. Problems with this approach have the potential to result in complaints and possibly legal action from bidders who miss out on obtaining a licence. In making a decision on the best method for determining annual licence fees, this potential downside should be considered against the benefits that may be provided by the Victorian method (such as lower overall licence prices – as evidenced through the analysis presented below).

Potential benefits of the Victorian approach are that a single tender price may be simpler to communicate and administer, and aid in transparency for industry.

### Other issues considered by PwC in the 2012/13 review

Analysis was undertaken to compare the current NSW pricing approach (pay-as-bid) with the Victorian pricing model (price = lowest successful bid). The comparison was undertaken for each numbered licence tender. The complete analysis is presented in Appendix C. Table 19 displays a comparison of highest prices paid in NSW for the licences released in 2011/12, with the price that would have been paid under the Victorian pricing method. Table 20 displays a similar comparison for median prices.

Table 19 Comparison of highest prices paid in 2011/12 using NSW and Victorian pricing methods

Licence Category	2011/12 Unrestricted All bidders	2011/12 Unrestricted Driver only	2011/12 PAL All bidders	2011/12 PAL Driver only	2011/12 FAL
NSW pricing method	\$37,100	\$36,452	\$27,971	\$28,756	\$28,655
Vic pricing method	\$32,999	\$28,800	\$26,000	\$20,800	\$27,000
<b>Difference</b>	<b>\$4,101</b>	<b>\$7,652</b>	<b>\$1,971</b>	<b>\$7,956</b>	<b>\$1,655</b>

Table 20 Comparison of median prices paid in 2011/12 using NSW and Victorian pricing methods

Licence Category	2011/12 Unrestricted All bidders	2011/12 Unrestricted Driver only	2011/12 PAL All bidders	2011/12 PAL Driver only	2011/12 FAL
NSW pricing method	\$34,865	\$32,526	\$26,780	\$23,752	\$28,654
Vic pricing method	\$32,999	\$28,800	\$26,000	\$20,800	\$27,000
<b>Difference</b>	<b>\$1,866</b>	<b>\$3,726</b>	<b>\$780</b>	<b>\$2,952</b>	<b>\$1,654</b>

Table 19 and Table 20 demonstrate that the process used by Victoria in 2009 to release fixed term conventional and wheelchair accessible taxi licences may encourage slightly lower licence prices, as the licence price assigned to all licences is determined by the lowest successful bid. It is important to note that in all licence categories (excluding FALs, for which the number of licences released is not large enough for meaningful comparison) the difference in the highest prices paid is significantly greater than the difference in the median prices paid between states. It also must be noted that this analysis employs the high level assumption that the Victorian pricing approach would result in the same spread of bids as the current NSW approach. There is no guarantee that this would be the outcome if the Victorian pricing approach was implemented in NSW.

## **5.5 Recommendations**

12. TfNSW could retain the 2011/12 release's sealed bid, e-tender process, as stakeholder views suggest there are no significant issues to justify a change. Alternatively, TfNSW could opt to switch to the Victorian lowest successful bid pricing model, reflecting that benefits would be obtained in line with the form of lower prices for bidders overall.

# Appendix A Stakeholder Consultation

Consultation process	Stakeholder
<b>Issues Paper</b>	Publicly released on Transport for NSW website
<b>Stakeholder forum</b>	<p><b>Attendees:</b></p> <p><u>Taxi Industry</u></p> <p>Michael Jools, Australian Taxi Drivers Association  Peter Ramshaw, NSW Taxi Council  Stephen Butt, NSW Taxi Council  Trevor Bradley, NSW Taxi Drivers Association  Ernie Mollenhauer, NSW Taxi Drivers Association  Todd Pinkerton, Transport Workers Union  Dylan Parker, Transport Workers Union</p> <p><u>Taxi Network Representatives</u></p> <p>Wissal Swar, Legion Cabs  Maroun Ajaka, Legion Cabs  Doug Edmonds, Manly Warringah Cabs  Bob Hansor, Manly Warringah Cabs  Peter Hyer, Premier Radio Cabs  Rhonda Chesterton, Premier Radio Cabs  Geoff Wong, RSL Ex-Servicemen's Cabs  Fred Lukabyo, South Western Cabs / Taxis Combined Services / Yellow Cabs of Sydney / Silver Service / Mact Network  Darrel Briggs, St George Cabs</p> <p><u>Customer and Community</u></p> <p>Cain Beckett, Disability Council of NSW  Adam Bannon, Disability Council of NSW  Aldina Aljukic, NSW Business Chamber  Ruth Robinson, Physical Disability Council of NSW  Terry Lee-Williams, City of Sydney  Don Morrison, Action for Public Transport  Paul Trevaskis, NSW Commuter Council  Eddie Ellis, NSW Commuter Council</p> <p><b>Unable to attend:</b></p> <p>Destination NSW  Better Regulation Office  Sydney Airport Corporation  Tourism and Transport Forum  Council on the Ageing</p>
<b>Parties who made submissions</b>	<p>Dr Peter Abelson, University of Sydney  Council of Social Service of NSW (NCOSS)  Australian Taxi Drivers Association (ATDA)  NSW Taxi Council (NSW TC)  Manly Council  NSW Taxi Drivers Association (NSW TDA)  Physical Disability Council of NSW (PCDN)  Edward Ellis – Individual (owner and lessee of taxi plate in Newcastle area)  John Fan – Individual (taxi driver)  John Lewis – Individual (submission via online submission form)  Erin O'Brien – Individual (submission via online submission form)  Action for Public Transport</p>

# Appendix B 2012/13 Sydney Taxi Growth Model

Component	Weighting	Measurement period	Forecast Change 2012 to 2013	% Change 2010 to 2011	Correlation	Contribution to growth 2012/13
State final demand		FY	3.25%		1.0	0.650%
Sydney population size		FY	1.17%		1.0	0.117%
Sydney Airport passenger numbers		FY		4.34%	1.0	0.434%
Total network bookings		CY		-8.57%	1.0	-0.857%
Value of licences		CY		4.59%	1.0	0.459%
Plate lease costs		Apr-Mar		1.66%	1.0	0.166%
Annual average pick up time (mins)		CY		-2.42%	1.0	-0.242%
Percentage of pickups within 15 mins		CY		-2.69%	-1.0	0.269%
Percentage of 'no cars available'		CY		-32.32%	1.0	-3.232%
<b>Unadjusted taxi fleet growth</b>						<b>-2.236%</b>
<b>Unadjusted number of new annual taxi licences</b>						<b>-126.5</b>
<b>Adjustments</b>						
(1) Number of WATs released (representing portion of standard jobs)		CY			-1.0	-17.6
(2) Attrition of licences		CY			1.0	55
<b>Total taxi fleet growth</b>						<b>-1.574%</b>
<b>Total number of new annual taxi licences</b>						<b>-89</b>
<b>Replacement licences to release</b>						
Peak Availability Licences					1.0	0
Unrestricted Licences					1.0	0
Fringe Area Licences					1.0	2
<b>Total replacement licences</b>						<b>2</b>

# Appendix C Comparison of prices using Victorian & NSW pricing methods

Comparison of prices by licence release using Victorian an NSW pricing methods														
Licence release information														
Release stage	Interim release	2010/11 - stage 1	2010/11 - stage 1	2010/11 - stage 1	2010/11 - stage 1	2010/11 - stage 2	2010/11 - stage 2	2010/11 - stage 2	2010/11 - stage 2	2011/12	2011/12	2011/12	2011/12	2011/12
Licence Class	Unrestricted	Unrestricted	Unrestricted	Peak Availability	Fringe Area	Unrestricted	Peak Availability	Fringe Area	Unrestricted	Unrestricted	Peak Availability	Peak Availability	Fringe Area	
Available to	All bidders	All bidders	Driver Only	All bidders	Helensburgh	All bidders	All bidders	Richmond / Windsor	All bidders	Driver Only	All bidders	Driver Only	Richmond / Windsor	
Number in release	100	96	90	61	3	33	29	4	60	66	25	22	4	
Prices paid in NSW														
Highest	\$40,000	\$39,000	\$36,972	\$28,028	\$2,002	\$40,300	\$29,500	\$20,020	\$37,100	\$36,452	\$27,971	\$28,756	\$28,655	
Median	\$31,616	\$34,554	\$33,393	\$25,800	\$2,002	\$35,500	\$27,380	\$20,020	\$34,865	\$32,526	\$26,780	\$23,752	\$28,654	
Lowest	\$30,476	\$33,852	\$32,240	\$25,210	\$2,002	\$34,840	\$26,633	\$20,020	\$32,999	\$28,800	\$26,000	\$20,800	\$27,000	
Price that would have been paid in NSW if Victorian pricing method was used (highest = median = lowest)														
Victorian	\$30,476	\$33,852	\$32,240	\$25,210	\$2,002	\$34,840	\$26,633	\$20,020	\$32,999	\$28,800	\$26,000	\$20,800	\$27,000	
Difference in price														
Highest <sup>41</sup>	\$9,524	\$5,148	\$4,732	\$2,818	\$0	\$5,460	\$2,867	\$0	\$4,101	\$7,652	\$1,971	\$7,956	\$1,655	
Median <sup>42</sup>	\$1,140	\$702	\$1,153	\$590	\$0	\$660	\$747	\$0	\$1,866	\$3,726	\$780	\$2,952	\$1,654	
Lowest	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	

<sup>41</sup> Note: this indicates the potential cost savings for a small number of high bidders in NSW if the Victorian pricing model was used.

<sup>42</sup> Note: this indicates the price differential between median prices in NSW and Victoria – i.e. the cost savings for the median NSW bidder if the Victorian pricing model was used.



