

## **TELSTRA CORPORATION LIMITED**

### **Final Access Determinations (FADs) Inquiry – response to information request under the BBM RKR**

25 November 2013

#### **Public Version**

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## 1 Introduction

### 1.1. Overview

On 13 September 2013, the Australian Competition and Consumer Commission (“**ACCC**”) requested Telstra to provide certain information under Rule 15 of the Building Block Model Record Keeping and Reporting Rule (“**BBM RKR**”) for the purposes of its review of the Fixed Line Services Model (“**FLSM**”). The ACCC is undertaking this review of the FLSM as part of its Fixed Services Review.

Telstra’s detailed response to the ACCC’s request for information is set out in this document, as well as in the attached data tables and the Comparison Statement. These documents should be read in conjunction with each other.

In preparing its response to the BBM RKR, Telstra has adopted the following broad approach, where possible: the use of detailed, bottom-up forecasts to ensure the inclusion of only relevant expenditure and the use of Telstra’s well-established internal forecasting models and processes. In adopting these approaches, Telstra is confident that the attached forecasts represent its best view of relevant operating expenditure, capital expenditure and demand as required under the BBM RKR.

More broadly, and as set out within this response, forecasts for capital expenditure reflect Telstra’s prudent investment approach, and the competitive internal process for allocating capital among competing opportunities. To this end, it is important to bear in mind that although parts of Telstra’s business are covered by the Fixed Line Services declarations, the significant majority of Telstra’s business is not captured by these declarations. There is internal competition for capital allocations between unregulated and regulated services that drives capital efficiency, placing Telstra in a position that contrasts significantly with other infrastructure businesses that are subject to building block-style price regulation.

At the outset, it is also important to recognise that this is the first time that Telstra has provided information in response to a BBM RKR request. There are significant differences between the approaches that were used to prepare forecasts for the regulatory period from June 2011 to June 2014 (the “**Previous Regulatory Period**”) and the approaches Telstra has adopted to respond to the current BBM RKR request. These differences are due to the greater detail required to be provided under the BBM RKR than was the case for informal data requests made in the context of the Previous Regulatory Period. Those forecasts were provided to the ACCC in response to an informal request prior to the finalisation of the FLSM, the ACCC’s determination of what assets should be included in the FLSM, and the ACCC setting the fixed principles that apply under the 2011 fixed line services final access determination (“**FAD**”). At that time there was also limited guidance on the principles to be used in preparing, and the objectives of, the forecasts.

The differences in approach in estimating forecast values in the Previous Regulatory Period, and in response to the current BBM RKR, must be considered in comparing the forecast values for the relevant periods. It will also be essential to consider these differences in the process of applying the BBM RKR forecast values to the FLSM.

Telstra has provided further details in relation to these differences in the Comparison Statement. Telstra considers that the different methodology it has adopted in responding to the current BBM RKR request will reduce the risk of there being significant differences between forecasts and actual expenditure during the new regulatory period. However, to the extent that Telstra undertakes efficient investment that exceeds these forecasts, it should be entitled to recover those amounts.

### 1.2. Comparison Statement

In its letter dated 17 September 2013, the ACCC requested that Telstra also provide it with a report under rules 10(c), 11(b) and 12(c), which:

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- (a) compares forecasts for capital expenditure from the regulatory period from June 2011 to June 2014 (the Previous Regulatory Period) with actual capital expenditure for that same period;
  - (b) compares forecasts for operating expenditure from the Previous Regulatory Period with actual operating expenditure for that same period; and
  - (c) explains any differences, trends and drivers.

As explained above, Telstra was not previously requested, and did not provide, forecast capital expenditure, operating expenditure and demand under the BBM RKR for the Previous Regulatory Period. Accordingly, Telstra cannot provide such a comparison under the BBM RKR. Telstra also notes that it is not possible, at this time, to compare forecasts for the Previous Regulatory Period to actual capital expenditure, operating expenditure and demand for that period, because FY2014 has not concluded.

Accordingly, and in order to satisfy the ACCC's request, Telstra has prepared, as a separate document, a comparison of forecasts contained within the FLSM for the Previous Regulatory Period for capital expenditure, operating expenditure and demand for FY2011, FY2012 and FY2013 (the "**Comparison Period**") with Telstra's actual operating expenditure, capital expenditure and demand for that period ("**Comparison Statement**").

The 2011 FLSM forecasts for capital expenditure, operating expenditure and demand which were used to set prices in the FAD and the FLSM forecasts for capital expenditure, operating expenditure and demand which were used to set prices in the 2012 WDSL FAD are referred to throughout this response as the "**Previous Regulatory Forecasts**".

The Comparison Statement should be read in conjunction with this document and should be considered to be provided in lieu of the comparison statement within this document for the purposes of satisfying rules 10(c), 11(b) and 12(c) of the BBM RKR.

For the avoidance of doubt, Telstra's comments regarding the confidentiality of Telstra's forecasts and this response (set out in section 3 of this document) also apply to the Comparison Statement.

### 1.3. Telstra's forecasting approach

Telstra has adopted a detailed "bottom up" approach to preparing the capital expenditure and operating expenditure forecasts set out in this response. For example, in the case of capital expenditure forecasts, this has involved building up all forecasts from an assessment of individual projects over the regulatory period, and limiting these forecasts to projects that have already been approved in accordance with Telstra's investment approval processes.

In addition, the processes used to forecast capital expenditure, operating expenditure and demand for the purposes of this response also reflect, and are more consistent with, Telstra's existing internal business systems and forecasting processes. Telstra has only deviated from its well-developed processes for setting forecasts where necessary to meet the BBM RKR requirements, for example, to extrapolate forecasts over a longer period than Telstra's standard 12 to 36 month planning horizon.

This approach gives a high degree of confidence that Telstra's forecasts capture only costs that are relevant to the FLSM and which are reasonable and efficiently incurred. However, inherent in any process for providing longer range forecasts, there are a number of challenges. These challenges are exacerbated in circumstances where there is recognised uncertainty about the technology that will be used to deploy the NBN and the speed with which that deployment will take place. Telstra has provided details in relation to the way that it has addressed these challenges in the explanatory statements set out below.

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In summary, Telstra has adopted the following approach in responding to the BBM RKR request:

- (a) Telstra has generally based its forecasts in respect of capital expenditure, operating expenditure and demand on information, processes and experienced views of likely market developments as at 30 June 2013. This is intended to ensure broad internal consistency between the assumptions underpinning the capital expenditure, operating expenditure and demand forecasts.
- (b) Telstra has modelled key external and market factors (most notably the NBN rollout and the anticipated impact it will have on demand for fixed line services) based on internal estimates of the impact for the NBN rollout undertaken as at June 2013 (see Section 2.2 below).
- (c) To provide the ACCC with forward looking estimates of operating expenditure and capital expenditure that most closely align with, and relate to, the relevant FLSM asset categories (and align with the fixed line services for which the FLSM estimates costs), Telstra's product managers and subject matter experts have prepared "bottom-up" operating expenditure and capital expenditure forecasts based on current actual expenditure.

#### 1.4. Impact of NBN

The proposed NBN rollout has been a significant factor for Telstra in its preparation of capital expenditure, operating expenditure and demand forecasts, as the rollout will naturally have a significant impact on Telstra's fixed line network. Telstra is also developing products and infrastructure relevant to the NBN.

To take into account the impact of the NBN rollout in preparing its capital expenditure, operating expenditure and demand forecasts, Telstra has adopted the following approach:

- (a) Telstra has based its forecasts on information, processes and views of likely developments as at 30 June 2013. These internal estimates are used within Telstra's business planning cycle for FY2014. As the estimates were prepared based on NBN Co's stated rollout plans and timetable as at that time, they do not account for any subsequent delays in the rollout plan or the potential impact of NBN Co adopting an alternative technology (such as FTTN).
- (b) Based on these rollout assumptions, Telstra has prepared demand forecasts for the fixed line services the subject of the BBM RKR which take into account forecast losses to NBN.
- (c) Excluded operating and capital expenditure from its forecasts that is due to the NBN or NBN products and services. In particular, Telstra has not included within its forecasts the estimated operating and capital expenditure related to the development and provision of services (and related infrastructure) over the NBN, with Telstra acting as service provider, or the operating and capital expenditure related to Telstra's supply of services to NBN Co.

#### 1.5. The requirement to provide longer term forecasts to FY2019

In its letter dated 17 September 2013, the ACCC requested Telstra to provide forecast data for demand, operating expenditure and capital expenditure for the period from FY2014 to FY2019. As set out above, the requirement to provide forecast data for a six year period (at a disaggregated and highly detailed level) is necessarily a complex task.

Given the uncertainties with any forecasting process, Telstra's business forecast horizon is generally between 12 to 36 months. The longer range forecasts have therefore involved making further assumptions about demand and expenditure, and extrapolating existing and expected trends, over a longer period of time than occurs for the purposes of Telstra's internal business planning.

The provision of longer range forecasts in order to comply with BBM RKR requirements is also complicated by the current uncertainty with respect to the pace of the NBN deployment, and is further compounded by the Australian Government's recently announced review of the technology used to deploy the network.

### 1.6. Prudence of investment

The BBM RKR request also requires Telstra to provide information in relation to Telstra's processes for operating expenditure, planning and qualifying investment projects, so that the ACCC can be satisfied of the prudence of Telstra's forecast investment program with respect to the fixed line network.

Details of Telstra's investment approval and forecasting processes are set out in the Explanatory Statements below. However, in addition to this material, it is important that the ACCC takes into account the broader context in which Telstra makes decisions to commit capital to its fixed line network. In particular:

- (a) Within Telstra, capital investment projects for fixed line network assets and services will only be approved if they are expected to meet specified internal rate of return targets. As part of the approval process, these projects also compete for scarce capital and management capacity against projects in other areas of Telstra's business. These other areas range from mobile networks and services to network applications and services ("NAS"), international networks and services (such as Telstra Global) and media and content infrastructure and services. Investment projects in these other areas typically involve significant growth markets for Telstra, are generally unregulated (or subject to significantly less regulation than is the case for the fixed line network) and are typically anticipated to earn higher returns than is the case for fixed line investments.
- (b) This internal competition for capital allocation between unregulated and regulated services places Telstra in a position that contrasts significantly with other infrastructure businesses that are subject to building block-style price regulation. For example, although a proportion of any electricity distribution or transmission network business may not be subject to regulation, the declared fixed line services account for only approximately 6% of Telstra's total revenue (*all* fixed line voice and fixed broadband revenue accounts for only approximately 25% of Telstra's total revenue).
- (c) Telstra also utilises its fixed line network to deliver downstream retail services to compete not only with access seekers using Telstra's fixed line network, but also with competitors using alternative infrastructure. This stands in sharp contrast to the arrangements for energy and water service providers who generally have little or no interest in downstream markets and do not face competing forms of infrastructure.

The consequence of these distinctions is that (unlike some other regulated infrastructure businesses), Telstra does not have an incentive to over-invest or invest imprudently with respect to the assets and services the subject of the Fixed Services Review. Telstra has a strong interest to ensure that its fixed line services are provided efficiently, irrespective of the regulatory arrangements applying to access seekers. There is no incentive for Telstra to "gold-plate" fixed line services infrastructure in circumstances where greater returns could readily be obtained by investing scarce capital in other growth areas of its business.

Details of Telstra's inflation assumptions are set out in section 5.1.1(a) below.

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## 2 Confidentiality - Disclosure of RKR data

The information provided by Telstra in response to the BBM RKR request is highly commercially sensitive.

The disclosure of information in relation to operating expenditure and capital expenditure forecasts, including the explanations set out in this document, would cause competitive harm to Telstra as rivals would be able to gain a greater insight into Telstra's expenditure patterns and areas of investment focus. Releasing the forecast data would provide commercially sensitive information about Telstra's commercial intentions to competitors and hinder Telstra's ability to compete in the market.

The disclosure of forecast data, including the explanations set out in this document, may also prejudice Telstra's position in commercial negotiations with suppliers and wholesale customers. This could affect Telstra's performance in financial markets and its dealings with shareholders, investors and analysts. In this regard, the costs of maintaining Telstra's network is a highly sensitive area that is subject to significant scrutiny and speculation by analysts and the media.

In addition, this response contains commercially sensitive information that could have an impact on re-negotiations in relation to the NBN, both with respect to Telstra's negotiations with NBN Co and with respect to Telstra competing with other telecommunications providers for contracts to supply services to NBN Co.

The release of Telstra's internal guidelines would also provide competitors with commercially sensitive information about Telstra's internal processes. These processes involve significant information and systems that are confidential and proprietary to Telstra.

Telstra understands and supports the importance of a transparent process. However, Telstra considers that a balance must be struck between transparency and the protection of Telstra's highly commercially sensitive information. Accordingly, Telstra considers that the public disclosure of RKR data and the accompanying explanations provided by Telstra should be strictly limited to that which is necessary for the purposes of the ACCC's review of the FLSM.

Accordingly, Telstra considers that any disclosure of this highly commercially sensitive information should be subject to terms and conditions (pursuant to section 151BUA(2)(d) of the *Competition and Consumer Act 2010* ("CCA"). For example, disclosure should be limited to individuals who have been approved by Telstra and subject to those individuals having executed a confidentiality undertaking in a form satisfactory to Telstra and the ACCC.

Telstra will prepare a more detailed response on confidentiality issues once it has had an opportunity to review the ACCC's proposed notice setting out the terms and conditions on which the ACCC proposes to provide that information in the consultation process undertaken in accordance with section 151BUA(5) of the CCA.

## 3 Structure of response and Explanatory Statements

The Explanatory Statements which form part of this response are structured as follows:

- The information required by Rule (9)(a) of the BBM RKR is set out in section 5.1.1(a) of this response;
- The information required by Rules (9)(b), (c) and (d) of the BBM RKR is set out as follows:
  - in relation to Rule 8(a), in section 5.1.1 of this response;
  - in relation to Rule 8(b), in section 5.1.2 of this response;
  - in relation to Rule 8(c), in section 5.2.1 of this response;

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- in relation to Rule 8(d), in section 5.2.2 of this response; and
  - in relation to Rule 8(e), in section 5.3 of this response; and
  - The information required by Rule (9)(e) of the BBM RKR is set out in section 5.1.2(e) of this response.

The accompanying forecast information required by Rules 10, 11 and 12 of the BBM RKR are also set out in each of these sections.

#### **4 Data produced under Rules 7 and 8**

Telstra's response to the data requests set out in Rules 7 and 8 of the BBM RKR is provided on the Microsoft Excel spreadsheet entitled "BBM RKR Request – Telstra's response (25 November 2013)".



## 5 Explanatory Statements

### 5.1. Capital and operating expenditure forecasts

#### 5.1.1. Rule 8(a): Forecast total annual Operating Expenditure specified for each FLSM Asset Class, expressed in nominal terms.

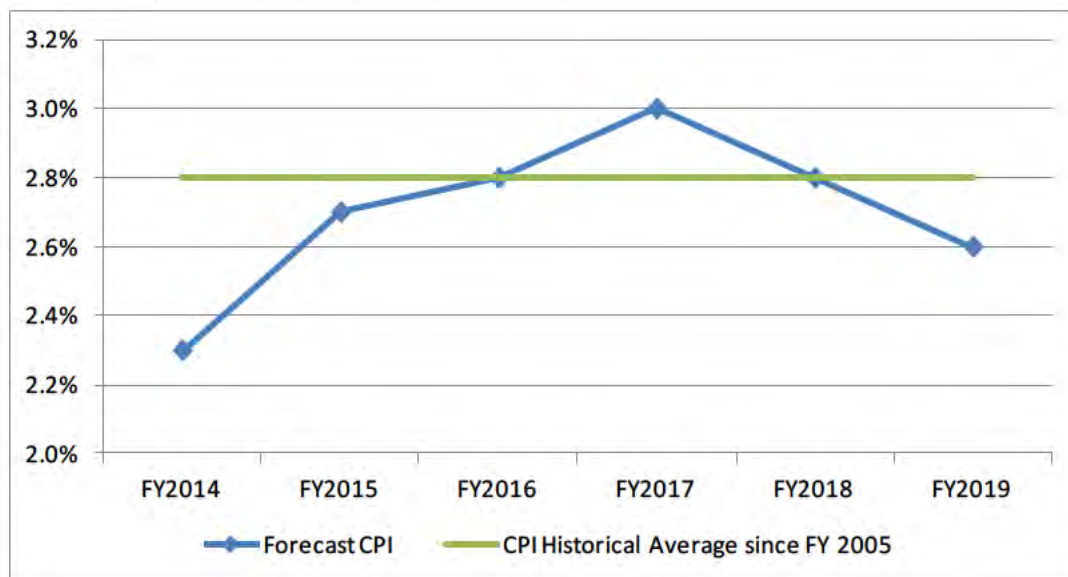
##### (a) *Telstra's annual inflation assumptions used in its forecasts of Operating Expenditure and Capital Expenditure* [Explanatory statement request 9(a)]

Telstra's inflation forecasts are based on internal forecasts for the Consumer Price Index ("CPI").

Telstra's CPI forecasts are derived from internal multi-variant spread sheet-based economic modelling, undertaken by Telstra's Senior Economist within the Telstra Finance Business Unit. Estimates for CPI forecasts are based on relationships between forecast GDP growth, the forecast level of the Australian dollar, and wage and employment growth, forecasts of which are based on internal economic modelling using proxies for demand and wage inflation.

Telstra's internal CPI forecasts are cross-referenced with the prevailing market consensus forecasts such as commercial bank economic forecasts, Treasury and RBA forecasts, IMF, OECD, EIU and other private sector forecasters.

**Figure 1: Telstra CPI forecasts FY2014 to FY2019**



Telstra's annual inflation forecast for each year of the new regulatory period is set out below:

**Table 1: CPI forecasts**

Year	Inflation forecast
FY2014	2.7%
FY2015	2.8%
FY2016	3.0%
FY2017	2.8%
FY2018	2.8%
FY2019	2.6%

**(b) The method used to determine the forecasts in Rule 8(a)  
[Explanatory statement request 9(b)]**

**Introduction – General Approach**

To address the requirements specified within the BBM RKR, and to provide a robust, forward-looking view of relevant expenditure (whilst seeking to minimise the inclusion of non-relevant expenditure), Telstra has relied on detailed, bottom-up estimates, drawing on specialists within Telstra's Operations, Finance and Wholesale Business Units.

The operating expenditure forecasts are comprised of four key elements:

- (a) estimated operating expenditure that is directly and indirectly attributable to the relevant FLSM asset classes and relevant fixed line services, as incurred by the Telstra Operations Business Unit, excluding operating expenditure relating to capital projects;
- (b) estimated direct and indirect operating expenditure related to capital projects (referred to as project operating expenditure, or "propex"), based on analysis of the RKR capital expenditure forecasts and estimates of the ratio of propex to capital expenditure attributable to the FLSM asset classes;
- (c) estimated operating expenditure attributable to the regulated fixed line services (ULLS, LSS, WLR, LCS, PSTN OA, PSTN TA and WDSL) as incurred by the Telstra Wholesale Business Unit. These estimates reflect the cost to Telstra of developing, marketing and managing the regulated fixed line access services; and
- (d) an estimated percentage mark-up to reflect a contribution toward un-attributable costs (e.g. a contribution towards corporate overheads).

In effect, the operating expenditure estimates are calculated using the following formula:

$$\text{opex}_{it} = (\text{TOPsOpex}_{it} + \text{Propex}_{it} + \text{TWOpe}_{it}) \times (1 + \text{OH}\%)$$

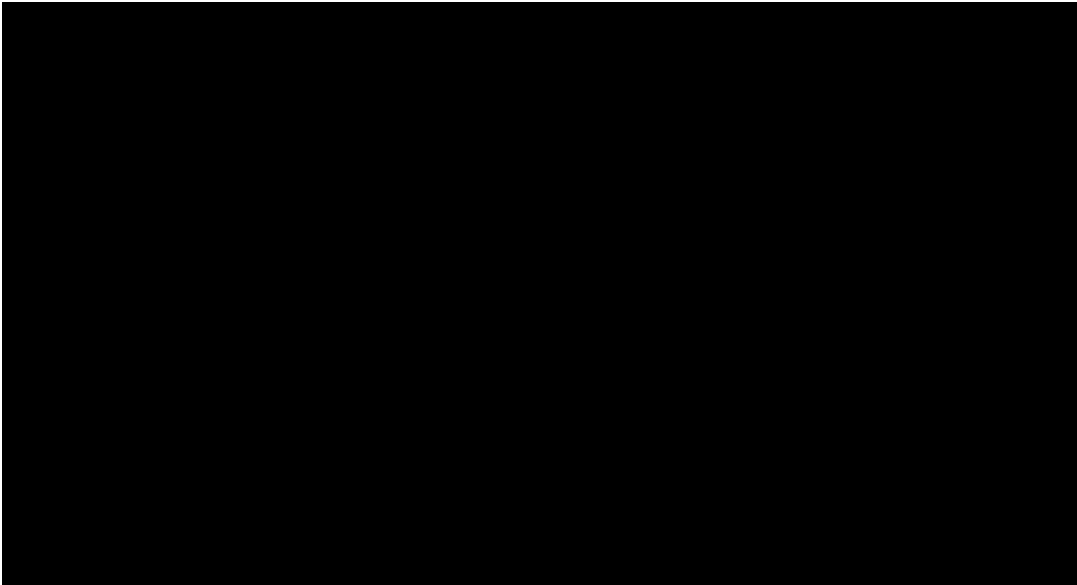
Where,  $\text{opex}_{it}$  is Telstra's estimate for operating expenditure for the FLSM asset category  $i$  (including indirect assets) at time  $t$ .

The only exception to the above approach was that used to provide forecast operating expenditure estimates for the LSS Equipment asset class. Due to the definition of the LSS Equipment class,

generating a bottom-up forecast of costs (using a similar approach as for the other FLSM asset classes) is not possible. Instead Telstra has generated forecasts based on Regulatory Accounting Framework (“RAF”) estimates, a similar approach to that used by the ACCC for the previous FAD period.

The following chart shows the relevant contributions to the operating expenditure forecast estimates for FY2014:

**Figure 2: Contributions to operating expenditure forecast estimates [C-I-C starts]**



**[C-I-C ends]** The following sections set out:

- the approach, data sources and key assumptions used in the estimation of relevant operating expenditure incurred by the Telstra Operations Business Unit;
- the approach, data sources and key assumptions used in the estimation of relevant operating expenditure incurred by the Telstra Wholesale Business Unit;
- The approach used to estimate relevant project operating expenditure;
- The approach used to estimate a contribution towards unattributable operating expenditure;
- The approach used to estimate operating expenditure for the “LSS Equipment” FSLM asset class; and
- The approach used to sum the individual operating expenditure estimates related to Telstra Operations, Telstra Wholesale and project operating expenditure; the application of the contribution for unattributable costs and the application of these estimates to the BBM RKR template.

### ***Estimation of Telstra Operations’ contribution to relevant operating expenditure***

The majority **[C-I-C starts]** [REDACTED] **[C-I-C ends]** of relevant operating expenditure is forecast to be incurred by the Telstra Operations Business Unit.

Telstra Operations is responsible for all aspects of the design, engineering, architecture, construction, and operation of Telstra’s networks, technology and information technology, plus the delivery of customer services across those networks. The group’s responsibilities also include (among other things):

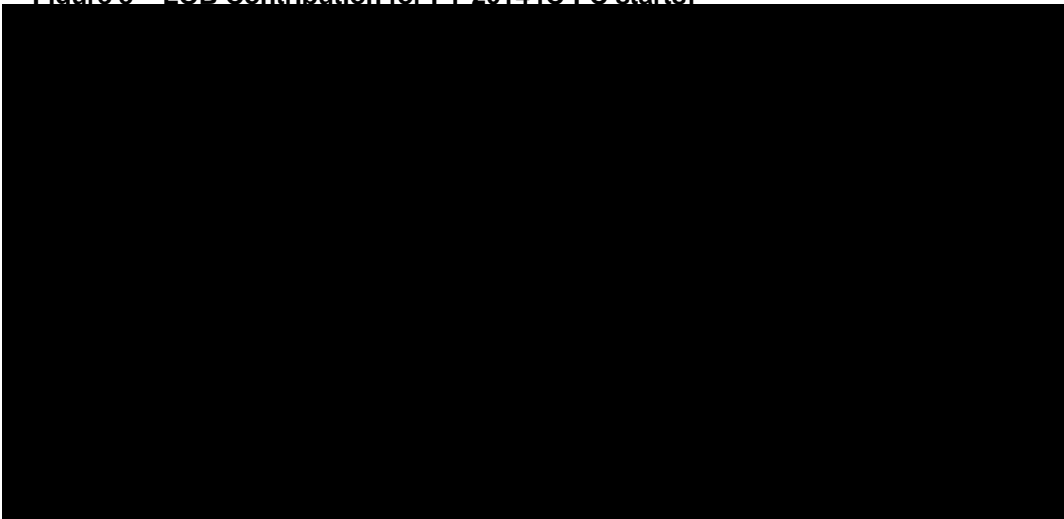
- identifying emerging technologies and representing Telstra in the setting of industry technology standards;
- the build, augmentation, integration and cutover of communication networks and systems;
- provision of IT infrastructure, architecture and applications, and IT business integration;
- delivery of Telstra's Information Technology change program which is part of Telstra's overall business, network and technology change program;
- operation of Telstra's network platforms, internet-based products and services and customer networks and devices; and
- activation and fault repair of all customer services across Australia.

In order to derive estimates for the contribution to relevant operating expenditure incurred by Telstra Operations, specialists in Telstra's Finance Business Unit (with responsibility for the Operations Business Unit), in conjunction with finance and planning specialists within Telstra' Operations Business Unit were tasked with estimating operating expenditure (excluding capital projects expenditure) covering all network, IT and service related expenditure (including labour, materials and management costs) directly and indirectly attributable to the asset classes set out in the FLSM or directly and indirectly attributable to the fixed line services.

Four Lines of Business (“**LOBs**”) within Telstra Operations completed this detailed task – Customer Service Delivery (“**CSD**”), Networks, Service Operations and IT Services. Telstra Operations Finance team also assessed the business unit-wide support costs relevant to the FLSM. LOB's not included for the purposes of preparing forecasts were Network Applications and Services and the NBN LOB.

The following chart sets out the relative contribution of each LOB for FY2014:

**Figure 3 – LOB Contribution for FY 2014 [C-I-C starts]**



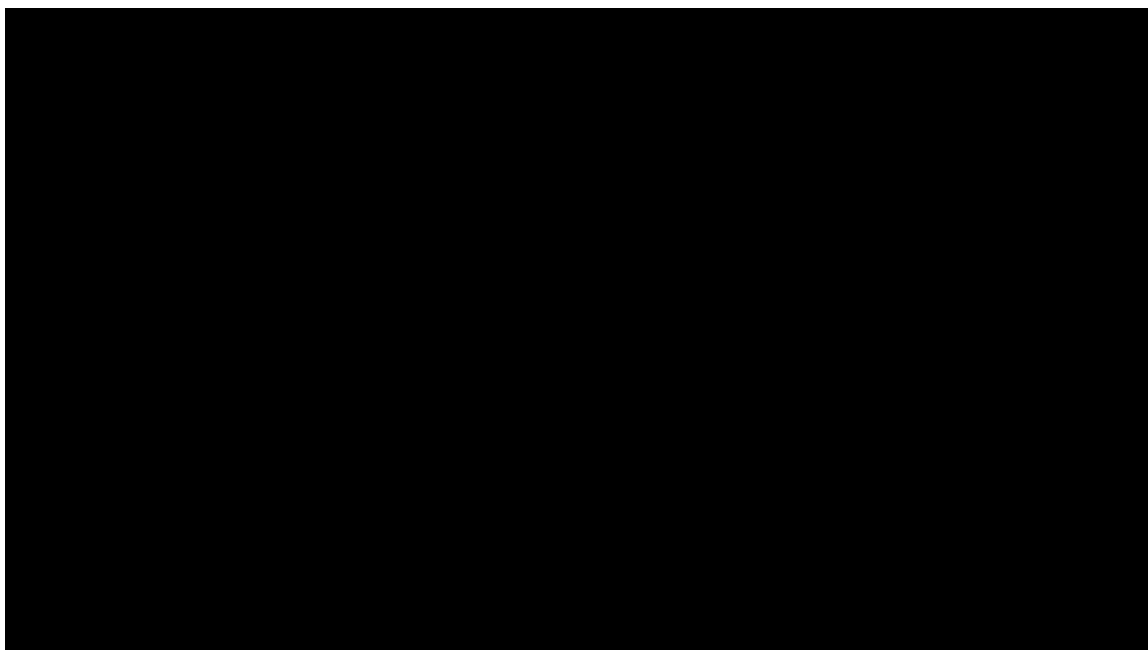
**[C-I-C ends]** In general terms, each included LOB applied the following approach and assumptions for estimation of direct and indirect operating expenditure relevant to the FLSM asset classes and the fixed line services:

- (a) estimates are for all direct and indirect operating expenditure (including labour, materials and LOB overhead costs – such as training and management) relevant to the FLSM asset classes, other than propex. Propex estimates have been excluded, as these are sourced separately, based on the capital expenditure forecasts;

- 
- (b) for direct operating expenditure, LOBs generally utilised reports generated from Telstra's General Ledger reporting systems ("**HYPERION**"), to extract operating expenditure written directly against asset categories that map to the relevant FLSM asset classes. In circumstances where direct operating expenditures for a given LOB are not written against asset categories, or where certain expenditures are not written against asset categories, alternative approaches were used (such as FTE activity surveys);
- (c) for indirect operating expenditure, Telstra's internal Network Cost Allocator ("**NECTAR**") was used to determine relevant indirect operating expenditure by allocating a proportion of indirect operating expenditure incurred by the LOB, based on the cost drivers within NECTAR. The NECTAR model is used throughout Telstra for the allocation of common costs and shared network costs to products and services. Among other things it is allocation basis for the Telstra Economic Model ("**TEM**") and the RAF reports; and
- (d) each LOB estimated forecast operating expenditure for a base year. For CSD, the base year used was FY2013, each other LOB estimated a base year for FY2014.

Each LOB's contribution to the overall estimate of CAN, Core and Indirect operating expenditure varies significantly, and the relative importance of estimates for Direct and Indirect operating expenditure will vary by LOB, as set out in Figure 4 below:

**Figure 4: LOB contribution to CAN, Core and Indirect operating expenditure [C-I-C starts]**



**[C-I-C ends]** The following section sets out the particular approach, data sources and assumptions used by each LOB is estimating relevant operating expenditure.

#### Customer Service Delivery LOB

The CSD LOB is responsible for two key activities in the provision of services and solutions for Telstra's wholesale and retail customers: "activation" and "assurance". Activation describes the installation, setting up and switching on of products and services. Assurance is the process of maintaining products and services and managing and repairing faults.

In FY2014, CSD's total operating expenditure budget is [C-I-C starts] [REDACTED] [C-I-C ends]. Based on an assessment of operating expenditure incurred by CSD attributable either to the relevant FLSM asset categories, or otherwise attributable to the provision of the fixed line services, the estimated relevant operating expenditure for FY2014 is [C-I-C starts] [REDACTED] [C-I-C ends]. This equates to approximately [C-I-C starts] [REDACTED] [C-I-C ends] of CSD's FY2014 operating expenditure budget (excluding depreciation and amortisation).

The approach and data sources used in compiling CSD operating expenditure estimates is set out below.

- (a) In order to estimate a FY2014 view of relevant operating expenditure, the CSD finance team and subject matter experts within the LOB undertook a detailed, bottom-up analysis of direct and indirect operating expenditure incurred in FY2013. The resulting estimates were then uplifted by CPI to provide a FY2014 figure. This approach was used rather than applying proportionate figures to CSD estimated FY2014 budget. [C-I-C starts] [REDACTED] [C-I-C ends]

- (b) Estimates for direct and indirect operating expenditure were sourced from the CSD regional field work groups as well as central support groups. CSD workforce groups involved in the provision and maintenance of services not relevant to the fixed line services (such as Telstra Plus, Customer Solutions, Premium Solutions and Service Solutions) were excluded.

- (c) *Direct operating expenditure*

Data used in the estimates of direct operating expenditure were sourced from Telstra's General Ledger (using extracts generated by the Hyperion system). Program Opex Reports generated by Investment Management Reporting within the Reporting Centre of Excellence were used to determine relevant direct expenditure based on the asset (and asset category) against which the expenditure was written. The ACCC asset mapping was then used to apply expenditure against relevant asset categories to the FLSM asset classes.

Using this mapping, direct operating expenditure against the following FLSM asset categories was recorded: CAN Copper Cables, CAN Ducts and Pipes, Can Pair Gain Systems, CAN Radio Bearer Equipment, Core Radio Bearer Equipment, Other CAN, Switching Equipment – Local, and Transmission equipment. Almost [C-I-C starts] [REDACTED] [C-I-C ends] of CSD operating expenditure directly attributable to the FLSM asset classes falls under CAN Ducts and Pipes.

- (d) *Inclusion of operating expenditures not written against a particular FLSM asset class, but relevant to the fixed lines services*

Not all CSD activities and expenditures are written against asset categories within the Program Opex Reports. This is for a number of reasons, such as field service technician not selecting an asset when reporting a completed ticket of work, or because a particular item of operating expenditure is not considered to directly impact on an underlying asset, but rather relate to customer services supplied over network assets.

In order to account for these types of costs, Telstra Operations and CSD Finance teams determined those expenditure types that related to the fixed line services supplied over the FLSM asset classes, but were not otherwise allocated to a particular asset class.

These expenditures activities include routine copper cable maintenance, proactive maintenance for copper and fibre cable, and fault reporting.

Telstra Operations and CSD Finance teams allocated these costs to FLSM asset classes based on the expenditure description and their relevance to the different FLSM asset classes.

(e) *Indirect operating expenditure*

Estimates of indirect operating expenditure relevant to the FLSM asset classes were based on cost driver at the LOB level and use of the NECTAR cost allocation model. As for direct operating expenditures, data were extracted from Telstra's general ledger, reported by Activity drivers. Discussions were held with relevant subject matter experts within CSD to determine drivers relevant to the FLSM asset classes to facilitate the apportionment of management overheads and general support activities.

Networks LOB

The Networks LOB within Telstra Operations is responsible for the planning, design, deployment and performance of Telstra's access, core and service enabling networks, including the fixed line network CAN and Core.

In FY2014, the Networks LOB total operating expenditure budget is [C-I-C starts] ██████████ ██████████ [C-I-C ends]. Based on an assessment of operating expenditure incurred by Networks attributable either to the relevant FLSM asset categories, or otherwise attributable to the provision of the fixed line services, the estimated relevant operating expenditure for FY2014 is [C-I-C starts] ██████████ ██████████ [C-I-C ends]. This equates to approximately [C-I-C starts] ██████████ [C-I-C ends] of Network's FY2014 operating expenditure budget (excluding depreciation and amortisation).

The following approach was used to estimate the Networks LOB's contribution to relevant operating expenditure:

- For each function within Networks - Fixed and Direct Access Engineering ("FDAE"), Consumer and Mobility Product Engineering ("CMPE"), Asset and Facility Management ("AFM") and Transport and Routing Engineering ("TRE") - subject matter experts provided function-level estimates of the relevant direct and indirect operating expenditure for the FLSM asset classes;
- The major categories of operating expenditure incurred by Networks are labour, service contracts and license fees and costs associated with network rent and network buildings support (such as power charge). Data for labour, materials and overhead costs were extracted from the Telstra Data Warehouse. Data to service contracts managed by the Networks LOB were extracted from CSAM, a contract management system;
- Finance teams within the function areas of Networks determined estimates for operating expenditure for the CAN FLSM asset classes by summing Labour, Contract Services Agreements, licence fees and overhead costs that could be directly attributed to asset categories that mapped to the CAN FLSM assets classes. The same approach was also used with respect to determine estimates for the Core network FLSM asset classes;
- Relevant indirect operating expenditure – including expenditure on network rent and network building support – were estimated based on data drawn from the Telstra Data Warehouse, with relevant costs allocated to the FLSM asset classes based on the identified network element; and
- The ACT Utility Tax was excluded from the operating expenditure estimates.

## Service Operations LOB

Service Operations is responsible for the security, reliability, quality and speed of response and restoration of Telstra's network and IT systems. Service Operations operates Telstra's Global Operations Centre.

In FY2014, Service Operations' total operating expenditure budget is [C-I-C starts] [REDACTED] [C-I-C ends]. Based on an assessment of operating expenditure incurred by Service Operations attributable either to the relevant FLSM asset categories, or otherwise attributable to the provision of the fixed line services, the estimated relevant operating expenditure for FY2014 is [C-I-C starts] [REDACTED] [C-I-C ends]. This equates to approximately [C-I-C starts] [REDACTED] [C-I-C ends] of Service Operations' FY2014 operating expenditure budget (excluding depreciation and amortisation).

The following approach was used to estimate the Service Operations LOB contribution to relevant operating expenditure:

- The predominant driver of operating expenditure within Service Operations is labour costs. Telstra Services Labour costs are not directly booked against asset categories within Telstra's accounting systems. In order to determine reasonable allocations of operating expenditure to the relevant asset classes, the TEM and NECTAR were employed;
- An internal survey used in the preparation of the TEM was sent to Business Operations Managers within Service Operations in August 2013. The survey asked each team within Service Operations to determine the number of FTE staff allocated to the fixed line services – specifically ULLS, LSS, WLR/LCS, Retail Basic Access, Wholesale DSL and PSTN OA and TA. Retail services (such as BigPond ADSL) and non-CAN services (such as mobiles) were excluded. (It should be noted that Retail Basic Access services and WLR are managed equivalently by Service Operations); and
- A proportion of Telstra Services operating expenditure budget for FY2014 was then applied to the set of FLSM asset classes based on the overall proportion of FTE staff reported to be allocated to the TEM products. The TEM allocators (provided through NECTAR) were then used to apportion this amount to the individual FLSM asset classes.

## IT Services LOB

The IT Services LOB is responsible for the management of Telstra's Information Technology ("IT") systems – including operating support systems and business support systems used in the management and operations of Telstra fixed network assets and fixed line services.

In FY2014, IT Services' total operating expenditure budget is [C-I-C starts] [REDACTED] [C-I-C ends]. Based on an assessment of operating expenditure incurred by IT Services attributable either to the relevant FLSM asset categories, or otherwise attributable to the provision of the fixed line services, the estimated relevant operating expenditure for FY2014 is [C-I-C starts] [REDACTED] [C-I-C ends]. This equates to approximately [C-I-C starts] [REDACTED] [C-I-C ends] of CSD's FY2014 operating expenditure budget (excluding depreciation and amortisation).

The predominant operating expenditure for IT Services is the cost of operating and maintaining Telstra's IT systems. The following approach was used to estimate the IT Services LOB contribution to relevant operating expenditure:

- all IT Applications allocated via NECTAR (i.e. considered to have an impact on network assets) were isolated. Based on this exercise, the following Applications were included:
  - MITS - Module Inventory Tracking System; the Telstra Database of Record ("DBoR") for inter-exchange network inventory and its physical connections;



- 
- TPNI - Telstra Physical Network Inventory, which aids in the planning, design, construction, utilisation and maintenance of Telstra's Customer Access Network, and the Inter Exchange Network;
  - CRAMER-LI – supports business activities related to the management of logical network inventory;
  - TRUESOURCE - is a Network Discovery and Inventory Reconciliation system used to compare and align live Telstra Network Inventory data with logical inventory systems data;
  - XDM - Cross Domain Manager, which provides the capacity to manage network functions across multiple domains;
  - STS - Sales Transaction Solution is a Front of House system (replacement for PHOENIX and AOE). STS supports the sales process end to end; and
  - NPAMS - Network Plant Assignment and Management System, manages the Telstra CAN and allocation of telephone numbers. NPAMS is the DBoR for Copper and Pair Gain Systems in the CAN;
  - the NECTAR allocators for each of these systems were then used to determine the proportion of operating expenditure assigned to each system to be allocated to the FLSM asset classes. Overall, approximately [C-I-C starts] [redacted] [C-I-C ends] of applications costs for the above systems were allocated to the FLSM asset classes; and
  - to generate a FY2014 estimate, the estimated application costs for FY2013 were apportioned to the IT Services budget, adjusted to remove project operating expenditure. A blended uplift factor to account for IT Services management, support and training was then applied of [C-I-C starts] [redacted] [C-I-C ends].

#### Telstra Operations Business Unit Support

Telstra Operations Business Unit Support refers to those groups within Telstra Operations that provide whole of Business Unit support. Specifically, the Asset and Facilities Management group, the Labour and Contract Management Group and the Business Performance Management Group. To estimate the Telstra Operations Business Unit Support contribution to relevant operating expenditure, the proportion of the FY2014 aggregate budget for the CSD, Networks, Service Operations and IT Services LOBs that had been estimated to apply to the FLSM asset classes was applied to the respective FY2014 budgets of each support group.

#### ***Estimation of project operating expenditure contribution to relevant operating expenditure forecasts***

Forecasts for project operating expenditure – that is, operating expenditure related to and driven by capital expenditure projects (generally referred to as propex) - were calculated based on the capital expenditure forecasts. For more details on the approach and assumptions used in preparing the capital expenditure forecasts please refer to section 5.1.2 below.

Telstra first estimated a capital expenditure to propex ratio based on historical data on capital projects (which were relevant to the capital expenditure forecasts) and propex over the past three years. Telstra then applied these ratios to its “asset class” level forecasts within capital projects to generate propex forecasts for each asset class. These forecasts were applied to the relevant FLSM categories to generate propex forecasts.

#### ***Estimation of Telstra Wholesale contribution to relevant operating expenditure forecasts***

The following section sets out the approach adopted by Telstra to estimate the forecast operating expenses attributable to the operation of the Telstra Wholesale Business Unit, with respect to the costs related to the development and supply of the regulated fixed line services (PSTN OA and TA, ULLS, LSS, WDSL, WLR and LCS).

In order to estimate these costs, the Telstra Wholesale Finance Group used the TEM cost allocations (derived from the NECTAR model), to estimate relevant direct and indirect operating expenditure allocated to these services from FY2011 to FY2013. These are set out in the following table:

**Table 2: Estimates of relevant direct and indirect operating expenditure (FY2011 to FY2013) [C-I-C starts]**

	FY2011	FY2012	FY2013	Average FY2011 to FY2013
<b>Total Direct and Attributable Indirect Costs – TW Business Unit</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>
<b>Total Direct and Attributable Indirect Costs - Fixed Line Services</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>
<b>Total Direct and Attributable Costs - Fixed Line Services, as a % of Total TW Direct and Attributable Costs</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>	<b>[REDACTED]</b>

[REDACTED] [C-I-C ends]. To estimate the contribution of Telstra Wholesale to relevant operating expenditure for FY2014, the calculated proportion was applied to the Telstra Wholesale operating budget for FY2014.

### ***Estimate of contribution to corporate overhead costs***

The estimates for relevant operating expenditure as incurred by Telstra Operations (including project operating expenditure) and Telstra Wholesale capture the direct and indirect operating expenditure relevant to the FLSM asset classes and the fixed lines services. However, the approach used in the estimation of these costs does not account for a contribution towards unattributable costs (e.g. corporate overheads) incurred by Telstra in its operations.

To estimate a percentage mark-up to account for these unattributable operating costs, Telstra has relied on estimates from the TEM. Within the TEM profit and loss statements, estimates of unattributable costs are set out as a component of total costs (made up of service costs, costs of goods sold, attributable (or indirect cost), unattributable costs and depreciation) allocated to services and groups of services supplied by Telstra.

Unattributable costs include those associated with support units such as: Human Resources; Legal; and Finance and Strategy. The distribution of corporate administration expenses (to products) is primarily driven by Labour or Revenue mark-ups derived from the "core" business units (e.g. Operations, Retail, Wholesale). In certain instances direct-to-product allocations are used if deemed appropriate.

The following table provides an extract from TEM for June 2013, showing unattributable costs as a percentage of total attributable and unattributable costs (excluding depreciation), for each of the regulated fixed line services. Depreciation has been excluded as the mark-up will be applied to forecast costs excluding depreciation.

**Table 3: Total attributable and unattributable costs for regulated fixed line services, FY2013 [C-I-C starts]**

	ULL	Spectrum Sharing	Wholesale DSL	Local Carriage Services - Access	Local Carriage Services - Calls	Fixed Interconnect	Total Regulated Fixed Services
Total attributable costs							
Total unattributable cost							
<b>Total Cost</b>							
Unattributable as % of Total Cost							

[REDACTED] [C-I-C ends].

Telstra has used the estimate of the percentage of unattributable costs to total costs (excluding depreciation) for the aggregate group of regulated fixed line services [C-I-C starts] [REDACTED] [C-I-C ends] to apply as a mark-up to the direct and indirect operating expenditure estimates.

#### ***Estimation of operating expenditure for LSS Equipment***

Due to the definition of the LSS Equipment class, generating a bottom-up forecast of costs (using a similar approach as for the other FLSM asset classes) is not possible. Instead Telstra has generated forecasts based on RAF estimates, the same underlying data source as that used in the FLSM for the Previous Regulatory Period (for more detail on LSS Equipment asset class, please refer to the Comparison Statement).

To derive an LSS Equipment operating expenditure estimate for FY2014, Telstra has averaged operating expenditure attributable to LSS within the RAF for the FY2012 and FY2013 RAF reports. [C-I-C starts] [REDACTED]

[REDACTED] [C-I-C ends].

Given the above, Telstra has estimated forecast values for LSS Equipment operating expenditure for FY2015 to FY2019 by uplifting the FY2014 base estimate by forecast CPI in each year.

#### ***Building up the operating expenditure estimates for inclusion in the RKR data template***

As set out above, operating expenditure forecasts were built up from several sources. These included Telstra Operations, Telstra Wholesale, the Investment Management group within Finance, and the Regulatory Accounting group within Finance. The following steps were followed to build up the operating expenditure forecasts for inclusion:

- direct operating expenditure (including for the FLSM category Indirect CAN Assets and Indirect Core Assets, but excluding LSS Equipment) is comprised of the forecasts provided by Telstra Operations and the Investment Management propex forecasts. The forecasts for each FLSM asset category were summed and uplifted by the unattributable cost ratio;

- indirect operating expenditure is comprised of the forecasts provided by Telstra Operations and Telstra Wholesale. The forecasts were summed and uplifted by the unattributable cost ratio; and
- direct operating expenditure forecasts are not at an individual product level, and so operating expenditure for LSS is assumed to be included in the total Core operating expenditure forecast. To remove the possibility of any double counting, the forecasts for each of the other Core FLSM categories were decreased by a proportional amount of the LSS operating expenditure. This ratio was calculated as the FLSM asset category operating expenditure forecast compared to the total Core operating expenditure forecast for each year in the forecast regulatory period.

**(c) The assumptions used to determine the forecasts in Rules 8(a); and [Explanatory statement request 9(c)]**

Details of the assumptions used to determine the forecasts in Rule 8(a) are set out in section 5.1.1 above.

**(d) The basis for the assumptions [Explanatory Statement request 9(d)]**

[C-I-C starts] [Redacted text block]

[REDACTED]

[REDACTED]

[REDACTED]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]



[Redacted header]

[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]

[C-I-C ends]

- (e) **The cost drivers used for each expenditure class.**  
[Explanatory statement request 10(a)]

Details of the cost drivers used for each expenditure class are set out in section 5.1.1 above.

- (f) **The cost allocations (and underlying methodology behind the allocations) with respect to any common or joint costs related to shared facilities or network elements, and an explanation of how these accord with the Fixed Line Services Model; and**  
[Explanatory statement request 10(b)]

The cost allocations and underlying approaches to the allocations used in the estimation of relevant operating expenditure are set out throughout the responses in 5.1.1 above. Where a proportion of common or joint costs has been estimated to apply to a FLSM asset class (or to indirect operating expenditure relevant to the fixed line services), NECTAR was the primary cost allocation model used to allocate these costs.

With respect to the FLSM, as set out in detail in the Comparison Statement, the approach Telstra has adopted for the estimation of forecast operating expenditure differs from the approach used in the Previous Regulatory Period. As such, different costs are recorded and a different set of cost allocators than those used previously will be required to account for these estimates and their contribution to the fixed line services access prices within the FLSM.

- (g) **A report comparing forecasts for the previous Regulatory Period with actual Operating Expenditure for that period, and an explanation of any differences, trends and drivers**  
[Explanatory statement request 10(c)]

Please refer to the Comparison Statement.

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**5.1.2. Rule 8(b): Forecast total annual Capital Expenditure specified for each FLSM Asset Class, expressed in nominal terms.**

*[This section has been intentionally deleted from this document –please refer to amended RKR document of February 2014 for this section]*

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## 5.2. Demand forecasts

This section sets out Telstra's explanation of how it has forecasted demand for the various services/products as required by the BBM RKR.

### 5.2.1. Rule 8(c): Forecast annual Demand for the following Fixed Line Services:

#### 5.2.1.1. ULLS SIOs, by geographic Band

*[Explanatory statement request 9(b) – (d)]*

The forecast estimates for ULLS SIOs have been developed by the Telstra Wholesale ULLS and LSS Product Manager using broadly the same methodology used in Telstra's business planning processes. This methodology is described below. Any variations to this approach that have been required to accommodate the particular requirements of the BBM RKR (e.g. the requirement to provide forecasts for ULLS SIOs on a Band basis and to provide forecast data to FY2019) are also set out below.

Telstra uses a spread sheet model to forecast ULLS SIOs on a monthly basis for each ULLS customer. These forecasts are then aggregated to provide an annual forecast for all customers.

[C-I-C starts]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

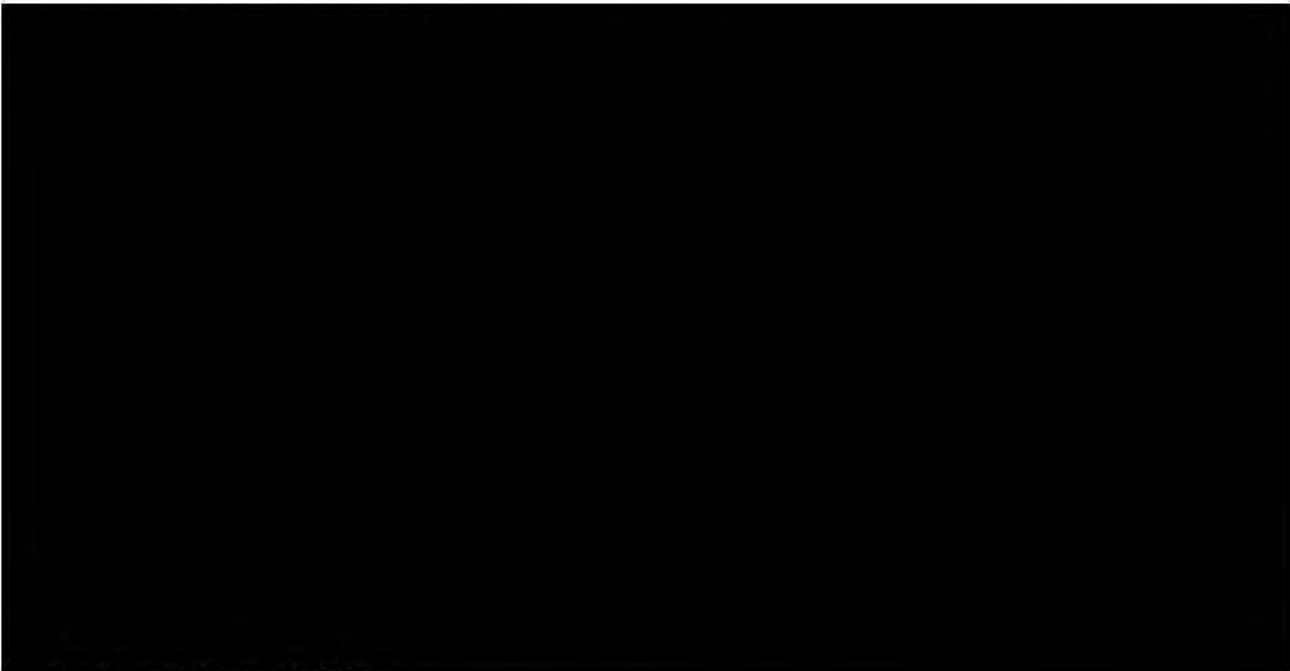
[REDACTED]

[REDACTED]

[C-I-C ends]

The following chart sets out the actual and forecast values for aggregate ULLS SIOs, total ULLS connections and total ULLS disconnections for each month from June 2010 to June 2019:

**Figure 16: Total Connections, Total Disconnections and SIOs for ULLS, June 2010 to June 2019 (Actuals and Forecasts) [C-I-C starts]**



[C-I-C ends] Impact of NBN

The data for cumulative losses to NBN are sourced from Telstra Wholesale’s Senior Commercial Manager. The annual cumulative forecast volumes used by the ULLS Product Manager within the ULLS forecasting model are set out in the table below:

**Table 9: NBN Assumptions – ULLS impact [C-I-C starts]**

	13/14	14/15	15/16	16/17	17/18	18/19
<b>NBN Assumptions - ULLS impact</b>	██████	██████	██████	██████	██████	██████

[C-I-C ends] Please see Attachment 1 for further information on how these NBN assumptions are determined.

Allocating ULLS demand forecast to geographic bands

Table 10 below shows the number of ULLS SIOs by band as at June 2013.

Table 10: Allocation of ULLS forecasts into geographic bands [C-I-C starts]

ULLS Band	ULLS SIOs	Percentage of total
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED] [C-I-C ends]

Figure 17: Split of ULLS SIOs by ULLS Band, June 2010 to June 2013 (quarterly actuals), June 2014 to June 2019 (annual forecasts) [C-I-C starts]



[C-I-C ends] Please see Attachment 1 for further information on how these NBN assumptions are determined.

**5.2.1.2. LSS SIOs**

**[Explanatory statement request 9(b) – (d)]**

The forecast estimates for LSS SIOs have been developed by Telstra Wholesale’s ULLS and LSS Product Manager using broadly the same methodology as that used for forecasting estimates for ULLS SIOs.

Telstra uses a spreadsheet model to forecast LSS SIOs on a monthly basis for each customer. These forecasts are then aggregated to provide a total forecast.

[C-I-C starts]

[REDACTED]

[C-I-C ends]

The following chart sets out the actual and forecast values for Net LSS SIOs, total LSS connections and total LSS disconnections for each month from June 2010 to June 2019:

**Figure 18: Total Connections, Total Disconnections and SIOs for LSS, June 2010 to March 2019 (Actuals and Forecasts) LSS SIOs [C-I-C starts]**



[C-I-C ends] *Impact of NBN*

The data for losses to NBN are sourced from Telstra Wholesale's Senior Commercial Manager. The annual forecast volumes used by the LSS Product Manager within the LSS forecasting model are set out in Table 11 below:

**Table 11: NBN Assumptions – LSS impact [C-I-C starts]**

	13/14	14/15	15/16	16/17	17/18	18/19
<b>NBN Assumptions - LSS impact</b>	██████	██████	██████	██████	██████	██████

[C-I-C ends] Please see Attachment 1 for further information on how these NBN assumptions are determined.

**5.2.1.3. WLR SIOs, by geographic Band**  
**[Explanatory statement request 9(b) – (d)]**

The forecast estimates for WLR SIOs have been developed by Telstra Wholesale’s WLR Product Manager using broadly the same methodology used in Telstra’s business planning processes. This methodology is described below. Any variations to this approach that have been required to accommodate the particular requirements of the BBM RKR (e.g. the requirement to provide forecasts for WLR SIOs on a Band basis and to provide forecast data to FY2019) are also set out below.

The following chart sets out actual and forecast values for WLR SIOs as at 30 June each year from June 2010 to June 2019:

**Figure 19: WLR SIOs as at 30 June each year – 2010 to 2019 (Actuals and Forecasts) [C-I-C starts]**



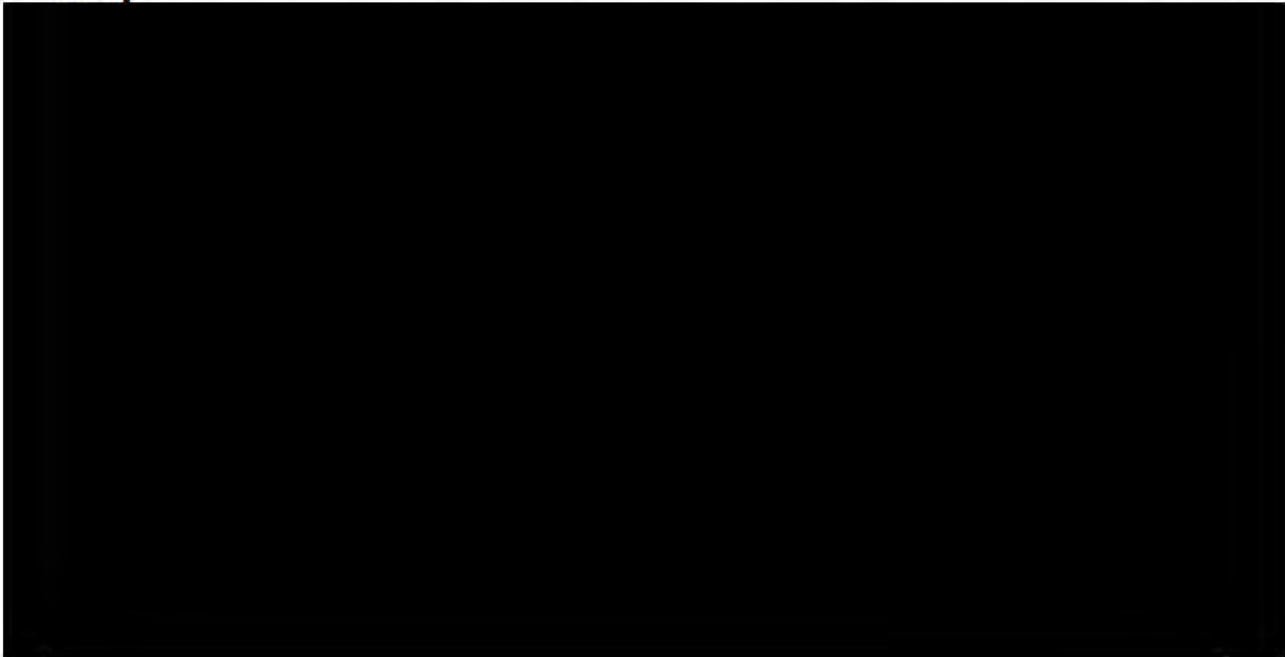


[Redacted text]

[C-I-C ends]

The relative impact of each of the above demand drivers on the estimated change in WLR SIOs between June 2013 (actual) and the June 2014 (forecast) is set out in the following chart:

**Figure 20: Breakdown of WLR SIO movement between June 2013 and June 2014 forecast [C-I-C starts]**



[Redacted text]

[C-I-C ends]

The demand drivers

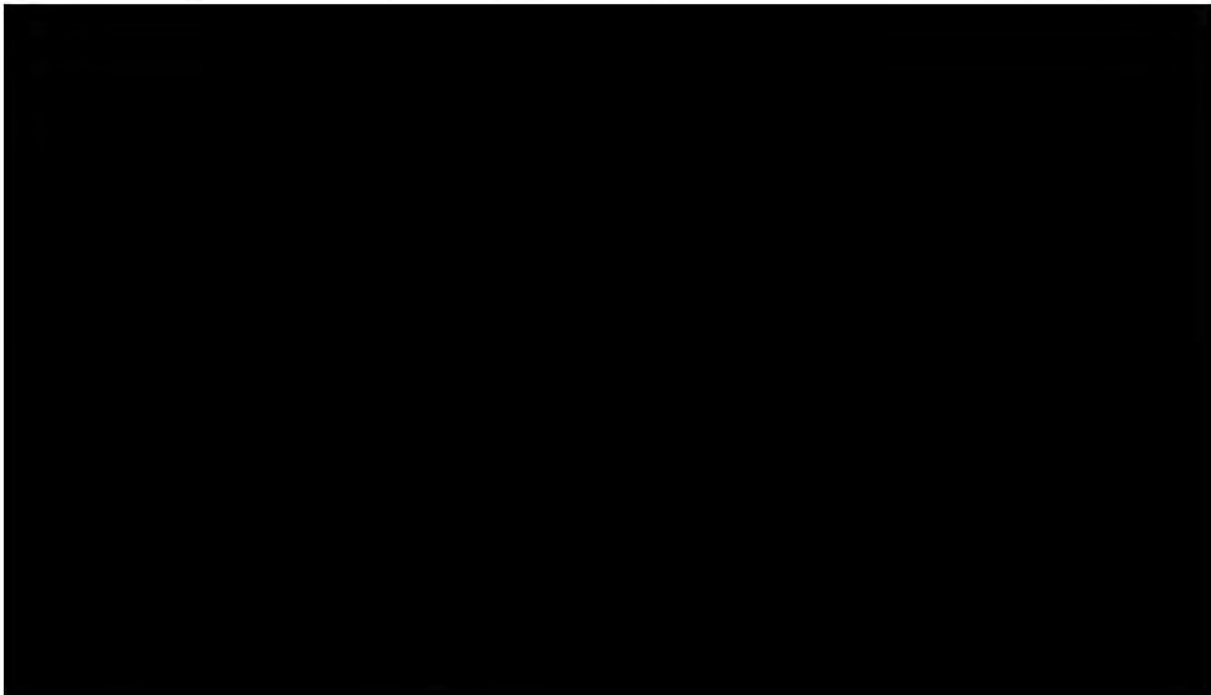
The following section sets out the source and assumptions underpinning the demand drivers that determine the forecast values [C-I-C starts]

[Redacted text]

[C-I-C ends]



**Figure 21: New Connections, In Place Connections and Cancellations for WLR, June 2011 to June 2018 (Actuals and Forecasts) [C-I-C starts]**



[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[C-I-C ends]

Allocating WLR demand forecast to geographic bands

Telstra does not forecast WLR SIOs by WLR band. In order to provide the ACCC with an estimate of the forecast SIOs for WLR by band over the forecast period, Telstra has disaggregated the WLR forecasts into bands using a forecast estimate (i.e. percentage splits). The following chart illustrates that the percentage of WLR SIOs by band has changed slightly over the period June 2010 to June 2013.

**Figure 22: Split of WLR SIOs by ULLS Band, June 2010 to June 2013 (quarterly actuals), June 2014 to June 2019 (annual forecasts) [C-I-C starts]**



#### **5.2.1.4. Total SIOs, by geographic Band** **[Explanatory statement request 9(b) – (d)]**

The BBM RKR defines “Total SIOs” as the sum of:

- (a) Voice-only SIOs;
- (b) DSL-only SIOs; and
- (c) Voice and DSL bundle SIOs.

These categories align to categories of data provided by Telstra through the quarterly Telstra CAN RKR. These categories cross product and service definitions; however they can be reconciled to the sum of specific fixed line services. Specifically, the sum of Voice-only SIOs and voice and DSL bundle SIOs is equivalent to the sum of Telstra PSTN services (retail and wholesale), either provided in conjunction with an ADSL service or supplied as a “voice only service”.

For the purposes of preparing forecasts, Telstra has utilised this relationship in order to provide internally consistent forecasts for WLR, ULLS and Total SIOs.

[C-I-C starts]



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[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

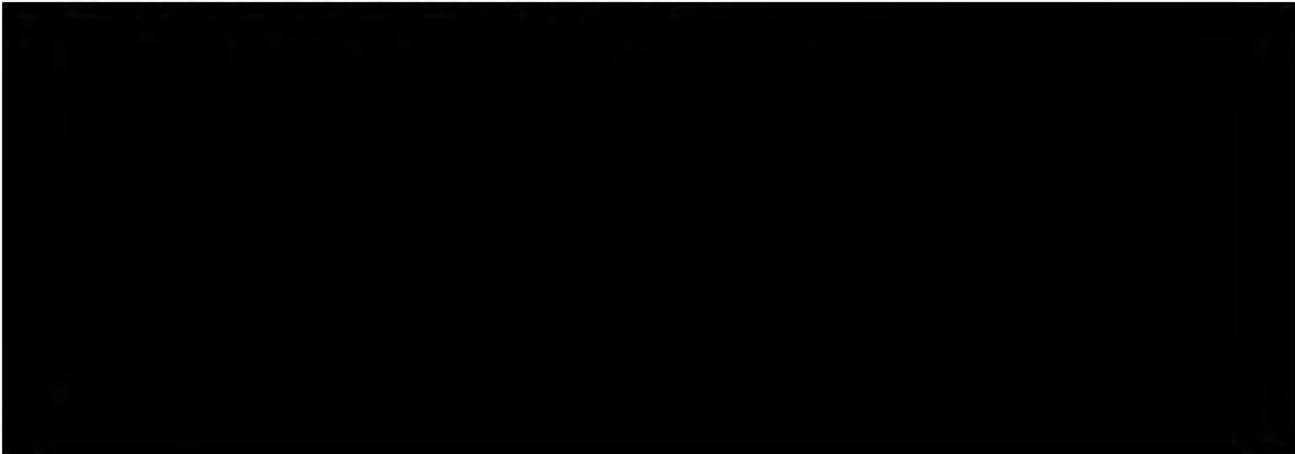
[REDACTED]

[REDACTED]					
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

**[C-I-C ends]** *Allocating the Total SIO demand forecast to geographic bands*

In order to provide the ACCC with an estimate of the forecast Total SIOs by band over the forecast period, Telstra has disaggregated the Total SIO forecasts into bands using a forecast estimate (i.e. percentage splits). The following chart illustrates that the percentage of Total SIOs by band has changed slightly over the period June 2010 to June 2013:

**Figure 24: Split of Total SIOs by ULLS Band, June 2010 to June 2013 (quarterly actuals), June 2014 to June 2019 (annual forecasts) [C-I-C starts]**



[REDACTED]

[REDACTED] **[C-I-C ends]**

**5.2.1.5. PSTN OTA minutes**

*[Explanatory statement request 9(b) – (d)]*

[C-I-C starts]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[C-I-C ends]

The approaches used to forecasting Wholesale PSTN OA/TA and LCI call minutes and Other OTA call minutes are set out below.

Wholesale PSTN OA/TA and LCI call minutes

[C-I-C starts]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

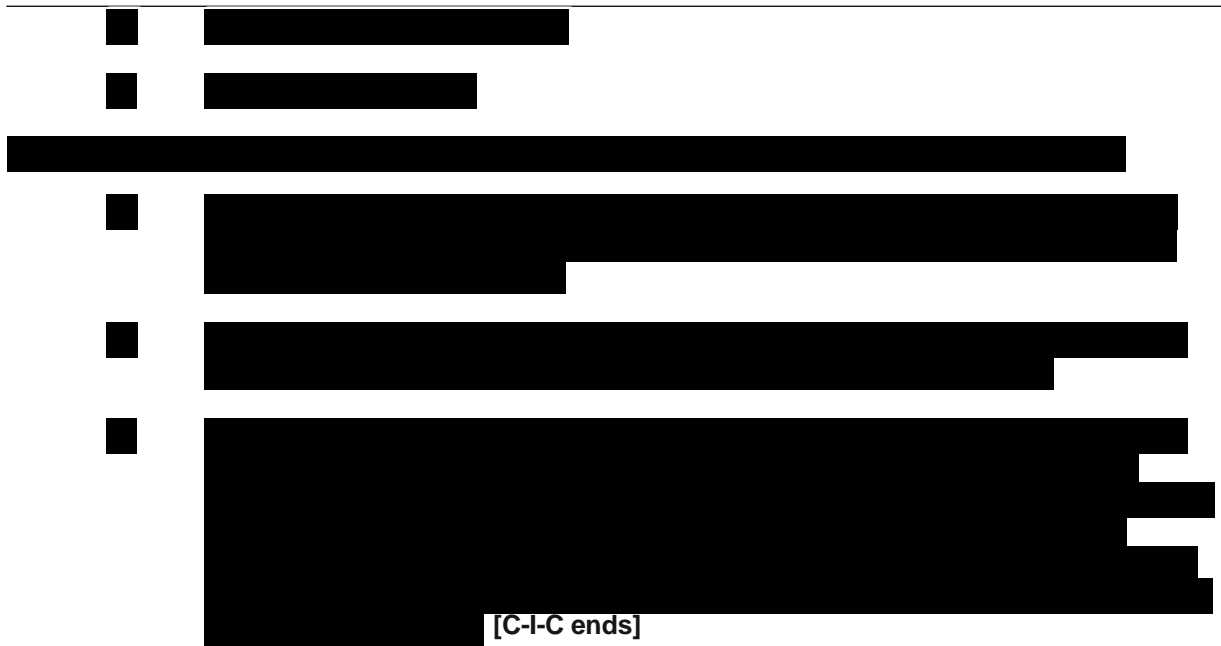
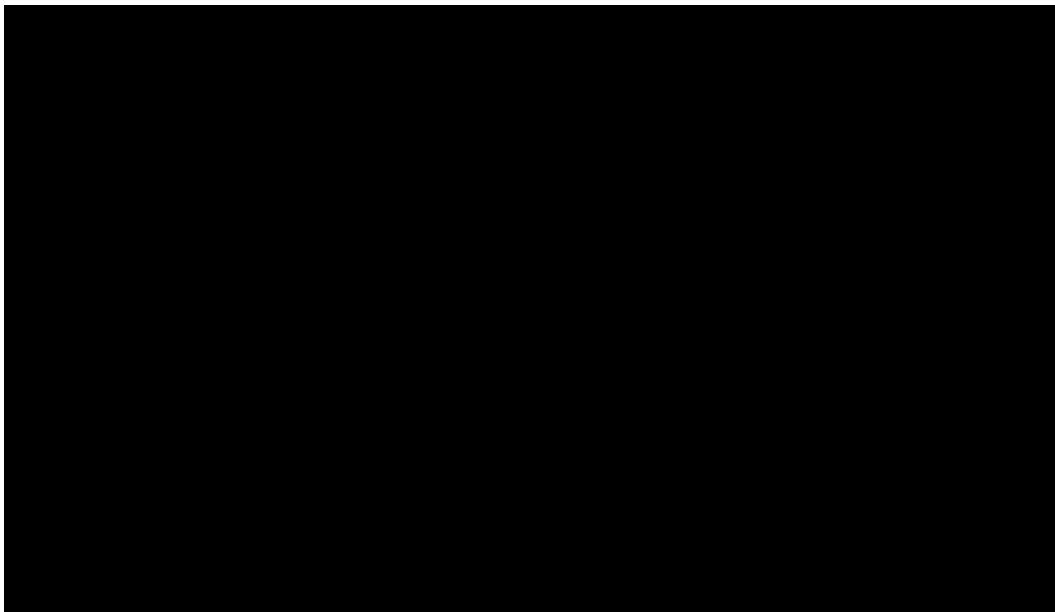


Figure 25: PSTN OTA Total Minutes (Actuals) [C-I-C starts]



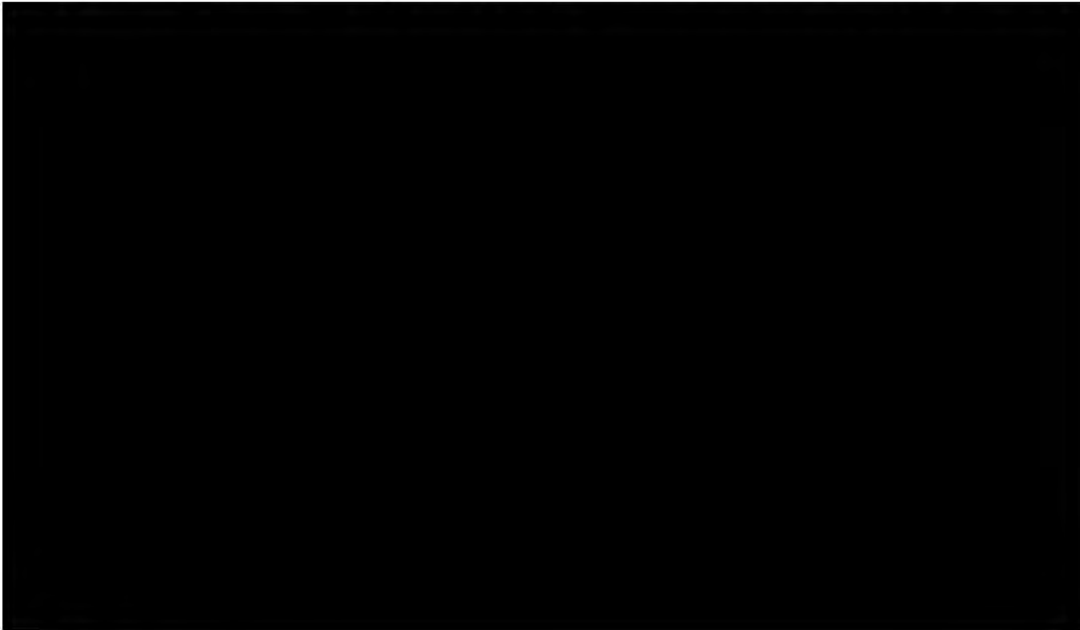


[Redacted]

[C-I-C ends]

Figure 19 below shows Telstra's actual Wholesale PSTN OA/TA and LCI call minutes for the period from FY2012 to FY2013, and forecast volumes for the balance of the forecast period.

**Figure 26: Wholesale PSTN OA/TA and LCI call minutes (Actuals and Forecasts) [C-I-C starts]**



[Redacted]

- [Redacted]
- [Redacted]
- [Redacted]

[C-I-C ends]

'Other' OTA call minutes [C-I-C starts]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[REDACTED]

[REDACTED] [C-I-C ends]

**Table 14: Percentage of total OTA minutes attributable to Wholesale PSTN OTA and “Other” PSTN OTA [C-I-C starts]**

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED] [C-I-C ends]

**Table 15: PSTN OTA Call minutes [C-I-C starts]**

[REDACTED]	[REDACTED]		[REDACTED]						
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]						[REDACTED]	[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]				[REDACTED]	[REDACTED]	

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[C-I-C ends]

Table 16: Total PSTN OTA minutes [C-I-C starts]

	[REDACTED]			[REDACTED]					
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[C-I-C ends]

Table 17: 'Other' OTA Call minutes [C-I-C starts]

	[REDACTED]			[REDACTED]					
	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[C-I-C ends]

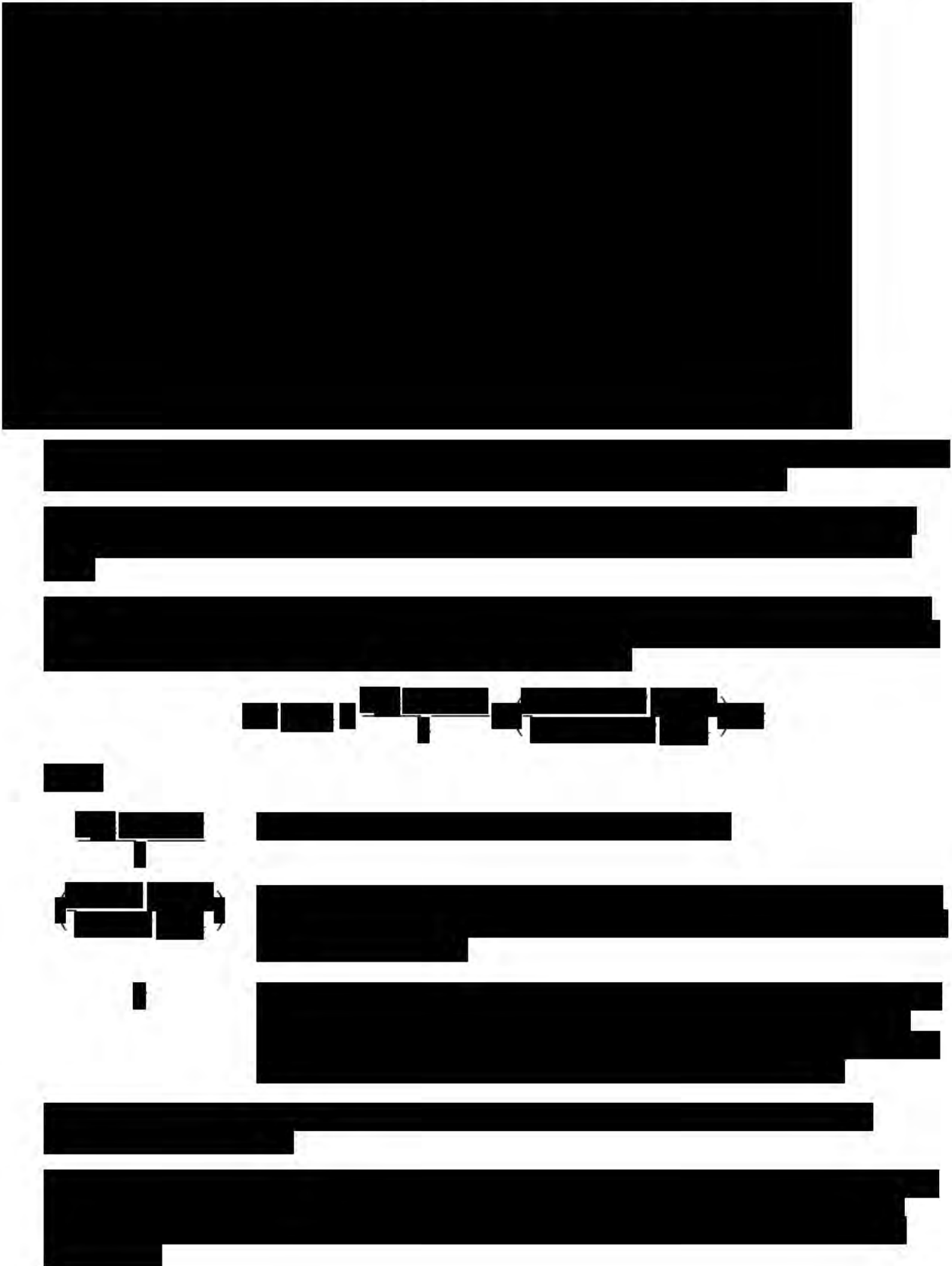
#### **5.2.1.6. LCS minutes and average call duration** ***[Explanatory statement request 9(b)-(d)]***

##### LCS Minutes

Telstra's forecast estimates for the number of LCS calls per financial year for the forecast period have been developed by Telstra's Wholesale LCS Product Manager. The forecast methodology is similar to that used for Telstra's business planning purposes and is described below. To the extent that any variations to the methodology used for business planning purposes have been required to accommodate the particular requirements of the BBM RKR (e.g. the requirement to provide forecast data to FY2019), these are also set out below.

The following chart sets out actual and forecast values for the annual number of LCS Calls from FY2011 to FY2019.

Figure 29: Annual number of LCS calls (Actuals and Forecasts) [C-I-C starts]



[REDACTED]

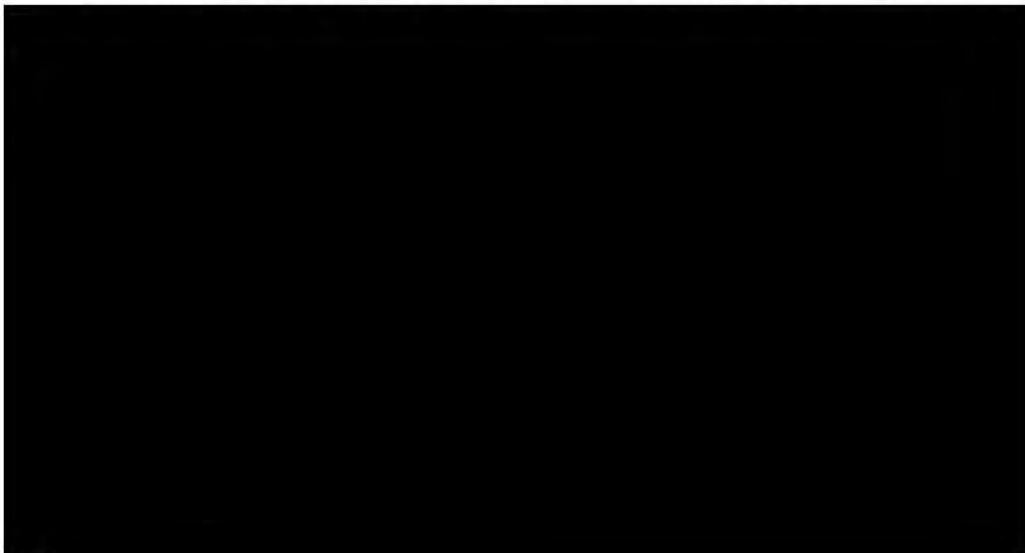
[REDACTED]

**[C-I-C ends] *LCS Average Call Duration***

The LCS forecasting spread sheet model referred to above is also used to forecast average LCS call duration on a monthly basis. The model uses actual values up to and including August 2013, with the first month of forecast values given for September 2013.

**[C-I-C starts]** [REDACTED]  
[REDACTED] **[C-I-C ends]**

**Figure 30: Average LCS Call Duration – 2009/10 to 2018/19 (Actuals and Forecasts) [C-I-C starts]**



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [C-I-C ends]

**5.2.2. Forecast annual Demand for:**

**5.2.2.1 The total number of Wholesale ADSL SIOs used by Access seekers as at 30 June, in each of the three Zones**

The forecast estimates for WDSL SIOs have been developed by Telstra’s Wholesale WDSL Product Manager using broadly the same approach that is used for business planning processes. This approach is described below, with any variations to the approach that have been required to accommodate the particular requirements of the ACCC’s RKR (e.g. the requirement to provide forecasts for WDSL SIOs on a Zone basis and to provide forecast data to FY2018) also set out.

A spread sheet model is used to estimate monthly forecasts for WDSL SIOs on a per customer basis.

[C-I-C starts] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



[C-I-C ends] The relative impact of the above drivers for the estimated change in WDSL SIOs between June 2013 (actual) and the June 2014 (forecast) are set out in the following figure:

**Figure 31: Relative impact of WDSL SIO demand drivers [C-I-C starts]**





[REDACTED]

[REDACTED]

[REDACTED] [C-I-C ends]

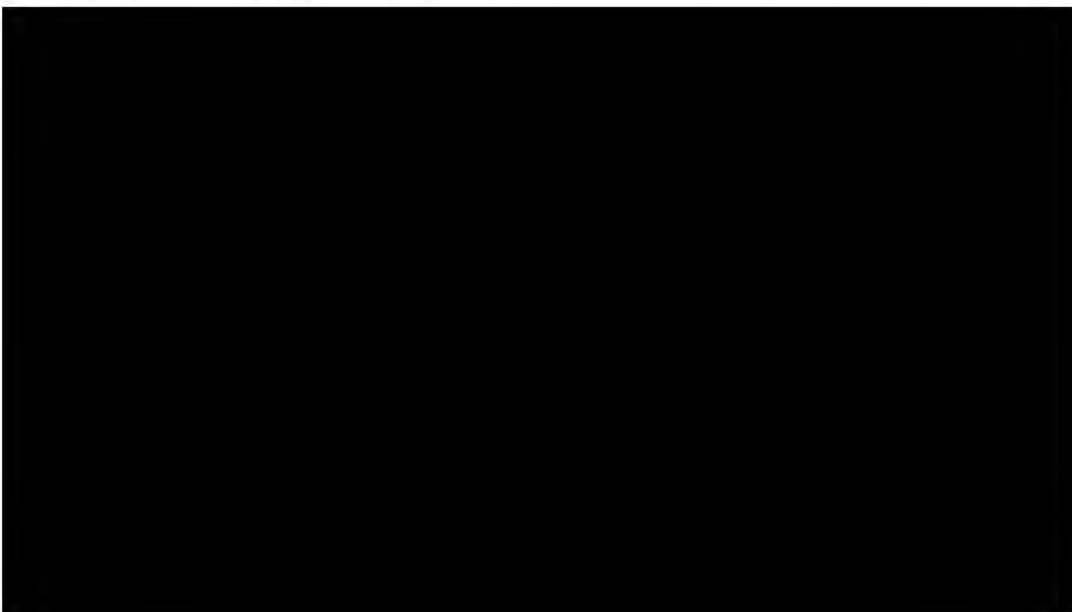
**Table 18: Impact of NBN – WDSL assumptions [C-I-C starts]**

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019
Impact of NBN - WDSL assumptions	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED] [C-I-C ends]

**Figure 32: Total WDSL Connections and Disconnections from July 2011 to April 2015 (Actuals and Forecasts) [C-I-C starts]**



[C-I-C ends] *Allocating Wholesale ADSL SIOs to the three zones*

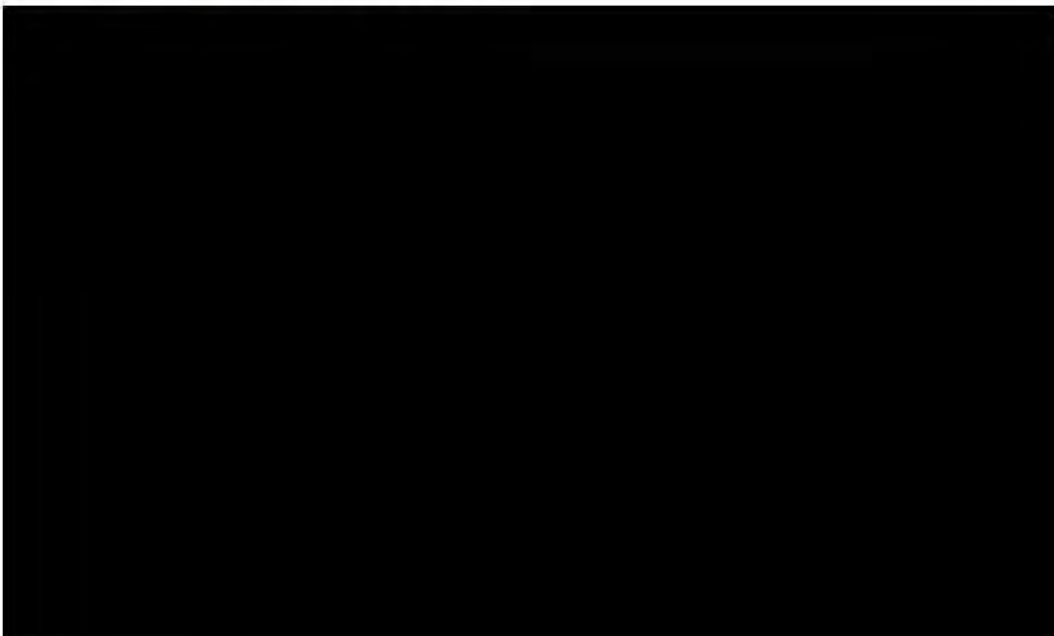
[C-I-C starts] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [C-I-C ends]

**Figure 33: Relative proportions of WDSL SIOs in Zones 2 and 3 from June 2014 to June 2019 (Actuals and Forecasts) [C-I-C starts]**



[REDACTED]

[C-I-C ends]

**5.2.2.2 The total amount of Peak Usage, in Mbps, by Access Seekers for the Wholesale ADSL service as at 30 June**

The forecast estimates for Peak Usage for customers of WDSL have been developed by Telstra's Wholesale WDSL Product Manager using broadly the same approach that is used for business planning processes. This approach is described below, with any variations to the approach that have been required to accommodate the particular requirements of the ACCC's RKR (e.g. the requirement to provide forecasts for WDSL Peak Usage to FY2019) also set out.

A spread sheet model is used to estimate monthly forecasts for WDSL Peak Usage on a per customer basis.

[C-I-C starts] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[C-I-C ends] The following Table sets out an example illustrating this process:

**Table 19: Sample WDSL Peak Usage forecast [C-I-C starts]**

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### 5.2.2.3 The total number of Retail ADSL SIOs supplied by Telstra as at 30 June

The forecast estimates for Retail ADSL SIOs have been developed by Telstra's Retail Business Broadband Product Manager using broadly the same approach Telstra uses in its business planning processes. This approach is described below, with any variations to the approach that have been required to accommodate the particular requirements of the ACCC's RKR also set out.

Telstra Retail uses a spread sheet model used to prepare forecasts for all fixed broadband services (ADSL, cable, NBN and other) over a rolling three year period. The model was last updated in June 2013, following the March 2013 Quarter ("**Fixed Broadband Model**").

[C-I-C starts]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [C-I-C ends]

**5.2.2.4 The total amount of Peak Usage, in Mbps, used by Telstra to supply Retail ADSL services as at 30 June**

**Introduction**

Telstra’s forecast estimates for the amount of peak hour traffic consumed by Telstra Retail ADSL customers, have been developed by Telstra’s Technology Modelling Unit. The forecast methodology is similar to that used for Telstra’s business planning purposes and is described below. To the extent that any variations to the methodology used for business planning purposes have been required to accommodate the particular requirements of the BBM RKR (e.g. the requirement to provide forecast data to FY2018) are also set out.

The following table sets out actual and forecast values for the annual forecast traffic demand (i.e. the average traffic for the busiest 30 minute period recorded at the end of each reported month, for both metered and unmetered data (“Busy Hour”) for ADSL retail customers from June 2011 to June 2019.

**Table 20: Retail ADSL Peak Usage (Mbps) (Actuals and Forecasts) [C-I-C starts]**

	Jun 11 (actual)	Jun 12	Jun 13	Jun 14	Jun 15	Jun 16	Jun 17	Jun 18	Jun 19
Traffic (Gbps)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[Redacted text block]

[Redacted text block]

- | [Redacted list item]
- | [Redacted list item]
- | [Redacted list item]
- | [Redacted list item]
- | [Redacted list item]

[Redacted text block]

[Redacted text block]

- | [Redacted list item]
- | [Redacted list item]

[Redacted text block]

[C-I-C ends]

**5.3. Rule 8(e): Total Asset Lives for forecast Capital Expenditure for each FLSM Asset Class**

- (a) *The method used to determine the forecasts in Rule 8(e)*  
*[Explanatory statement request 9(b)]*

The forecasts in Rule 8(e) were determined in accordance with the process set out below.

[C-I-C starts] [Redacted text block]

[Redacted text block]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- [REDACTED]

- [REDACTED]

- [REDACTED]

[REDACTED]

[REDACTED] [C-I-C ends]

(b) *The assumptions used to determine the forecasts in Rule 8(e)  
[Explanatory statement request 9(c)]*

[C-I-C starts] [REDACTED]

[REDACTED]



[REDACTED]

[C-I-C ends]

(c) *The basis for the assumptions*  
*[Explanatory statement request 9(d)]*

[C-I-C starts] [REDACTED]

[REDACTED]

[REDACTED]

- | [REDACTED]
- | [REDACTED]

[REDACTED]

- | [REDACTED]
- | [REDACTED]

[REDACTED]

- | [REDACTED]
- | [REDACTED]

[REDACTED]

[REDACTED]

[C-I-C ends]

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**Attachment 1: NBN rollout assumptions**

The forecasts provided by Telstra in response to the RKR request take into account assumptions in relation to the impact of the NBN rollout on SIO numbers.

The particular set of NBN forecasts used for the basis of preparing the RKR forecasts was prepared by Telstra's Finance group, in consultation with Telstra Wholesale and Telstra's Products and Marketing group between March and June 2013. As such, the forecasts for NBN rollout (and the estimated flow-on impact to the relevant fixed line services) are based on NBN Co's publically announced roll-out schedule at that time. Subsequent amendments to the planned roll-out schedule and the potential impact of the September 2013 Federal Election have not been taken into account. The inputs used by the model, and the model itself, are described in more detail below.

The NBN Forecast model relies on the following assumptions:**[C-I-C starts]**

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

[REDACTED]

[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [C-1-C ends]