



Independent Pricing and Regulatory Tribunal

# **Review of maximum fares for private ferry services in 2017**

**Transport — Final Report**  
November 2016





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# 1 Executive summary

The Independent Pricing and Regulatory Tribunal of New South Wales (IPART) is currently reviewing the maximum fares for seven private ferry operators that provide regular passenger ferry services under contract to Transport for NSW (TfNSW) in the Sydney, Central Coast and North Coast areas of NSW.

IPART makes recommendations on maximum fares to TfNSW. The Secretary of TfNSW is responsible for deciding on these fares.

This report explains our final recommendations for maximum fares in 2017 and the approach we took to make these recommendations.

## 1.1 Overview of our final recommendations

Under our final recommendations, maximum fares for private ferry services would change as follows from January 2017 (or when determined by TfNSW):

- ▼ Brooklyn Ferries fares **increase** by 30 cents (to \$7.30)
- ▼ Church Point Ferry Service fares **increase** by 30 cents (to \$8.30)
- ▼ Clarence River Ferries fares **increase** by 30 cents (to \$8.30)
- ▼ Palm Beach Ferry Service fares **increase** by 30 cents (to \$8.10 and \$11.60 for the Basin and Ettalong services, respectively), and
- ▼ Matilda Cruises, Central Coast Ferries and the Cronulla and National Park Ferry Service fares **do not change** from 2016 levels (see Table 1.1).

As discussed in Section 1.3, our final recommendations are the same as the draft recommendations we released in October 2016.

We consider that maximum fares should be at an efficient level; where passengers pay for the efficient costs of providing ferry services. For Brooklyn, Church Point, Clarence River and Palm Beach services, maximum fares need to increase in 2017 to move towards an efficient level.

As Central Coast Ferries and Matilda Cruises are currently charging less than the maximum fare, we are not recommending increasing the maximum fare in 2017. This is discussed further in Section 1.2. Under our final recommendation, the

maximum fare for the Cronulla and National Park Ferry Service does not change in 2017 as this is above our estimate of the efficient fare.

**Table 1.1 Final recommendations on maximum fares for private ferry services from January 2017 (incl. GST)**

Operator	Maximum fare in 2016 (\$2016)	Fare charged by operators in 2016 (\$2016)	Final recommended maximum fare in 2017 (\$2017)	Change in maximum fare
Brooklyn Ferry Service	\$7.00	\$7.00	\$7.30	\$0.30
Central Coast Ferries	\$7.80	\$7.50	\$7.80	-
Church Point Ferry Service	\$8.00	\$8.00	\$8.30	\$0.30
Clarence River Ferries	\$8.00	\$8.00	\$8.30	\$0.30
Cronulla and National Park Ferry Service	\$6.40	\$6.40	\$6.40	-
Matilda Cruises (Circular Quay to Darling Harbour)	\$7.40	\$7.00	\$7.40	-
Matilda Cruises (Circular Quay to Lane Cove)	\$7.40	\$7.00	\$7.40	-
Palm Beach Ferry Service (Palm Beach to the Basin)	\$7.80	\$7.80	\$8.10	\$0.30
Palm Beach Ferry Service (Palm Beach to Ettalong)	\$11.30	\$11.30	\$11.60	\$0.30

**Note:** TfNSW may decide to change fares before January 2017.

It is important to note that we only recommend the maximum fare. Ferry operators can choose to set their fare below the maximum fare, and may do so to compete with other forms of transport. In our view, ferry operators are in the best position to decide whether to set their fares below the maximum.

## 1.2 How we made our final recommendations

To make our final recommendations, we considered the current (2016) maximum fare for each ferry operator and how much, if any, this needs to change to be at a more efficient level in 2017.

We used the following framework to recommend maximum fares in 2017:

- ▼ For ferry operators currently charging fares **less than** the 2016 maximum fare, we considered whether there is a need to change the maximum fare in 2017 and whether the maximum fare needs to be regulated.
- ▼ For ferry operators currently charging the 2016 maximum fare:
  - if the 2016 maximum fare is **the same as or higher than** the 2017 efficient fare, we recommended making **no change** to the 2016 maximum fare
  - if the 2016 maximum fare is **below** the 2017 efficient fare, we recommended **increasing** the 2016 maximum fare to the lesser of:



- the 2017 efficient fare from the building block model, or
- the 2016 maximum fare plus 30 cents.

More information about our framework to make our final fare recommendations is provided below.

### 1.2.1 Recommendations for private ferries charging below maximum fares

Ferry operators face varying degrees of competition from other transport options. In some cases, this competition is limiting the price that ferry operators can charge their customers. In our view, competition provides the best form of protection for customers, including protection from higher than efficient prices.

We found that currently two ferry operators (Matilda Cruises and Central Coast Ferries) are charging fares below their 2016 maximum fares:

- ▼ Matilda Cruises (Circular Quay to Darling Harbour) is charging \$7.00 and the 2016 maximum fare is \$7.40.
- ▼ Matilda Cruises (Circular Quay to Lane Cove) is charging \$7.00 and the 2016 maximum fare is \$7.40.
- ▼ Central Coast Ferries is charging \$7.50 and the 2016 maximum fare is \$7.80.

Fares for Matilda Cruises and Central Coast Ferries services are being determined by the competitive market. In our view, market-determined fares are likely to be a better estimate of an efficient fare compared to our estimates. As the current fares are below the maximum fares in 2016, we are recommending no change to the maximum fares in 2017. Nevertheless, Matilda Cruises and Central Cost Ferries still have the ability to increase their fares in 2017 as their current fares are 30 to 40 cents below their maximum fares.

We are of the view that price regulation is not necessary for the Matilda Cruises and Central Coast services covered by this review. In general, price regulation is only required in a monopoly market, where lack of competition can lead to higher prices and poorer service outcomes relative to a competitive market. However, competition is delivering Matilda Cruises and Central Coast passengers benefits beyond those that can be achieved through fare regulation.

### 1.2.2 Recommendations for private ferries currently charging maximum fares

For private ferries currently charging the maximum fares, we considered whether the maximum fare should be changed in 2017. To do so, we updated our building block models from last year's review to estimate efficient fares in 2017, and compared these with the 2016 maximum fares. The inputs we updated in the building block models include patronage, government payments made to ferry operators and the weighted average cost of capital (WACC). This is discussed further in Chapter 3. In addition, we considered external benefits provided by private ferry services and found that these do not exceed the financial viability payments that some ferry operators are receiving from the NSW Government. Therefore, we have not recommended making any changes to our approach for determining efficient fares on the basis of external benefits.

We found that Cronulla Ferry Service's current maximum fare is higher than the 2017 efficient fare, and therefore our final recommendation is to leave the 2016 maximum fare unchanged at \$6.40 in 2017. This would be the third year that this fare has been frozen in nominal terms.

For the remaining private ferry operators, we found that their current maximum fares are below the 2017 efficient fares and hence we are recommending increasing the maximum fare of the ferry services to the lesser of:

- ▼ the 2017 efficient fare from the building block model, or
- ▼ the 2016 maximum fare plus 30 cents.

We consider that an increase of 30 cents provides a reasonable balance between the impacts on ferry operators and passengers. This is similar to fare increases in previous years.

We are not able to provide details of our calculations of efficient fares as our analysis relies on confidential information provided by the ferry operators. Nevertheless, we have conducted thorough analysis of this information in making our recommendations. This is discussed further in Chapter 3.

### 1.2.3 Extending Opal to private ferries

Some ferry operators have called for the extension of the Opal system to all private ferries. The decision to include private ferries under the Opal system is a matter for the NSW Government.

## 1.3 Changes since our Draft Report

In October 2016 we released our Draft Report and invited stakeholder comment on our draft recommendations for maximum fares in 2017. We did not receive any stakeholder submissions to our draft recommendations.

Since releasing our Draft Report we have updated our analysis of efficient fares. However these updates have not changed our final fare recommendations under our decision making framework outlined above. We discuss these updates further in Chapter 3 and Appendix D.

## 1.4 Approach to future reviews

Our building block models for ferry operators include forecasts of efficient operating and capital costs extending until 2017. These forecasts are based on advice from Indec Consulting. For our review next year, we will need to commission updated advice on efficient costs.

We consider that, in line with other industries where we regulate using a building block approach, in future reviews we could recommend a price path for maximum fares over a number of years rather than just a single year. This would provide ferry operators and passengers with more certainty over future fare changes.

The regulatory framework under such an approach may also include a mechanism to revise fares, either up or down, if there are substantial unforeseen changes. We would consult with stakeholders on the types of changes that may warrant a revision to fares, as well as on other issues relevant to the regulatory framework.

## 1.5 List of final recommendations and findings

### Final recommendations

- 1 That maximum fares for private ferry services would change as follows from January 2017 (or when determined by TfNSW):
  - Brooklyn Ferries fares **increase** by 30 cents (to \$7.30)
  - Church Point Ferry Service fares **increase** by 30 cents (to \$8.30)
  - Clarence River Ferries fares **increase** by 30 cents (to \$8.30)
  - Palm Beach Ferry Service fares **increase** by 30 cents (to \$8.10 and \$11.60 for the Basin and Ettalong services, respectively), and
  - Matilda Cruises, Central Coast Ferries and the Cronulla and National Park Ferry Service fares **do not change** (\$7.40, \$7.80 and \$6.40 respectively). 9
  
- 2 That Matilda Cruises' two ferry services and the Central Coast Ferry service should not be subject to price regulation, as these services are provided in a competitive market and the market-determined fares are below IPART's recommended maximum fare. 9

## Final finding

- 1 That the external benefits from private ferry services do not exceed the financial viability payments that some ferry operators are receiving from the NSW Government. 12

## 1.6 How this report is structured

This report provides more detail on this review and our final recommendations:

- ▼ Chapter 2 explains our role in making recommendations for private ferry fares and our process for conducting this review.
- ▼ Chapter 3 sets out our final recommendations on private ferry fares, explains how we made these recommendations, and summarises how we propose to approach future reviews.
- ▼ Chapter 4 discusses other factors we considered in making our final recommendations, including their impact on stakeholders.
- ▼ Appendices A to F contain our terms of reference and supporting information.

## 2 Our review process

IPART makes **recommendations** to TfNSW on the maximum fares to be charged for regular private ferry services. Our role is limited to providing recommendations;<sup>1</sup> the Secretary of TfNSW will decide the date on which these changes, if accepted, will take effect. Operators may charge less than the recommended maximum fare if they wish.

This review does not include fares for Sydney and Stockton Ferry services. IPART reviews these fares as part of a separate public transport review.<sup>2</sup> Also, we are not reviewing the discount applied to concession tickets or the availability of Opal as these are matters for the NSW Government.

This chapter provides an overview of the factors we have considered in undertaking this review and explains our review process.

### 2.1 Factors we consider in undertaking the review

We review private ferry fares under terms of reference from the Premier (see Appendix A), which specify the factors that we must consider when making recommendations to TfNSW. These factors include:

- ▼ the cost of providing the services concerned and the need for greater efficiency in the supply of services so as to reduce costs for the benefit of customers
- ▼ relativities with Sydney Ferries' services including in terms of service, efficiency, cost and ticketing products
- ▼ the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standards of service
- ▼ the need to maintain ecologically sustainable development
- ▼ the impact on customers of the recommendations
- ▼ standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise and any suggested or actual changes to those standards), and

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<sup>1</sup> Pursuant to section 9 of the *Independent Pricing and Regulatory Tribunal Act 1992* (IPART Act).

<sup>2</sup> [http://www.ipart.nsw.gov.au/Home/Industries/Transport/Reviews/Public\\_Transport\\_Fares/Public\\_Transport\\_Fares\\_in\\_Sydney\\_and\\_Surrounds](http://www.ipart.nsw.gov.au/Home/Industries/Transport/Reviews/Public_Transport_Fares/Public_Transport_Fares_in_Sydney_and_Surrounds).

- ▼ the effect of any pricing recommendation on the level of Government funding provided to private operators under commercial contracts.

We also had regard to the list of factors we are required to consider under section 15 of the IPART Act in making our recommendations for private ferry fares (see Appendix B). The ferry services covered by this review are listed in Table 2.1.

**Table 2.1 Ferry services covered by this review and current fares as at 16 November 2016**

Operator	Routes	Current maximum fare	Current fare charged
Brooklyn Ferry Service	Brooklyn to Dangar Island	\$7.00	\$7.00
Central Coast Ferries	Woy Woy to Empire Bay	\$7.80	\$7.50
Church Point Ferry Service	Scotland Island and western foreshore of Pittwater	\$8.00	\$8.00
Clarence River Ferries	Iluka to Yamba	\$8.00	\$8.00
Cronulla and National Park Ferry Service	Cronulla to Bundeena	\$6.40	\$6.40
Matilda Cruises	Circular Quay to Darling Harbour (fast ferry)	\$7.40	\$7.00
	Circular Quay to Lane Cove (fast ferry)	\$7.40	\$7.00
Palm Beach Ferry Service	Palm Beach to Mackerel Beach and the Basin	\$7.80	\$7.80
	Palm Beach to Ettalong and Wagstaffe (fast ferry)	\$11.30	\$11.30

**Note:** Fares are for adult single trips.

**Source:** IPART, private ferry operator websites.

## 2.2 Our review process and timetable

We commenced this review in August 2016 by contacting the private ferry operators and inviting them to provide any updated cost and patronage information for our consideration. We took this information into consideration in making our draft recommendations. In October we released a Draft Report for consultation with private ferry operators and other stakeholders. We did not receive any submissions on our Draft Report. This Final Report is being provided to TfNSW in November 2016 (Table 2.2).

**Table 2.2 Review timetable**

Milestone	Indicative timing
Release Draft Report and recommendations	11 October 2016
Submissions due on Draft Report	8 November 2016
<b>Final report to TfNSW</b>	<b>November 2016</b>

## 3 Final recommendations on maximum fares

In this chapter we outline our final recommendations on maximum fares in 2017. We explain our approach to estimating efficient fares and how these inform our fare recommendations.

We also outline why we consider that the competitive market is determining efficient fares for the Matilda Cruises and Central Coast services and that on this basis we recommend there is no need to regulate maximum fares for these services. In our view, competition provides the best form of protection for customers, including protection from higher than efficient prices.

### 3.1 Summary of our final recommendations

Final recommendations

- 1 That maximum fares for private ferry services would change as follows from January 2017 (or when determined by TfNSW):
  - Brooklyn Ferries fares **increase** by 30 cents (to \$7.30)
  - Church Point Ferry Service fares **increase** by 30 cents (to \$8.30)
  - Clarence River Ferries fares **increase** by 30 cents (to \$8.30)
  - Palm Beach Ferry Service fares **increase** by 30 cents (to \$8.10 and \$11.60 for the Basin and Ettalong services, respectively), and
  - Matilda Cruises, Central Coast Ferries and the Cronulla and National Park Ferry Service fares **do not change** (\$7.40, \$7.80 and \$6.40 respectively).
- 2 That Matilda Cruises' two ferry services and the Central Coast Ferry service should not be subject to price regulation, as these services are provided in a competitive market and the market-determined fares are below IPART's recommended maximum fare.

Our final recommendations are the same as the draft recommendations we released in October 2016.

We consider that maximum fares should be at an efficient level; where passengers only pay for the efficient costs of providing ferry services. For Brooklyn, Church Point, Clarence River and Palm Beach services, maximum fares need to increase in 2017 to move towards an efficient level.

As Central Coast Ferries and Matilda Cruises are currently charging less than the maximum fares we recommended last year, we are not recommending increasing the maximum fares this year. Under our final recommendation, the maximum fare for the Cronulla and National Park Ferry Service does not change in 2017 as this is above our estimate of the efficient fare.

We are of the view that price regulation is not necessary for the Matilda Cruises and Central Coast services covered by this review. We consider that competition is delivering passengers for these services benefits beyond those that can be achieved through fare regulation.

**Table 3.1 Final recommendations on maximum fares for private ferry services from January 2017 (incl. GST)**

Operator/route	Maximum fare in 2016 (\$2016)	Current fare in 2016 (\$2016)	Final recommended maximum fare in 2017 (\$2017)	Change in maximum fare
Brooklyn Ferry Service	\$7.00	\$7.00	\$7.30	\$0.30 (4.3%)
Central Coast Ferries	\$7.80	\$7.50	\$7.80	-
Church Point Ferry Service	\$8.00	\$8.00	\$8.30	\$0.30 (3.8%)
Clarence River Ferries	\$8.00	\$8.00	\$8.30	\$0.30 (3.8%)
Cronulla and National Park Ferry Service	\$6.40	\$6.40	\$6.40	-
Matilda Cruises (Circular Quay to Darling Harbour)	\$7.40	\$7.00	\$7.40	-
Matilda Cruises (Circular Quay to Lane Cove)	\$7.40	\$7.00	\$7.40	-
Palm Beach Ferry Service (Palm Beach to the Basin)	\$7.80	\$7.80	\$8.10	\$0.30 (3.8%)
Palm Beach Ferry Service (Palm Beach to Ettalong)	\$11.30	\$11.30	\$11.60	\$0.30 (2.7%)

**Note:** TfNSW may decide to change fares before January 2017.

### 3.2 How we made our final recommendations

We took the following steps to make our final fare recommendations:

- ▼ Invited ferry operators (except Matilda Cruises) to provide updated cost and patronage information and considered this in updating our building block models to estimate an efficient fare in 2017 (Section 3.2.1)
- ▼ Applied our decision making framework to make recommendations on fare changes in 2017 (see Section 3.2.2)
- ▼ Confirmed that our recommendations address all the issues we are required to consider for this review (see Chapter 4).



### 3.2.1 Updating the building block models

We use building block models to estimate an efficient fare for ferry operators. An 'efficient fare' is one that will allow the ferry operator to:

- ▼ recover the operating costs of running its business efficiently
- ▼ earn an appropriate return on the capital it has invested in that business (and regulatory depreciation on this capital), and
- ▼ undertake prudent and efficient capital expenditure (for example, to replace an old ferry).

The building block models were developed as part of our 2014 review, and cover three calendar years from 2015 to 2017. More information is provided in Appendix C. We do not have a building block model for Matilda Cruises as we are recommending that its fares do not need to be regulated. This is discussed further below.

#### Updated information from ferry operators

We invited ferry operators to provide us with updated information for our review, including any material changes in their costs. Some operators provided us with information about changes to their operating expenditure (OPEX), capital expenditure (CAPEX) incurred for an engine replacement and proposed CAPEX to replace vessels.

We have considered this updated information but have made a final decision not to make any changes to our building block models. This is because our building blocks already provide for an efficient level of OPEX and CAPEX for each operator. Based on advice from Indec Consulting in our 2014 review, we have already made allowance for OPEX, and CAPEX for vessel replacement, refurbishments and engine replacements in estimating our efficient fares during the 2015-17 period. Indec noted that some ferries were being utilised far beyond the conventional useful economic lives and that CAPEX to replace very old vessels would be prudent and we included these costs in our estimates of efficient fares. Indec's report is available on our website.<sup>3</sup>

Some ferry operators also called for the extension of the Opal system to all private ferries. The decision to include private ferries under the Opal system is a matter for the NSW Government.

<sup>3</sup> <https://www.ipart.nsw.gov.au/Home/Industries/Transport/Reviews/Private-Ferries/Review-of-Fares-for-Private-Ferries-and-the-Stockton-Ferry-for-2015?qDh=2>.

### Updating other inputs in the building block model

We updated some common inputs to the building block models for all ferry operators, including:

- ▼ the market based parameters in the weighted average cost of capital (WACC) – see Appendix D
- ▼ patronage forecasts for 2017, based on the last three years of historical data, and
- ▼ government payments, including viability payments to some ferry operators, and concession and school travel subsidies based on contract arrangements.

More details are provided in Appendix D to F.

### External benefits

One of the decisions we make in determining public transport fares is how much of the total cost should be paid by the passengers through fares and by the NSW community as a whole through the Government subsidy. The main reason governments subsidise public transport services is that having these services benefits the whole community, not only the people who use them (ie, public transport services can provide external benefits).

The main external benefit associated with public transport is avoided road congestion. We did not estimate external benefits for Brooklyn Ferry Service, Church Point Ferry Service and Clarence River ferry service. These ferries provide a service to islands and/or are located in areas where there are unlikely to be external benefits associated with avoided road congestion. There are likely to be some external benefits (mainly avoided road congestion) associated with the Palm Beach (Ettalong), Cronulla and Central Coast Ferry services. We have updated our estimate of the external benefit for these services. Our updated estimate falls within the range that we used last year.

Our final finding is that external benefits are less than the financial viability payments received by Central Coast, Cronulla and Palm Beach Ettalong ferry services. Therefore, we do not consider there are any external benefits, in addition to the current viability payment, that need to be accounted for in our building block model. More information on how we have estimated external benefits is provided in Appendix C.

### IPART final finding

- 1 That the external benefits from private ferry services do not exceed the financial viability payments that some ferry operators are receiving from the NSW Government.

### Estimating efficient fares for 2017

By making the updates to our building block models outlined above, we updated our estimate of efficient fares in 2017. We are not able to provide details of our calculations of efficient fares as our analysis relies on confidential information provided by the ferry operators. Nevertheless, we have conducted thorough analysis of this information in making our recommendations.

As noted in our previous reviews, private ferry operators are commercial businesses with an incentive to be efficient and profitable. They earn revenue from ticket sales and this is at risk from competition by other forms of transport.

#### 3.2.2 Framework to recommend fare changes

We used the following framework to recommend maximum fares in 2017:

- ▼ For ferry operators currently charging fares **less than** the 2016 maximum fare, we considered whether there is a need to change the maximum fare in 2017 and whether the maximum fare needs to be regulated.
- ▼ For ferry operators currently charging the 2016 maximum fare:
  - if the 2016 maximum fare is **the same as or higher than** the 2017 efficient fare, we recommended making **no change** to the 2016 maximum fare
  - if the 2016 maximum fare is **below** the 2017 efficient fare, we recommended **increasing** the 2016 maximum fare to the lesser of:
    - the 2017 efficient fare from the building block model, or
    - the 2016 maximum fare plus 30 cents.

#### 3.2.3 Recommendations for private ferries charging below maximum fares

Ferry operators face varying degrees of competition from other transport options. In some cases, this competition is limiting the price that ferry operators can charge their customers. Competition provides the best form of protection for customers, including protection from higher than efficient prices.

We found that currently two ferry operators (Matilda Cruises and Central Coast Ferries) are charging fares below their 2016 maximum fares:

- ▼ Matilda Cruises (Circular Quay to Darling Harbour) is charging \$7.00 and the 2016 maximum fare is \$7.40.
- ▼ Matilda Cruises (Circular Quay to Lane Cove) is charging \$7.00 and the 2016 maximum fare is \$7.40.
- ▼ Central Coast Ferries is charging \$7.50 and the 2016 maximum fare is \$7.80.

Fares for Matilda Cruises and Central Coast Ferries services are being determined by the competitive market. Market-determined fares are likely to be a better estimate of an efficient fare compared to our estimates. As the current fares are below the maximum fares in 2016, we are recommending no change to the maximum fares in 2017. Nevertheless, Matilda Cruises and Central Cost Ferries still have the ability to increase their fares in 2017 as their current fares are 30 to 40 cents below their maximum fares.

We are of the view that price regulation is not necessary for the Matilda Cruises and Central Coast services covered by this review. In general, price regulation is only required in a monopoly market, where lack of competition can lead to higher prices and poorer service outcomes relative to a competitive market. However, competition is delivering Matilda Cruises and Central Coast passengers benefits beyond those that can be achieved through fare regulation.

#### **3.2.4 Recommendations for private ferries currently charging maximum fares**

Where the ferry operator is currently charging the 2016 maximum fare, we considered whether the maximum fare should be increased in 2017. To do this we compared the 2016 maximum fare with our estimate of the 2017 efficient fare from our building block models.

Where we found a difference between the 2016 maximum fare and the 2017 efficient fare, we took a conservative approach so that fares transition towards the efficient level over an appropriate time. We consider this conservative approach is appropriate, to minimise price shocks for passengers as well as revenue shocks for operators. Unlike the operators of rail, metropolitan and outer metropolitan bus services, Sydney Ferry and the Stockton Ferry, who receive contract payments to provide public transport services, private ferry operators are dependent on fare box revenues.

##### **The 2016 maximum fare is the same or higher than the 2017 efficient fare**

We found that Cronulla Ferry Service's current maximum fare is higher than the 2017 efficient fare, and therefore our Final recommendation is to leave the 2016 maximum fare unchanged at \$6.40 in 2017. This would be the third year that this fare has been frozen. We recommended leaving the maximum fare unchanged, rather than reducing it, due to the impact that reducing fares would have on private ferry operators' revenue. As discussed above, private ferry operators retain fare box revenue.

##### **The 2016 maximum fare is the below the 2017 efficient fare**

For the remaining private ferry operators, we found that their current maximum fares are below the 2017 efficient fares and hence we are recommending increasing the 2016 maximum fare to the lesser of:

- ▼ the 2017 efficient fare from the building block model, or
- ▼ the 2016 maximum fare plus 30 cents.

We consider that an increase of 30 cents provides a reasonable balance between the impacts on ferry operators and passengers. This is similar to fare increases in previous years.

### 3.3 Changes since our Draft Report

We did not receive any submissions from stakeholders on our draft recommendations released in October.

Since releasing our Draft Report we have updated our analysis of efficient fares. In particular, we took account of updated market information which has increased our estimate of the WACC by around 20 basis points (see Appendix D for more details). While this has increased the efficient fare by 10 cents (rounded) for all but one ferry operator where we use a building block model, it has not changed our final fare recommendations under our decision making framework.<sup>4</sup>

### 3.4 Approach to future reviews

As noted above, our building block models for ferry operators include forecasts of efficient OPEX and CAPEX extending until 2017. For our review next year, we will need to commission updated advice on efficient costs.

We consider that, in line with other industries where we regulate using a building block approach, in future reviews we could recommend a price path for maximum fares over a number of years rather than just a single year. This would provide ferry operators and passengers with more certainty over future fare changes.

The regulatory framework under such an approach may also include a mechanism to revise fares, either up or down, if there are substantial unforeseen changes. We would consult with stakeholders on the types of changes that may warrant a revision to fares, as well as on other issues relevant to the regulatory framework.

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<sup>4</sup> For one ferry operator, our updated analysis did not change the efficient fare when rounded to the nearest 10 cents.

## 4 Other factors we considered

We are required by our terms of reference and by section 15 of the IPART Act to consider a range of matters related to the effect of our pricing recommendations and decisions on stakeholders. Our views on the likely implications of our decisions for four key stakeholder groups – private ferry operators, passengers, the environment and Government – are outlined in this section.

We are also required to consider the relativities between private ferry fares and those of government-provided ferry services, and standards of service and patronage. Our analysis of these issues is also provided in this chapter.

### 4.1 Implications for private ferry operators

To make our final recommendations we considered the implications for fare levels and ferry operators' revenues. Where we found a difference between the current and efficient maximum fare, we took a conservative approach, so fares will transition towards the efficient level over an appropriate time.

We took this approach to prevent price shocks for passengers as well as revenue shocks for operators. Unlike the operators of rail, metropolitan and outer metropolitan bus services, Sydney Ferry and Stockton Ferry, who receive contract payments to provide public transport services, private ferry operators are dependent on fare box revenues.

It is important to note that we only recommend the maximum fare. Operators can choose to set their fare below the maximum fare. Ferry operators are in the best position to decide whether to set their fares below the maximum.

### 4.2 Implications for passengers

Passengers of Clarence River, Brooklyn and Church Point and Palm Beach ferries would experience a moderate increase in fares in 2017 under our final recommendations. The recommended increase in maximum fares for these private ferries is 30 cents per trip, which represents a percentage increase between 2.7% and 4.3% (Table 3.1). This compares with the range of 1% and 4.5% increase we recommended last year. We have considered the impact on passengers by gradually transitioning the current maximum fares towards the efficient fares.

For Cronulla Ferry Service, Central Coast Ferries and Matilda Cruises, we consider passengers will have a small positive impact, while receiving the same quality of service. This is because our Final recommendation is to freeze the current maximum fares (in nominal terms) in 2017. For the Cronulla Ferry Service and Matilda Cruises, there has been a freeze in the maximum fare since January 2014, which implies a reduction of 7.1% in real terms (ie, excluding inflation) over the 4-year period (2014 to 2017 inclusive).

### 4.3 Implications for the environment

The impact of the final recommended fares on the environment in terms of pollution and congestion is likely to be negligible, given that private ferry travel accounts for a small proportion of all public transport trips.

### 4.4 Implications for Government funding

Where our final recommendations result in an increase to some maximum fares in 2017, this will affect the government through increased payments for fully subsidised student travel under the SSTS, and half-fare and PET concessions.

Generally, the Government provides operators with:

- ▼ A payment based on the **maximum** child fare for an eligible school student presumed by TfNSW to have travelled under the SSTS. Operators do not record patronage figures for SSTS passengers.
- ▼ A top-up to the full adult fare charged by the operator for concession passengers reported to have travelled by the ferry operator.
- ▼ A payment for passengers who travel with a Gold Opal card, for those operators who previously sold Pensioner Excursion Tickets (PET's).<sup>5</sup>

As these payments are related to the level of fares charged by ferry operators and/or the maximum fare that they can charge, our recommendations will increase the amount of funding required per student or concession passenger trip for four operators only. There should be no impact on funding for the other operators.

### 4.5 Relativities with Sydney Ferries' services

Matilda Cruises is the only private ferry operator that provides comparable services to those provided by Sydney Ferries on the Circular Quay to Darling

<sup>5</sup> PET's are no longer sold or accepted, but those operators who previously sold PETs can accept Gold Opal cards, see <http://www.transportnsw.info/sites/en/tickets/ticket-types/day-passes/pensioner-excursion.page>, accessed 20 September 2016.



Harbour route. There are slight differences in the service route and travel time between the two services, namely:

- ▼ The Sydney Ferries trip uses slow ferries and takes a slightly longer route; from Circular Quay to Darling Harbour is via Milsons Point, McMahon's Point and Balmain East and is scheduled to take 23 minutes.
- ▼ The Matilda service uses fast ferries and travels from Circular Quay to Darling Harbour via Luna Park and the estimated travel time is 20 minutes.

Currently, the Sydney Ferries single Opal adult fare is \$5.74 (fare less than 9 km).<sup>6</sup>

Our Final recommendation is to freeze fares for Matilda Cruises in 2017, so the Final recommended maximum fare for Matilda Cruises remains unchanged from last year at \$7.40. As discussed, Matilda Cruises is charging less than the maximum fare; the current single adult fare is \$7.00.<sup>7</sup> We consider this relativity with Sydney Ferries' fares is appropriate due to the differences between the services.

#### 4.6 Service standards

We collect and publish summary data on patronage and service standards. For this review, we have received data for the 12 months to June 2016 from TfNSW.

Patronage data is manually collected by operators. Figure 4.1 below shows the breakdown of patronage on private ferries according to passenger type. It illustrates the relativities between numbers of adult full fare-paying passenger trips, and subsidised trips (ie, passengers paying concession/half-fares or using PETs and patronage counted under the SSTS).

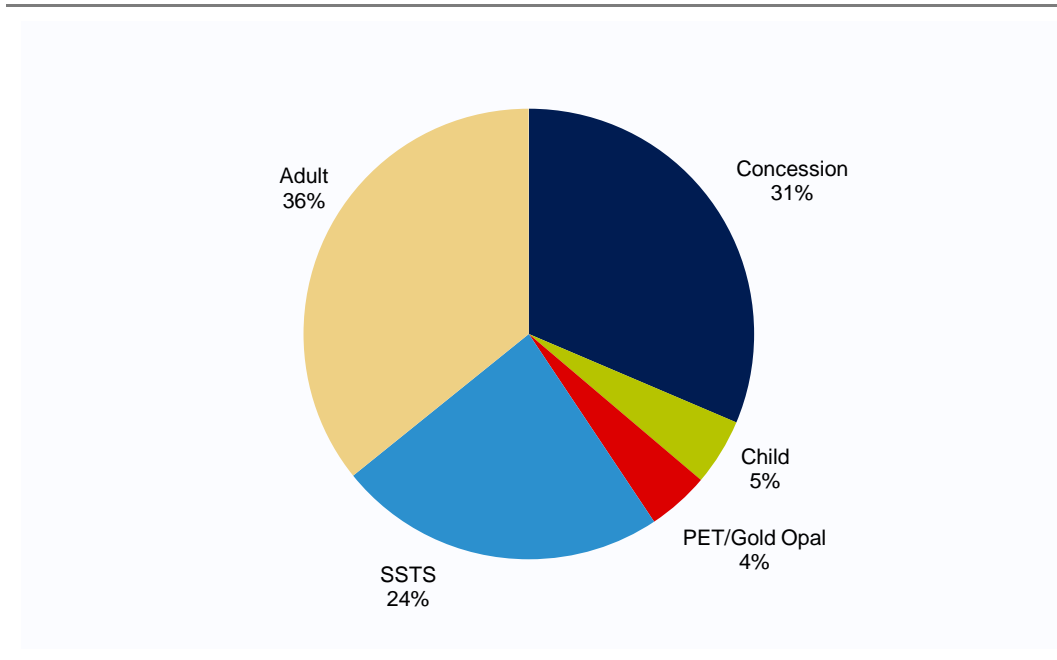
In total, there were just over 1 million private ferry trips reported across 2015-16. The proportion of patronage by passenger type is broadly similar to what we reported last year for 2014-15. Adult full fare ferry trips increased slightly to 36%, while concession increased by one percentage point to 31%. The share of Child and PET passengers remained unchanged. SSTS passengers were down by 3 percentage points to 24%.

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<sup>6</sup> TfNSW, Ferry tickets, available at <http://www.transportnsw.info/en/tickets/tickets-opal-fares/ferry.page>? Accessed 16 November 2016.

<sup>7</sup> Matilda Cruises, City Loop Ferry Service Prices, available at <http://www.matilda.com.au/dir076/matilda.nsf/Pages/Ferry+Services~City+Loop+-+Luna+Park> accessed 16 November 2016.



**Figure 4.1 Patronage on private ferries – 2015-16**

**Note:** The SSTS patronage is based on the number of issued passes and assumed school trips.

**Data source:** TfNSW, September 2016.

Ferry operators also provide TfNSW with information on late and cancelled services and the number of safety incidents experienced. For the 12 months to June 2016, the private ferry industry reported 17 incidences of late services and 5 cancelled services, for example due to bad weather. We note that these incidences represent a very low proportion of total services provided (less than 1%). No safety incidents were recorded. This information is summarised in Table 4.1, along with information collected from our previous reviews.

**Table 4.1 Summary of KPI data for year ending 30 June**

Route Year ending 30 June	Late				Cancelled				Safety			
	2016	2015	2014	2013	2016	2015	2014	2013	2016	2015	2014	2013
Central Coast - Woy Woy – Empire Bay	0	3	0	0	1	0	0	0	0	0	0	0
Church Point	2	2	4	7	0	0	0	2	0	0	0	0
Clarence River- Iluka – Yamba	0	0	0	0	0	0	0	0	0	0	0	0
Cronulla – Bundeena	0	0	1	1	0	0	2	7	0	0	0	0
Brooklyn – Dangar Island	0	0	1	0	0	0	3	0	0	0	0	0
Circular Quay – Darling Harbour (ff)	0	0	10	13	0	0	5	1	0	0	0	4
Circular Quay – Lane Cove (ff)	12	3	0	4	4	4	4	0	0	0	0	0
Palm Beach – Mackerel and the Basin	1	1	0	0	0	0	0	0	0	0	0	0
Palm Beach – Ettalong Wagstaff (ff)	2	4	5	5	0	1	3	6	0	0	0	0

**Note:** ff denotes fast ferry.

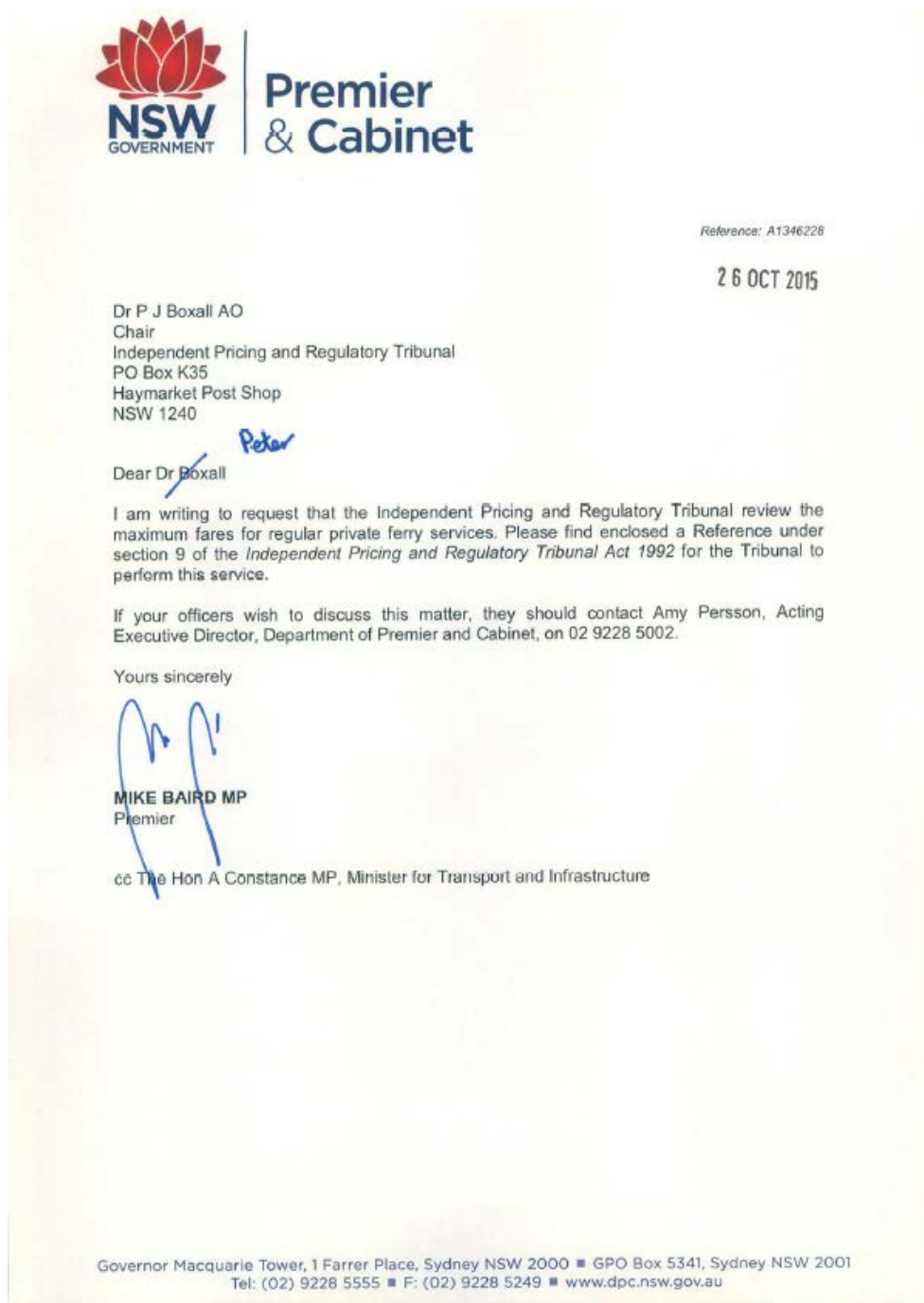
**Source:** TfNSW.



## Appendices



## A Terms of reference



**INDEPENDENT PRICING AND REGULATORY TRIBUNAL ACT 1992  
PRIVATE FERRY INDUSTRY FARE REVIEW**

I, Hon Mike Baird, Premier, pursuant to Section 9(2) of the *Independent Pricing and Regulatory Tribunal Act 1992*, approve the Independent Pricing and Regulatory Tribunal (IPART) entering into arrangements with Transport for NSW for two years to 2 August 2017 to provide services to Transport for NSW that are within its area of expertise. The services to be provided by IPART are the conduct of an investigation into, and the preparation of a report concerning, maximum fares for regular private ferry services under the *Passenger Transport Act 1990*.

In providing these services, IPART should consider:

- i) the cost of providing the services concerned and the need for greater efficiency in the supply of services so as to reduce costs for the benefit of customers;
- ii) relativities with Sydney Ferries' services, including in terms of service, efficiency, cost and ticketing products;
- iii) the protection of customers from abuses of monopoly power in terms of prices, pricing policies, and standards of service;
- iv) the need to maintain ecologically sustainable development;
- v) the impact on customers of the recommendations;
- vi) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise and any suggested or actual changes to those standards); and
- vii) the effect of any pricing recommendation on the level of Government funding provided to private operators under commercial contracts.

The services to be provided by IPART will include a public consultation process through which IPART will invite submissions from the private ferry operators and other stakeholder groups including user groups.

The services are to be provided through the provision of one or more reports to Transport for NSW, as agreed between Transport for NSW and IPART.



The Hon Mike Baird MP  
Premier  
Minister for Western Sydney

26 OCT 2015

Dated at Sydney.....2015

## B Requirements of the IPART Act for private ferries recommendations

Section 15 of the IPART Act 1992 details the matters to be considered by the Tribunal when making a recommendation under the Act. The section is reproduced in full below.

### (15) Matters to be considered by Tribunal under this Act

- (1) In making determinations and recommendations under this Act, the Tribunal is to have regard to the following matters (in addition to any other matters the Tribunal considers relevant):
  - (a) the cost of providing the services concerned,
  - (b) the protection of consumers from abuses of monopoly power in terms of prices, pricing policies and standard of services,
  - (c) the appropriate rate of return on public sector assets, including appropriate payment of dividends to the Government for the benefit of the people of New South Wales,
  - (d) the effect on general price inflation over the medium term,
  - (e) the need for greater efficiency in the supply of services so as to reduce costs for the benefit of consumers and taxpayers,
  - (f) the need to maintain ecologically sustainable development (within the meaning of section 6 of the *Protection of the Environment Administration Act 1991*) by appropriate pricing policies that take account of all the feasible options available to protect the environment,
  - (g) the impact on pricing policies of borrowing, capital and dividend requirements of the government agency concerned and, in particular, the impact of any need to renew or increase relevant assets,
  - (h) the impact on pricing policies of any arrangements that the government agency concerned has entered into for the exercise of its functions by some other person or body,
  - (i) the need to promote competition in the supply of the services concerned,
  - (j) considerations of demand management (including levels of demand) and least cost planning,
  - (k) the social impact of the determinations and recommendations,

B Requirements of the IPART Act for private ferries  
recommendations

- (l) standards of quality, reliability and safety of the services concerned (whether those standards are specified by legislation, agreement or otherwise).



## C Building block model

In this appendix we explain how we estimated efficient fares using the building block model. Section C.1 provides an overview of the model, and Section C.2 summarises the key inputs we used in the model.

### C.1 The building block model

In many industries that IPART regulates, we use the building block approach which 'builds up' the revenue required by the ferry operator to cover its total efficient costs of providing contracted services.

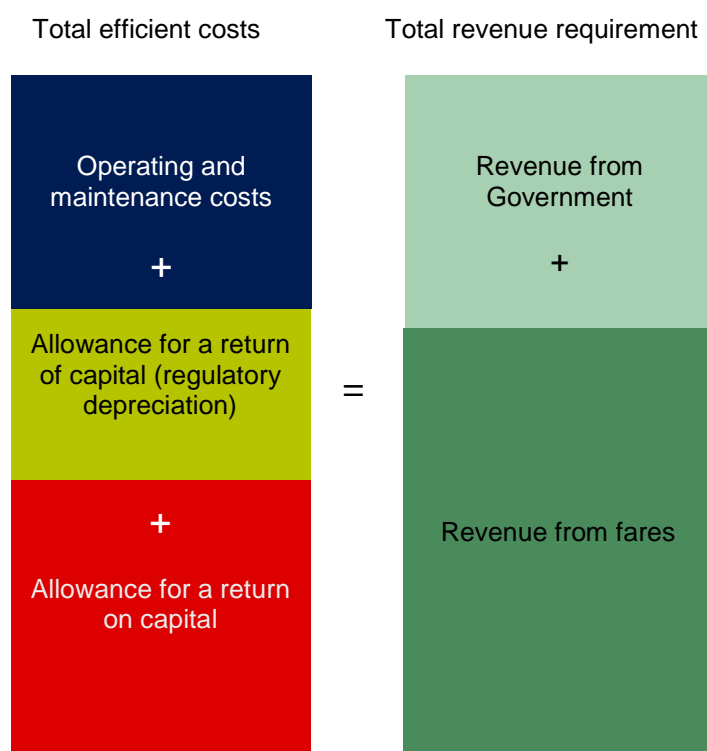
The total efficient costs include the following components:

- ▼ efficient operating and maintenance costs, and
- ▼ an allowance for prudent and efficient capital costs, in the form of return of capital (regulatory depreciation) and return on capital.

The total efficient costs also include allowances for regulatory taxation and working capital, but these represent a small proportion of the total efficient costs for private ferries services.

The ferry operator needs to earn revenue to recover its total efficient costs. This 'revenue requirement' is shared between the government (through payments made to operators) and passengers (through fares).

In this review we have estimated an 'efficient fare' so that passengers pay for the total efficient costs, less total payments from the government. This means that all else equal, larger government payments lead to lower fares, as less of the total efficient costs need to be recovered from passengers through fares. This is summarised in Figure C.1.

**Figure C.1 Revenue requirement under the building block approach**

**Note:** Our building block model also includes allowances for regulatory taxation and working capital. These are not shown in Figure C.1 because they represent a small proportion of the total revenue requirement for private ferries services. The figure is not to scale.

We have estimated the efficient costs for each of the operators until 2017. Under each operator's contract, they receive government payments for providing school travel and concessions tickets. Some operators receive viability payments as well. Therefore, we subtracted the estimated amount of these Government payments from the total revenue requirement. We calculated the fares that would be required to cover the remaining revenue requirement (also called the passengers' share of total efficient costs) based on our forecast estimate of annual patronage. We took account of patronage under different types of tickets (eg, adult, child, concession and multi-trip tickets) based on information reported by operators to TfNSW. A summary of multi-trip ticket information is provided in Table C.1.

Incorporating discounted multi-trip tickets in our building block model results in (all else equal) upward pressure on the ferry operators' efficient fare. This is because a greater share of passengers' trips are taken under discounted tickets, and therefore the efficient fare needs to be higher to ensure the operator earns enough revenue to cover the passengers' share of total efficient costs.

**Table C.1 Summary of multi-trip ticket information**

	<b>Multi-trip ticket type (trips per ticket)</b>	<b>Discount rate implied by current ticket price</b>
Brooklyn	Ferry Ten (10)	10%
	Ferry Twenty (20)	14%
Central Coast	Ferry ten (10)	47%
Church Point	Total Adult 12 <sup>a</sup>	40%
Clarence River	Info not available	Info not available
Cronulla	Weekly (10) <sup>b</sup>	36%
	10 Ride (10)	16%
	Family (6) <sup>c</sup>	6%
Palm Beach	Ferry Ten (10)	12% for Ettalong
		12% for Mackerel

<sup>a</sup> Church Point sells other multi-trip tickets such as *Adult Return*, *Concession 12*, *Concession Return* and *Child Return*.

<sup>b</sup> Weekly ticket allows unlimited trips per week, but we assumed 10 trips per week for the purpose of calculating the implied discount rate.

<sup>c</sup> Family ticket allows two adults and up to four children.

**Source:** Central Coast Ferries, <http://www.centralcoastferries.com.au/>; Church Point Ferry Service, <http://churchpointferryservice.com/>; Clarence River Ferries, <http://www.clarencriverferries.com/>; Cronulla and National Park Ferry Service, <http://www.cronullaferries.com.au/>; Palm Beach Ferry Service, <http://www.palmbeachferries.com.au/> accessed 16 November 2016.

When incorporating multi-trip tickets in our building block model we have assumed that the percentage discount implied by the current ticket price will remain in future years.

## C.2 Key inputs to the building block model

### C.2.1 Efficient operating expenditure

Efficient operating expenditures include labour costs, fuel, insurance, repairs and maintenance, berthing and mooring fees and 'other costs' including cash collection costs, office rent, communication costs, financial services, external consultants, advertising, etc.

As part of our 2014 review Indec provided advice on efficient operating costs for each ferry operator. In doing this, they collected data from the operators, and reviewed operators' actual operating costs reported in The CIE's survey undertaken in 2013.<sup>8</sup> As part of the 2015 review Indec reviewed updated information provided by some ferry operators.

<sup>8</sup> The CIE, *Final Report – Private Ferry Cost Consultancy*, October 2013.

### C.2.2 Efficient capital expenditure

In 2014, Indec provided advice on forecast efficient capital expenditures over the period 2015 to 2017 for each private ferry operator (except for Matilda Cruises). Vessels represent the largest proportion of capital expenditure incurred by private ferry operators. We have also included allowances for ferry refurbishment and engine replacement.

Replacement of old ferries is driven by structural integrity. In 2014, Indec noted that some operators are not planning any ferry replacement, refurbishment or engine replacement over the next three years. However, for some private ferry services, ferries are being utilised far beyond the conventional useful economic lives. Indec considered that additional capital expenditure, particularly to replace very old vessels, would be prudent.<sup>9</sup> This means that the efficient prices that we have estimated provide for operators to replace old ferries. Indec's 2014 and 2015 reports provide more details on efficient capital expenditure.<sup>10</sup>

Indec's forecast efficient capital expenditures are for the purpose of estimating total efficient costs under the building block model. This does not mean that an operator must incur this amount of capital expenditure in any given year. The assessment of required capital expenditure and the mix of operating and capital expenditures are best based on the knowledge and experience of the operators. However, we include efficient capital expenditures in the regulatory asset base (RAB), which is the basis for the allowance for a return on, and of capital. Including a return on and of capital should ensure that operators will be able to prudently replace assets over time. This is discussed in the section below.

### C.2.3 Allowances for regulatory depreciation and a return on assets

The revenue requirement calculated under the building block model includes an allowance for a return of capital, commonly known as depreciation, and a return on capital:

- ▼ Return of capital (regulatory depreciation): including a return of capital in the revenue requirement recognises that through the provision of services to customers, a business' capital infrastructure will wear out, and that the cost of maintaining the capital base is a legitimate business expense.
- ▼ Return on capital: a return on capital includes the cost of capital invested in a business through equity and debt investments.
- ▼ Both a return of and on capital are set with reference to the RAB. The RAB represents the value of the business' assets, used to provide the regulated services.

<sup>9</sup> Indec Consulting, *Efficient costs of providing private and Newcastle-Stockton ferry services – Final Report*, November 2014, pp i-ii.

<sup>10</sup> Indec Consulting, *Efficient costs of providing private and Newcastle-Stockton ferry services – Final Report*, November 2014; Indec Consulting, *Efficient costs of providing Brooklyn, Church Point and Palm Beach ferry services – Final Report*, December 2015.

We calculated the allowance for a return on capital by multiplying the weighted average cost of capital (WACC) by the value of the RAB. We used our standard approach to estimate the WACC and our final decision is to apply the midpoint WACC of 5.6% to estimate the allowance for a return on assets (see Table C.2).

**Table C.2 Real post-tax WACC range and midpoint**

	Low	Mid	High
Real post-tax WACC	5.1%	5.6%	6.1%

**Note:** Market data sampled to 14 November 2016.

**Source:** IPART calculation.

Details on our WACC calculation and parameters that underpin our WACC calculation are contained in Appendix D. Our 2014 Final Report provides more information about inputs in the building block model, including the initial RAB, remaining asset lives, patronage, freight revenue and government payments.<sup>11</sup>

### C.3 External benefits

One of the decisions we make in determining public transport fares is how much of the total cost should be paid by the passengers through fares and by the NSW community as a whole through the Government subsidy. The main reason governments subsidise public transport services is that having these services benefits the whole community, not only the people who use them (ie, public transport services can provide external benefits).

Our approach to estimating external benefits of private ferries firstly involves identifying ferry services where there are likely to be external benefits, the main external benefit being avoided road congestion. Our estimate also includes avoided air pollution and greenhouse gas pollution, avoided road accidents and the health benefits associated with walking or cycling to or from public transport and the external cost – the costs of raising funds to subsidise public transport.<sup>12</sup>

In submissions to previous reviews, some stakeholders have proposed other benefits that need to be included in our external benefit calculations. These include reduced demand for boat moorings, safety benefits, active transport benefits, lower air pollution, social inclusion benefits, and community benefits.

We have established an approach to determine the value of the net external benefits of public transport for our fare reviews.<sup>13</sup> The external benefits estimated under our approach already account for avoided road accidents when people use public transport instead of driving (safety benefits), avoided air pollution and greenhouse gas pollution

<sup>11</sup> IPART, *Review of maximum fares for private ferry services and the Stockton ferry service for 2015 - Final Report*, December 2014, Chapter 4 and Appendix D.

<sup>12</sup> For further information on our estimate of external benefits see IPART, *Review of external benefits of public transport - Draft Report*, December 2014.

<sup>13</sup> IPART, *More efficient more integrated Opal fares - Final Report*, May 2016, Chapter 9 – Box 9.3.

when people use public transport instead of driving, and external health benefits that arise because public transport encourages greater levels of physical activity (ie, walking or cycling to and from public transport).<sup>14</sup>

However, our approach does not account for the benefits of increased mobility and social inclusion. We consider that many of the benefits associated with social inclusion are private. For example, the ability of people to access resources such as education, employment, health and other services improves a person's well-being.<sup>15</sup> We consider that there may be some external benefits associated with improved mobility and social inclusion, but the benefits largely arise from physical access to public transport and frequency of services rather than fare levels. We also note that the risk factors for social exclusion include household income, supporting the view that well-targeted concession fares are an appropriate way of incorporating these externalities into fare-setting (rather than lowering fares for all customers and not just those who require the additional subsidy).

We consider that the Brooklyn and Church Point ferries provide a service to islands, and therefore, we do not consider there would be material external benefits (avoided road congestion) in their service areas.<sup>16</sup> In addition, the Clarence River Ferry service is located on the north coast of NSW where there is unlikely to be substantial road congestion. However, there are likely to be some external benefits (avoided road congestion) associated with the Palm Beach (Ettalong), Cronulla and Central Coast Ferry services.

We estimated the value of annual external benefits by estimating the amount of patronage in the peak period and multiplying this by our estimate of the net external benefit per passenger journey of \$0.94 for Sydney Ferries.<sup>17</sup> We have updated this estimate since our review last year, where we used a range for the external benefit per passenger journey (\$0.12 to \$1.41). However, our updated estimate falls within the range that we used last year. The results are summarised in the table below.

**Table C.3 External benefits associated with private ferry services**

	<b>Palm Beach to Ettalong</b>	<b>Cronulla to Bundeena</b>	<b>Central Coast, Woy Woy to Empire Bay</b>
Net external benefit per passenger journey (\$2014-15)	\$0.94	\$0.94	\$0.94
Estimated total external benefit (\$2016-17)	\$38,048	\$46,206	\$15,241

**Source:** IPART calculations.

The estimate of net external benefit per passenger journey in Table C.3 is based on the external benefits of Sydney Ferries, including for example, avoided road congestion

<sup>14</sup> IPART, *Review of external benefits of public transport - Draft Report*, December 2014, p 27.

<sup>15</sup> *Ibid*, pp 80-82.

<sup>16</sup> We have no evidence that there is major congestion on the water and that the ferries are displacing a large number of private boats.

<sup>17</sup> This estimate is based on our externality model used for our 2016 public transport review.

around the Sydney CBD. We consider that these estimates are likely to be higher than the external benefits for private ferry services. This is because, for example, the benefit of avoided road congestion is likely to be lower in the local areas for private ferry services, relative to the Sydney CBD.

However, even applying these estimates, external benefits are less than the financial viability payments received by Central Coast, Cronulla and Palm Beach Ettalong ferry services. Therefore, we do not consider there are any external benefits, in addition to the current viability payment, that need to be accounted for in our building block model.

## D Weighted-average cost of capital

One of the elements in the building block model is an efficient return on assets. The rate of return is a key input to our calculation for the allowance for a return on assets. We calculate the allowance for a return on assets by multiplying the weighted average cost of capital (WACC) by the RAB.

Our approach is to use a post-tax WACC to determine a rate of return.<sup>18</sup> We first estimate a WACC range based on current and long term market data. Then we selected a point within the range (established by the mid-points of the two WACC ranges) using our uncertainty index. As our assessment of uncertainty is currently within one standard deviation from the long term average of zero (ie, economic uncertainty is neutral), we have used the midpoint of the range of WACC values.<sup>19</sup>

We have also considered the level of the industry-specific parameters (ie, the equity beta and the gearing level) by investigating:

- ▼ the risks of providing ferry services, and
- ▼ the value of equity beta and gearing levels of companies that face similar risks to the ferry businesses we are regulating.

### D.1 Summary of the WACC for our final recommendations

For our final recommendations we have estimated a real post-tax WACC of 5.6%, which is the midpoint of the WACC range established based on:

- ▼ market-based WACC parameters (ie, risk-free rate, inflation rate, debt margin, market risk premium) estimated as of 14 November 2016, and
- ▼ the same industry-specific parameters that were used in our Draft Report - an equity beta range of 0.8 to 1.0 and a gearing ratio range of 60% to 40%.

Table D.1 sets out the individual parameters underpinning the WACC. The rest of this appendix provides more information on our analysis.

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<sup>18</sup> IPART, *Review of WACC Methodology - Final Report*, December 2013.

<sup>19</sup> See IPART, *Review of WACC Methodology - Final Report*, December 2013, p 23 for further details on our decision rule for selecting a point within the range of WACC values.



**Table D.1 WACC parameters and values**

	WACC - current data			WACC - long-term averages			WACC range		
	Low	Mid	High	Low	Mid	High	Low	Mid	High
Nominal risk free rate	2.2%	2.2%	2.2%	4.3%	4.3%	4.3%			
Inflation	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%			
Debt margin	2.4%	2.4%	2.4%	3.2%	3.2%	3.2%			
Gearing	60%	50%	40%	60%	50%	40%			
Market risk premium	7.3%	9.3%	11.3%	5.5%	6.0%	6.5%			
Equity beta	0.8	0.9	1.0	0.8	0.9	1.0			
Cost of debt (nominal pre-tax)	4.6%	4.6%	4.6%	7.5%	7.5%	7.5%			
Nominal vanilla WACC	6.0%	7.6%	9.9%	8.0%	8.6%	9.5%			
Real post-tax WACC	3.5%	5.1%	7.4%	5.4%	6.1%	6.9%	5.1%	<b>5.6%</b>	6.1%

**Note:** Market data sampled to 14 November 2016.

**Source:** IPART calculations.

The WACC for our final recommendations is 20 basis points higher than the draft recommendations released in October 2016 (Table D.2). There have been increases in the risk free rate and market risk premium while the debt margin is lower.

**Table D.2 Comparison of draft and final WACC**

	Draft recommendations			Final recommendations		
	Current data	Long-term	Range	Current data	Long-term	Range
Nominal risk-free rate	1.9%	4.4%		2.2%	4.3%	
Inflation	2.4%	2.4%		2.4%	2.4%	
Debt margin	2.6%	3.2%		2.4%	3.2%	
Gearing	60% to 40%	60% to 40%		60% to 40%	60% to 40%	
MRP	7.3% to 10.7%	5.5% to 6.5%		7.3% to 11.3%	5.5% to 6.5%	
Equity beta	0.8 to 1.0	0.8 to 1.0		0.8 to 1.0	0.8 to 1.0	
Real post-tax WACC	3.3% to 6.8%	5.5% to 7.0%	4.7% to 6.2%	3.5% to 7.4%	5.4% to 6.9%	5.1% to 6.1%
	(Midpoint 4.7%)	(Midpoint 6.2%)	(Midpoint 5.4%)	(Midpoint 5.1%)	(Midpoint 6.1%)	(Midpoint 5.6%)

**Source:** IPART calculations.

## D.2 Market based parameters

We have estimated the market-based parameters using IPART's standard approach as of 14 November 2016. Table D.3 summarises the approach to calculating the market-based parameters.

**Table D.3 Estimating the market-based WACC parameters**

Parameter	Current market data	Long-term average
Risk free rate	Based on end-of-trading-day data sampled over the 40-day trading period to 14 November 2016 from Bloomberg.	Based on end-of-trading-day data sampled over 10 years from Bloomberg.
Inflation	Based on the geometric mean of: - the latest available one-year forecast from the RBA and - the midpoint of the RBA's target range for inflation (2.5%).	
Debt margin	Based on the average of latest available two monthly BBB observations from the RBA (plus 12.5 basis points for debt raising costs).	Based on the average of the latest available 10-year average of the RBA's monthly BBB observations (plus 12.5 basis points for debt raising costs).
MRP	Based on monthly data using IPART's standard approach.	IPART's standard parameter valuation.

**Note:** We use market data to estimate the debt margin, but its value depends on an industry-specific credit rating. The RBA's BBB measure aggregates bonds with a credit rating of BBB- to BBB+.

**Source:** IPART, *Review of WACC Methodology - Final Report*, December 2013.

## D.3 Industry-specific parameters

To determine the appropriate level for the equity beta and the gearing, we have evaluated the risks faced by private ferry operators. We have compared these risks to other businesses/industries we regulate. We have also investigated market evidence available from companies that are listed on stock exchanges that provide ferry services.

In determining the equity beta and gearing level, our current practice is to adopt benchmark values (rather than the values of the regulated entity). This ensures that customers will not bear the costs associated with inefficient funding and capital structures. This is consistent with regulatory practice in Australia.

### Equity beta and gearing level

The equity beta measures the extent to which the return of a particular security varies with the overall return of the market. It represents the systematic or market-wide risk of a security that cannot be eliminated by holding it as part of a diversified portfolio. It is important to note that the equity beta does not measure business-specific or diversifiable risks.

The gearing ratio is the ratio of the value of debt to the total value of assets in the business' capital structure. Gearing is used to weigh the costs of debt and equity in

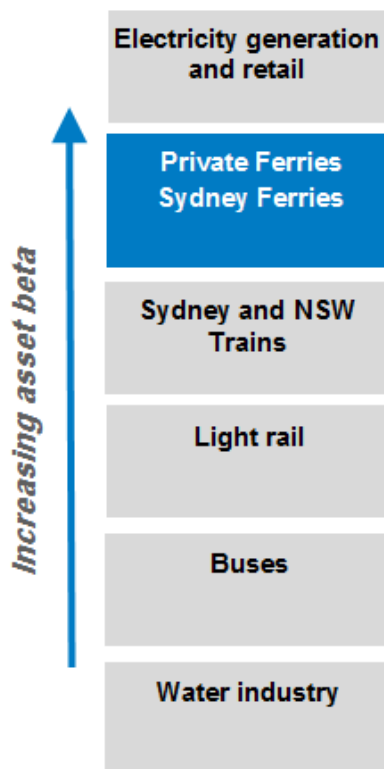
estimating the WACC. Since, all else being equal, debt funding is cheaper than equity funding, the lower the level of gearing the higher the WACC and vice versa.

Our final decision is to use:

- ▼ an equity beta of 0.8 to 1.0, and
- ▼ a gearing ratio ranging from 60% to 40%.

This decision implies that the level of risk faced by a ferry operator is higher than the risk faced by other public transport modes (Figure D.1). We came to this judgment after considering the relative risks involved in providing private ferry passenger services compared to other modes of transport. We also placed limited weight on beta and gearing values for a range of proxies for the private ferries.

**Figure D.1** Implied relative risks of utilities regulated by IPART



Source: IPART analysis.

### Risks relative to other industries

In principle, ferry and bus operators are likely to respond faster in the short to medium term to changes in patronage than rail operators due to the more capital intensive nature of rail business. However, the high level of profit variability of the ferry operators affects the levels of risk they face. By contractual arrangements private ferry operators are required to provide a set number of services, regardless of the number of passengers and more importantly, they earn fare box revenue from ticket sales which is variable.

This is likely to expose private ferry operators to revenue volatility as revenue is directly related to the number of passengers, although some private ferry operators may receive a viability payment. The scheduling requirements also limit the ability of ferry operators to respond to changes in patronage. Further, ferry operators are likely to have a higher proportion of tourist passengers than rail and bus operators. Ferry operators are therefore more exposed to fluctuations in the tourism cycle than bus and rail operators.

### Market evidence

Table D.4 contains companies that derive revenue from providing ferry passenger services that are listed on stock exchanges.

**Table D.4 Gearing and equity beta of private ferry comparators**

Company	Gearing (%)	Equity beta	Asset beta (implied)
Raja Ferry	12%	Not available	-
Viking Line	36%	0.38	0.25
Superdong Fast Ferry	0%	0.71	0.71
Reederei Herbert	0%	0.18	0.18
Hainan Strait Shipping	4%	0.98	0.94
Mols Linien	77%	0.29	0.06
Maritime Company of Lesvos	44%	0.33	0.19
Attica Holdings	37%	0.33	0.21
ANEK Lines	88%	0.33	0.04
Minoan Lines	38%	0.33	0.34
Tokai Kisen	42%	0.43	0.25
Sado Steam Ship	69%	0.53	0.17
Irish Continental	28%	0.63	0.45
Hong Kong Ferry	26%	1.04	0.75
<b>Mean</b>	36%	0.50	0.35
<b>Median</b>	37%	0.38	0.25

**Note:** The equity beta is the 2-year unadjusted beta.

**Source:** Bloomberg, DataStream Thomson Reuters and IPART analysis.

The data in Table D.4 suggests that, for private ferry operators the level of gearing ranges from 0% to 88% and the average is 36%. Also, the equity beta ranges from 0.2 to 1.0 and the average is 0.5.

We have placed limited weight on the evidence from the market due to a number of concerns we have with the data. For example:

- ▼ Table D.4 shows that gearing and beta values range widely. However, we note the average gearing level from this sample is at the lower end of the selected range of our analysis shown in Table D.1.
- ▼ The beta estimation method (regression of stock returns on market returns) may be subject to estimation errors.
- ▼ Also, most of the comparators provide more than just ferry transport services. These include property management, tourism and hospitality sectors and investment manager.

#### Our WACC decision rule

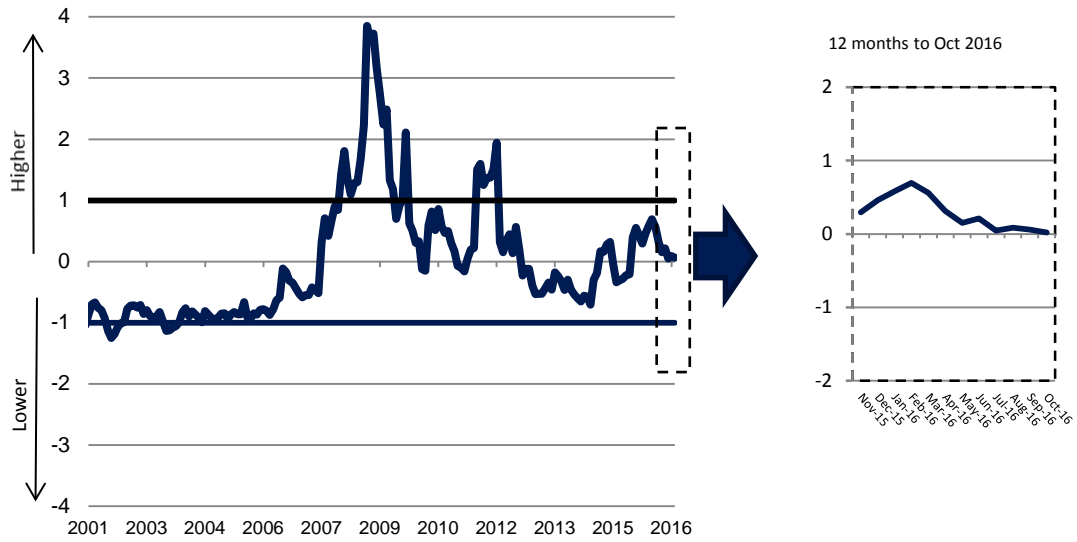
We use the uncertainty index to guide us choosing a WACC point estimate from within the WACC range:

- ▼ If the uncertainty index is within or at one standard deviation from the long term average of zero (ie, economic uncertainty is neutral), we will select the midpoint WACC.
- ▼ If the uncertainty index is more than one standard deviation from the long term average of zero, we will consider moving away from the midpoint WACC. We will have regard to the value of the uncertainty index and additional financial market information.<sup>20</sup>

Figure D.2 shows that the uncertainty index is currently within one standard deviation from the long term average of zero. Based on IPART's decision rule, we recommend the midpoint of the real post-tax WACC range, 5.6%, as the point estimate WACC.

<sup>20</sup> IPART, *Review of WACC Methodology - Final Report*, December 2013, p 23.

Figure D.2 Uncertainty index



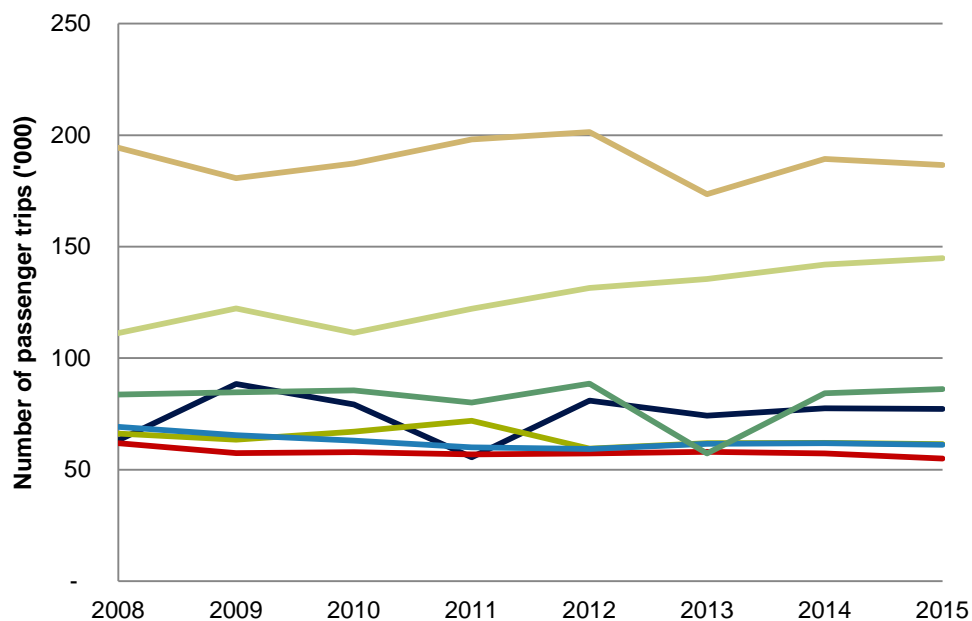
**Note:** IPART analysis as of 31 October 2016.

**Data source:** Thomson Reuters DataStream.

## E Patronage forecasts

Figure E.1 shows annual reported patronage levels for all private ferry operators since 2008. We have not identified individual operators due to confidentiality. Note that our analysis excludes the patronage level reported under the School Student Travel Scheme (SSTS). This is because the SSTS patronage is a notional number intended for calculating SSTS payments, and does not reflect the actual number of students travelled under the scheme.

**Figure E.1 Annual patronage levels (excluding SSTS)**



Data source: TfNSW.

Overall, patronage levels for private ferries have increased slightly over the past seven years. The annual patronage for a majority of operators has remained relatively stable. For one operator, the level of patronage has increased in recent years.

In our view, the average patronage over the most recent three years (where available) remains a reasonable guide to future patronage. Therefore, we used forecast patronage given by an average of the last three years' patronage levels.

## F Government payments

Ferry operators may receive a number of different government payments, including:

- ▼ School Student Travel Scheme (SSTS): this relates to government payments for services that carry school children. The total SSTS payment is notional and is calculated based on the following formula:

$\text{Semester payment} = \text{number of eligible children} \times \text{single child fare price} \times 2 \times \text{number of school days in semester} \times \text{average number of days travelled (77\% for school children or 75\% for TAFE)}^{21}$

- ▼ Gold Opal travel which replaces the Pensioner Excursion Ticket (PET): The total government payment relating to Gold Opal travel is calculated based on the following formula:

$\text{Payment} = \text{number of Gold Opal trips} \times (2 \times \text{full adult ticket})$

- ▼ Concession payments: The total government payment relating to Concession tickets is calculated as follows:

$\text{Payment} = \text{number of Concession tickets sold} \times \text{half the adult ticket price.}$

- ▼ Viability payments: The viability payments are made to certain operators based on consultant advice in 2010. The total amounts are indexed by the change in CPI each year.

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<sup>21</sup> We have assumed 75% for all as we do not have information on the split between TAFE and school students. This is a conservative assumption.