Australian Competition & Consumer Commission

Public Inquiry into final access determinations for fixed line services

Additional information on cost allocation

July 2014

Contents

1 Introduction

1.1 Purpose

As discussed in chapter 3 of the discussion paper[1], Telstra has proposed a revised cost allocation framework for calculating prices for declared services.

This document provides further information on Telstra's proposed approach for each of the asset classes contained in the fixed line service model (the FLSM). In particular, it compares Telstra's proposed cost allocation framework for each asset classes with the approach adopted in the 2011 and 2013 final access determinations, and highlights key features of Telstra's proposed approach.

This document has been prepared to assist stakeholders to review Telstra's proposed cost allocation framework and to prepare their submission on this issue. This appendix should be read in conjunction with the discussion paper.

1.2 Asset classes

The fixed line services model (the FLSM), which is used to calculate price for declared services, consists of 22 asset classes. These are categorised into 10 customer access network (CAN) asset classes and 12 core asset classes. The CAN asset class generally represent assets that are used to provide the declared fixed line services from Telstra's exchanges to end users while the core asset class generally represent assets that are used within or between Telstra exchanges.

Table 1.2.1 below lists the FLSM asset classes and shows the relative contribution of each asset class to total fixed line revenue requirement in 2013-14. For the purposes of this document, the ACCC has categorised the asset classes into three groups based on their relative contribution to the total fixed line revenue requirement. An asset class is considered to be significant if it contributes more than **[c-i-c starts]**█**[c-i-c ends]** per cent of total fixed line revenue requirement. An asset class is considered to be material if it contributes between **[c-i-c starts]**█**[c-i-c ends]** and **[c-i-c starts]**█**[c-i-c ends]** per cent of total fixed line revenue requirement. An asset class is considered to be minor if it contributes less that [c-i-c starts]█**[c-i-c ends]** per cent of total fixed line revenue requirement.

The materiality of each asset class is provided in the key points section for that asset class throughout the document.

Table 1.2.1   CAN and Core asset class costs in the FLSM as a proportion of total revenue requirement for 2013-14

CAN Assets	% of revenue requirement	Core Assets	% of revenue requirement
CA01 Ducts and pipes	**[c-i-c starts]**█	CO01 Switching equipment - local	**[c-i-c starts]**█
CA02 Copper cables	█	CO02 Switching equipment – trunk	█
CA03 Other cables	█	CO03 Switching equipment – other	█

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[1] ACCC, *Public inquiry into final access determinations for fixed line services: discussion paper,* July 2014.

CA04 Pair gain systems	▮	CO04 Interexchange cables	▮
CA05 CAN Radio bearer equipment	▮	CO05 Transmission equipment	▮
CA06 Other CAN assets	▮	CO06 Core radio bearer equipment	▮
CA07 Other communications plant and equipment	▮	CO07 Other communications plant and equipment	▮
CA08 Network land	▮	CO08 Network land	▮
CA09 Network buildings/support	▮	CO09 Network buildings/support	▮
CA10 Indirect capital assets	▮ **c-i-c ends]**	CO10 Indirect capital assets	▮
		CO11 LSS equipment	▮
		CO12 Data equipment	▮ **[c-i-c ends]**

1.3   Key themes

Although the purpose of this chapter is to provide specific information on cost allocation for each asset class, there are a number of key themes that are common to all or a large range of asset classes. These should be kept in mind when reviewing the discussion on each asset class. These key themes are as follows:

- Cost allocation factors are generally higher under Telstra's proposal compared to cost allocation factors calculated in accordance with the approach adopted in 2011 and 2013.

- The key driver of this increase in cost allocation factors is the one-off step change to a fully allocated model after a period of adopting a 'partially' allocated approach.

- There are likely to be other factors driving changes in cost allocation factors. Some of the additional drivers could include the following:

  o Telstra has used different sources of information to reflect cost drivers for particular asset classes. For example, it uses specific information on length of duct network in different geographic bands to reflect geographic cost differences. Under the 2011 and 2013 approach, geographic cost differences were reflected using a set of geographic cost relativities.

  o Demand for different services, including declared and non-declared fixed line services are forecast to change at different rates. Due to the fully allocated model under Telstra's proposed approach, this will mean that cost allocation factors will be affected in different ways.

- A move to a fully allocated model, different sources of information and different changes in demand between services are all likely to influence cost allocation factors. However, it is difficult to quantify the effect of each factor on the cost allocation factors.

- The 'Analysys' model was a primary source of information for the ACCC in developing cost allocation factors for the 2011 and 2013 FADs, and is referred to throughout this document. The Analysys model was a TSLRIC (total service long run incremental cost) model used by the ACCC before the introduction of the building-block model (and FLSM) in 2011. It is not currently used in setting prices for declared services.

1.4 Structure

The remaining sections of this document discuss cost allocation factors for each FLSM asset class. For each asset class, the following information is provided:

- *Asset description* – a short description of what the asset class comprises. This is generally based on how Telstra has described the asset class (as set out in their supporting documentation on their proposed cost allocation framework) and may incorporate information from other sources as well.

- *Key points* – a list of key points explaining the key differences between Telstra's proposed approach compared to the 2011/13 approach and notable features of Telstra's proposal. It also states whether the asset class is a significant, material or minor contributor to the total fixed line revenue requirement.

- *Services using this asset class* – a list of services that use the asset class. This includes all declared and non-declared fixed line services that use the asset class. It also states whether the asset class is used for other non-fixed line uses (such as third party access to ducts and Telstra exchange buildings and use of Telstra's core network by mobile and non-ADSL data services).

- *Approach adopted in 2011/2013 FAD* – a brief summary of the approach taken to calculate the cost allocation factors in the previous FADs.

- *Telstra's proposed allocation method* – a brief description of Telstra's proposed cost allocation method for that asset class. This information is based primarily on the documentation received from Telstra.

- *Current vs. Telstra's proposed allocation factors* – a comparison of cost allocation factors for 2013-14 based on the 2011/13 FAD approach compared with Telstra's proposal. It also provides a chart providing Telstra's proposed allocations for each asset class between all uses of that asset.

2   Customer Access Network (CAN) asset classes

2.1   CA01 ducts and pipes

Asset description

Ducts and pipes are the conduits which house telecommunication wire lines. These are predominantly used for the provision of fixed line access services to end-users. In addition, these assets are also used by Telstra for the provision of other services and by third parties (including NBN Co) through the leasing of space within Telstra's duct infrastructure.

Ducts and pipes predominantly contain copper cables in the main and distribution stages of Telstra's customer access network. The duct network also contains fibre optic cable, transmission cables, some HFC as well as cables of third parties (including NBN Co). The duct network is present in CBD, metropolitan and most regional areas.

Key points

- Ducts and pipes contribute a significant proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ▮▮▮ **[c-i-c ends]** per cent in 2013-14).

- Telstra's proposed cost allocation methodology for ducts and pipes incorporates the concept of duct kilometres into the calculation of the cost allocation factors. Duct kilometres is identified as a key cost driver by Telstra. It is also used to reflect assumed cost differentials for ducts and pipes between ULLS bands.

- Telstra's proposed methodology does not adopt the geographic cost relativities from the Analysys model, which were used to reflect cost differentials between ULLS bands in the 2011 FADs. Geographic cost differences are reflected in the concept of duct kilometres in Telstra's proposal. This represents a key change from the 2011 FADs.

- Telstra's proposed methodology explicitly reflects third party use of ducts and pipes. This element of Telstra's proposal is likely to be able to incorporate NBN Co's use of Telstra ducts and pipes in the calculation of cost allocation factors.

- In the 2011 FAD, the ACCC included an additional $911 million to the ducts and pipes RAB. The purpose of this adjustment was to maintain a $16 tie point for ULLS for that regulatory period.

Services using this asset class

Ducts and pipes are used for declared and other fixed line services and also for a range of non-fixed line uses.

The declared fixed line services that require ducts and pipes are ULLS and WLR. The other fixed line services that require ducts and pipes are retail PSTN access, ISDN access and other DSL services (i.e. Telstra's business DSL S/HDSL).

While ducts and pipes contain copper cables used to supply wholesale ADSL services, the costs of ducts and pipes are recovered through the WLR service or a Telstra retail service (customers must have an active line to supply a wholesale ADSL service). No cost is allocated to ADSL services for ducts and pipes as the costs for this asset class are recovered through the line access services.

Ducts and pipes also have non-fixed-line uses such as for Telstra's HFC network, for transmission cables, for NBN Co's cables (installed in Telstra's ducts under the agreements between Telstra and NBN Co) and for cables of other third party infrastructure providers.

Approach adopted for 2011 FAD

In the 2011 FAD, the cost allocation factors for ducts and pipes were based on forecast SIOs for ULLS and WLR, total fixed line SIOs, and geographic 'cost relativities'. The geographic cost relativities are factors taken from the Analysys model and reflect the relative differences in costs per SIO between the four ULLS bands for ducts and pipes and copper cables.

Using this information, the FLSM calculates:

- the average ducts and pipes cost per SIO

- the average ducts and pipes cost per SIO in each band (based on the cost relativities)

- the total cost of ducts and pipes for each band for ULLS and WLR (based on forecast SIOs for ULLS and WLR), and

- the total cost of ducts and pipes for each band for all services (based on total SIOs).

The cost allocation factors for ducts and pipes to ULLS and WLR are the ratio between total ducts and pipes cost for ULLS and WLR respectively and the total cost of ducts and pipes.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with ducts and pipes are assumed to be driven primarily by the distance the network is required to cover (i.e. the kilometres of ducts required to provide services), the geographic location of the duct infrastructure and the number of services that use the duct network.

A three-part allocation process is used to calculate the cost allocation factors for ducts and pipes:

- First, information about Telstra's duct and pipe network is obtained from a Telstra infrastructure database. From this the total duct kilometres is obtained for each band (ULLS bands 1 – 4) and for both fixed line and non-fixed-line use. From this, the proportion of total duct kilometres used in each band for each use is obtained.

- Second, the proportion of duct kilometres in each band for fixed line use is then allocated between ULLS, 'basic access' (which includes PSTN retail access and WLR) and other fixed line services based on SIOs (ISDN access and other DSL services) in that band. This determines band-specific allocators for ULLS and basic access. Treating WLR and PSTN retail access lines in this way ensured that the cost allocated to each basic access line is the same, which reflects the fact that they are equivalent services.

- Third, the band specific allocators are added together to obtain the cost allocation factors for ULLS and basic access. For ULLS, the band-specific allocators are added to obtain the cost allocation factor for bands 1-3. The cost allocation factor for band 4 is the band-specific allocator for band 4. For the WLR cost allocation factor, the band specific allocators for basic access are added, and then multiplied by the ratio of WLR lines to total basic access lines.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 (based on the 2011 FAD approach) and Telstra's proposed approach are provided in Table 2.1.1.

Table 2.1.1   **Comparison of 2011 FAD approach vs Telstra's proposed approach for CA01 ducts and pipes for 2013-14**

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
ULLS	[c-i-c starts] ▆	▆	▆	▆
WLR	▆	▆	▆	▆ [c-i-c ends]

Figure 2.1.2 shows Telstra's assumed share of use of ducts and pipes by the various services for 2013-14.

Figure 2.1.2   **Telstra's proposed allocation of CA01 for ducts and pipes for 2013-14**

[c-i-c starts]
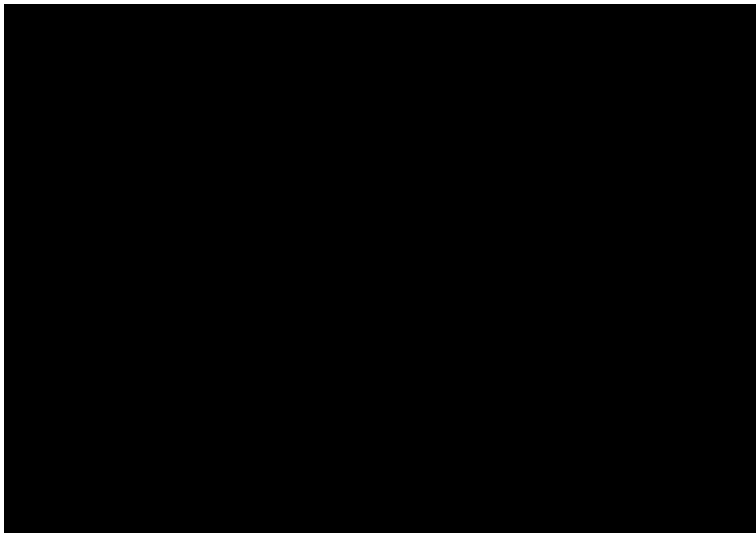
[c-i-c ends]

Note: 'Other non-fixed line' includes use by Telstra's HFC network, transmission cables, NBN Co's cables (installed in Telstra's ducts under the agreements between Telstra and NBN Co) and cables of other third party infrastructure providers.

2.2 CA02 copper cables

Asset description

Copper cables are used to connect end-user premises to exchange-based voice and broadband equipment (operated either by Telstra or a third party accessing an unbundled line service).

Key points

- Copper cables contribute a significant proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▮▮▮**[c-i-c ends]** per cent in 2013-14).

- Telstra's proposed cost allocation methodology for copper cables incorporates the concept of copper cable kilometres into the calculation of the cost allocation factors.

- Telstra's proposed methodology does not adopt the geographic cost relativities from the Analysys model, which were used to reflect cost differentials between ULLS bands in the 2011 FADs. Geographic cost differences are reflected in the concept of copper cable kilometres in Telstra's proposal. This represents a key change from the 2011 FADs.

Services using this asset class

Copper cables are used for declared and other fixed line services.

The declared fixed line services that require copper cables are ULLS and WLR. The other fixed line services that require copper cables are retail PSTN access, ISDN access and other DSL services (i.e. Telstra's business DSL S/HDSL).

While copper cables are used to supply WADSL and LSS, the costs are recovered via WLR or a Telstra retail service since there must be an active voice service on the line.

While copper cables are used to supply wholesale ADSL services, the costs of copper cables are recovered through the WLR service or a Telstra retail service (customers must have an active line to supply a wholesale ADSL service). No cost is allocated to ADSL services for copper cables as the costs for this asset class are recovered through the line access services.

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factors for copper cables were based on forecast SIOs for ULLS and WLR, total SIOs, and geographic 'cost relativities'. The geographic cost relativities are factors taken from the Analysys model and reflect the relative differences in costs per SIO between the four ULLS bands for ducts and pipes and copper cables.

Using this information, the FLSM calculates:

- the average copper cable cost per SIO

- the average copper cable cost per SIO in each band (based on the cost relativities)

- the total cost of copper cables for each band for ULLS and WLR (based on forecast SIOs) for ULLS and WLR and

- the total cost of copper cables for each band for all services (based on total SIOs).

The cost allocation factors for copper cables to ULLS and WLR are the ratio between total copper cables cost for ULLS and WLR respectively and total cost of copper cables.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with copper cables are assumed to be driven primarily by the distance the network is required to cover (i.e. the kilometres of copper cables required to provide services), the geographic location of the copper cables infrastructure and the number of services that use the copper cables network.

A three-part allocation process is used to calculate the cost allocation factors for copper cables:

- First, information about Telstra's copper cable network is obtained from a Telstra infrastructure database. From this the total copper cable kilometres is obtained for each band (ULLS bands 1 – 4). From this, the proportion of total copper cable kilometres used in each band is obtained.

- Second, the proportion of copper cable kilometres in each band is then allocated between ULLS, 'basic access' (which includes PSTN retail access and WLR) and other fixed line services based on SIOs (ISDN access and other DSL services) in that band. This determines band-specific allocators for ULLS and basic access. Treating WLR and PSTN retail access lines in this way ensured that the cost allocated to each basic access line is the same, which reflects the fact that they are equivalent services.

- Third, the band specific allocators are added together to obtain the cost allocation factors for ULLS and basic access. For ULLS, the band-specific allocators are added to obtain the cost allocation factor for bands 1-3. The cost allocation factor for band 4 is the band-specific allocator for band 4. For the WLR cost allocation factor, the band specific allocators for basic access are added, and then multiplied by the ratio of WLR lines to total basic access lines.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 2.2.1.

Table 2.2.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA02 copper cables for 2013-14

Declared service	2011 FAD approach%	Telstra proposed approach %	% point difference	% change
ULLS	[c-i-c starts] ▉	▉	▉	▉
WLR	▉	▉	▉	▉ [c-i-c ends]

Figure 2.2.2 shows Telstra's assumed share of use of copper cables by the various services for 2013-14.

Figure 2.2.2   Telstra's proposed allocation of CA02 copper cables for 2013-14

[c-i-c starts]

[c-i-c ends]

2.3 CA03 other cables

Asset description

Other cables are CAN fibre optic cables and joints (and associated equipment) used for the provision of FTTP-based fixed line access services in Telstra's Velocity estates such as those in the South Brisbane area. Other cables does not include fibre optic cable used to connect remote broadband and voice devices (e.g. CMUX units) to the local exchange (these are included in the core asset class – interexchange cables).

Key points

- Other cables contribute only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▉**[c-i-c ends]** per cent in 2013-14).

- The only declared service using other cables is WLR.

- In the 2011 FADs, the cost allocation factor for other cables (to WLR) was based on the cost allocation factor taken from the Analysys model and adjusted annually for changes in demand for WLR. Under Telstra's proposed approach, the cost allocation factors is based on forecast SIOs for WLR and retail PSTN access services. This move to a fully allocated approach appears to be the key consideration for this asset class.

Services using this asset class

The only declared service using other cables is WLR. Other cables are also used to provide PSTN retail access services.

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factor for other cables to WLR services was initially based on the Analysys cost allocation factor for 2008-09.

The cost allocation factor for each year was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in WLR SIOs for that year.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with other cables are assumed to be driven by the number of fixed line SIOs.

The cost allocation factor is derived by calculating the ratio of forecast WLR SIOs to the combined SIO forecast for WLR and PSTN retail access.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 2.3.1.

Table 2.3.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA03 other cables for 2013-14

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change

WLR	[c-i-c starts] ■	■		■	■ [c-i-c ends]

Figure 2.3.2 shows Telstra's assumed share of use of other cables by the various services for 2013-14.

Figure 2.3.2   Telstra's proposed allocation of CA03 other cables for 2013-14

[c-i-c starts]
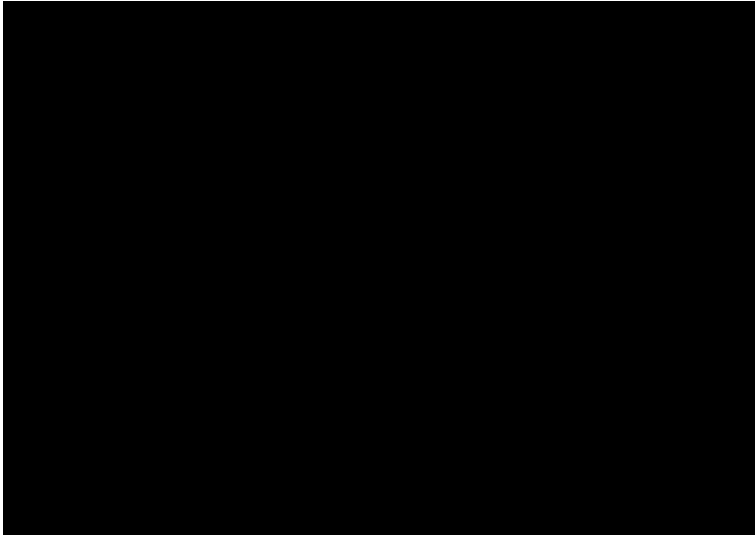
[c-i-c ends]

2.4   CA04 pair gain systems

Asset description

Pair gain systems refer to remote housing, devices and associated equipment used for supplying fixed line access services and fixed line voice services to end-users.

These devices, generally CMUX units, can also facilitate the provision of broadband services to end-users with the installation of a collocated DSLAM device (these DSLAM devices, along with exchange-based DSLAM equipment, are included in CO12 data equipment)

Key points

* Pair gain systems contribute a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▉**[c-i-c ends]** per cent in 2013-14).

* The only declared service using other cables is WLR.

* In the 2011 FADs, the cost allocation factor for pair gain systems (to WLR) was based on the cost allocation factor taken from the Analysys model and adjusted annually for changes in demand for WLR. Under Telstra's proposed approach, the cost allocation factors is based on forecast SIOs for WLR and other access services using pair gain systems. This move to a fully allocated approach appears to be the key consideration for this asset class.

Services using this asset class

The only declared service using pair gain systems is WLR. Pair gain systems are also used to provide PSTN retail access services and ISDN access services.

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factor for the pair gains systems to WLR services was initially based on the Analysys cost allocation factor for 2008-09.

The cost allocation factor for each year was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in WLR SIOs for that year.

Telstra proposed allocation method

Under Telstra's revised model, the costs associated with pair gains systems are assumed to be driven by the number of fixed line SIOs.

The cost allocation factor is derived by calculating the ratio of forecast WLR SIOs to the combined SIO forecast for all services using pair gain systems (WLR, PSTN retail access, and ISDN access).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 2.4.1.

**Table 2.4.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA04 pair gain systems for 2013-14**

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
WLR	[c-i-c starts]⬛	⬛	⬛	⬛[c-i-c ends]

Figure 2.4.2 shows Telstra's assumed share use of the pair gains systems assets by the various services for 2013-14.

Figure 2.4.2   Telstra's proposed allocation of CA04 pair gain systems for 2013-14

[c-i-c starts]
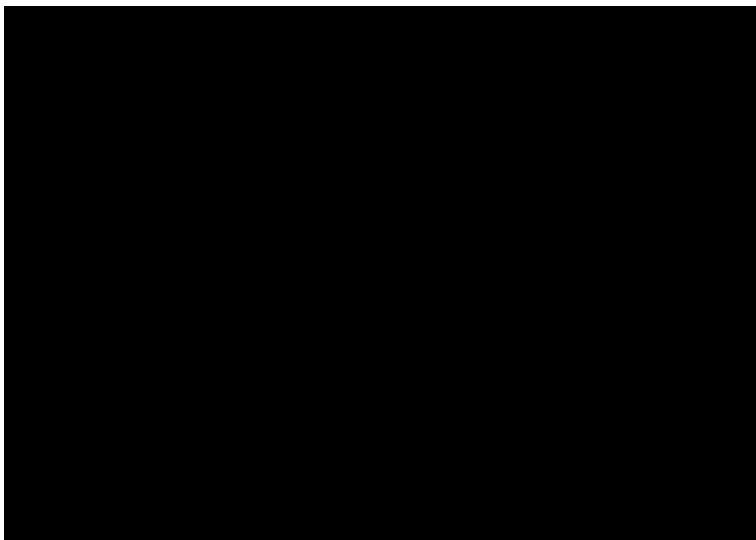
[c-i-c ends]

2.5   CA05 CAN radio bearer equipment

Asset description

These assets include antennas, terminals and related equipment used to provide fixed wireless PSTN voice services in rural and remote areas. These assets are not related to mobile wireless services.

Key points

- CAN radio bearer equipment contributes only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▮**[c-i-c ends]** per cent in 2013-14).

- In the 2011 FADs, there was no allocation of CAN radio bearer equipment costs to declared services. Under Telstra's proposed cost allocation approach, there is an allocation of CAN radio bearer equipment costs to WLR.

Services using this asset class

According to Telstra's proposal the only declared service using CAN radio bearer equipment is WLR (although no allocation of these costs was made to WLR in the 2011 FADs). CAN radio bearer equipment is also used to provide PSTN retail access services.

Approach adopted for the 2011 FAD

Similar to other CAN asset classes, the Analysys model was used as a basis for determining the cost allocation factors for CAN radio bearer equipment in the 2011 FADs. Because the Analysys model did not allocate any costs of CAN radio bearer equipment to declared services, no allocation of this asset class was made to declared services.

Telstra proposed allocation method

Under Telstra's revised model, the costs associated with CAN radio bearer equipment are assumed to be driven by the number of fixed line SIOs.

The cost allocation factor is derived by calculating the ratio of forecast WLR SIOs to the combined SIO forecast for WLR and PSTN retail access.

Current versus Telstra's proposed allocation method

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 2.5.1.

Table 2.5.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA05 CAN radio bearer equipment for 2013-14

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
WLR	[c-i-c starts]▮	▮	▮	▮[c-i-c ends]

Figure 2.5.2 Telstra's assumed share of the radio bearer equipment asset class by the various services for 2013-14.

Figure 2.5.2   Telstra's proposed allocation of CA05 CAN radio bearer equipment for 2013-14

[c-i-c starts]

[c-i-c ends]

2.6　CA06 other CAN assets

Asset description

The other CAN assets class is mainly made up of network termination units, which are used by fixed line access services. These assets are located at end-user premises.

Key points

- Other CAN assets contribute only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]**███**[c-i-c ends]** per cent in 2013-14).

- In the 2011 FADs, the cost allocation factors for other CAN assets were based on the cost allocation factors taken from the Analysys model and adjusted annually for changes in demand for ULLS and WLR. Under Telstra's proposed approach, the cost allocation factors is based on forecast SIOs for ULLS, WLR and other access services using other CAN assets. This move to a fully allocated approach appears to be the key consideration for this asset class.

Services using this asset class

The declared services using other CAN assets are ULLS and WLR. Other CAN assets are also used to provide PSTN retail access services, ISDN access services and other DSL services (this includes business DSL and SHDSL).

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factors for other CAN assets for the ULLS and WLR service were initially based on the Analysys cost allocation factors for 2008-09.

The cost allocation factor for each year was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in ULLS and WLR SIOs for that year.

Telstra proposed allocation method

Under Telstra's revised model, the costs associated with other CAN assets are assumed to be driven by the number of fixed line SIOs.

The cost allocation factors for ULLS and WLR are derived by calculating the ratio of forecast ULLS or WLR SIOs to the combined SIO forecast for all services using other CAN assets (ULLS, WLR, PSTN retail access, ISDN access and other DSL services).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 2.6.1.

Table 2.6.1　Comparison of 2011 FAD approach vs Telstra proposed approach for CA06 other CAN assets for 2013-14

Declared services	2011 FAD approach%	Telstra proposed approach %	% points difference	% change
ULLS	[c-i-c starts]███	███	███	███

17

| WLR | ██████ | █████ | █████ | ██████[c-i-c ends] |

Figure 2.6.2 shows Telstra's assumed share use of the other CAN assets class by the various services for 2013-14.

Figure 2.6.2   Telstra's proposed allocation of CA06 other CAN assets for 2013-14

[c-i-c starts]
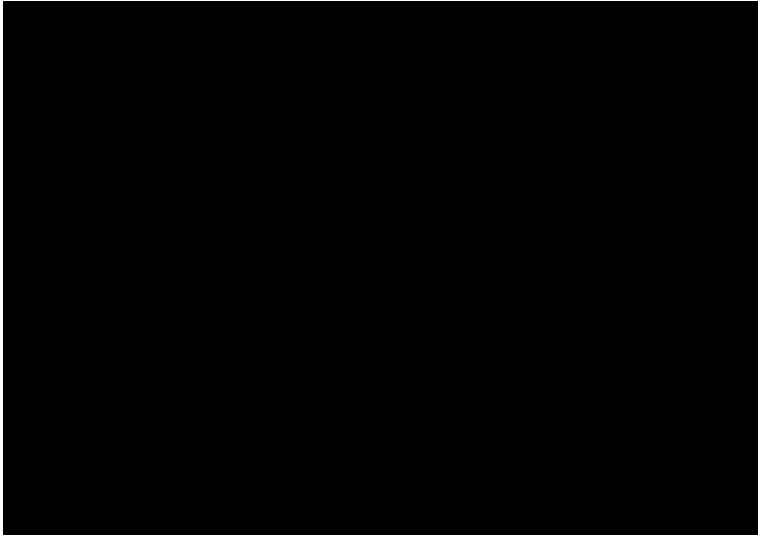
[c-i-c ends]

2.7 CA07 other communications plant and equipment

Asset description

Other communications plant and equipment asset class is predominantly made up of CAN radio towers, used in conjunction with radio bearer equipment in the provision of fixed-wireless services in rural and remote areas.

Key points

- Other communications plant and equipment comprises only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]**█**[c-i-c ends]** per cent in 2013-14).

- In the 2011 FADs, the cost allocation factors for other communications plant and equipment were based on cost allocation factors taken from the Analysys model and adjusted annually for changes in demand for ULLS and WLR. Under Telstra's proposed approach, the cost allocation factors is based on forecast SIOs for ULLS, WLR and other access services using other communications plant and equipment. This move to a fully allocated approach appears to be the key consideration for this asset class.

Services using this asset class

The declared services using other communications plant and equipment are ULLS and WLR. Other communications plant and equipment is also used to provide PSTN retail access services, ISDN access services and other DSL services (this includes business DSL and SHDSL).

Approach adopted for the 2011 FAD

The Analysys model did not include a separate asset class for other communications plant and equipment. In the 2011 FAD, the initial cost allocation factors for other communications plant and equipment was based on a weighted average of Analysys cost allocation factors for CAN radio equipment and CAN building and support assets.

The cost allocation factor for each year was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in ULLS and WLR SIOs for that year.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with other communications plant and equipment are assumed to be driven by the number of fixed line SIOs.

The cost allocation factors for ULLS and WLR are derived by calculating the ratio of forecast ULLS or WLR SIOs to the combined SIO forecast for all services using other CAN assets (ULLS, WLR, PSTN retail access, ISDN access and other DSL services).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 2.7.1.

**Table 2.7.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA07 other communications plant and equipment for 2013-14**

Declared service	2011 FAD approach%	Telstra proposed approach %	% point difference	% change
ULLS	[c-i-c starts] ■	■	■	■
WLR	■	■	■	■ [c-i-c ends]

Figure 2.7.2 shows Telstra's assumed share use of the other communications plant and equipment asset class by the various services for 2013-14.

Figure 2.7.2   Telstra's proposed allocation of CA07 other communications plant and equipment for 2013-14

[c-i-c starts]
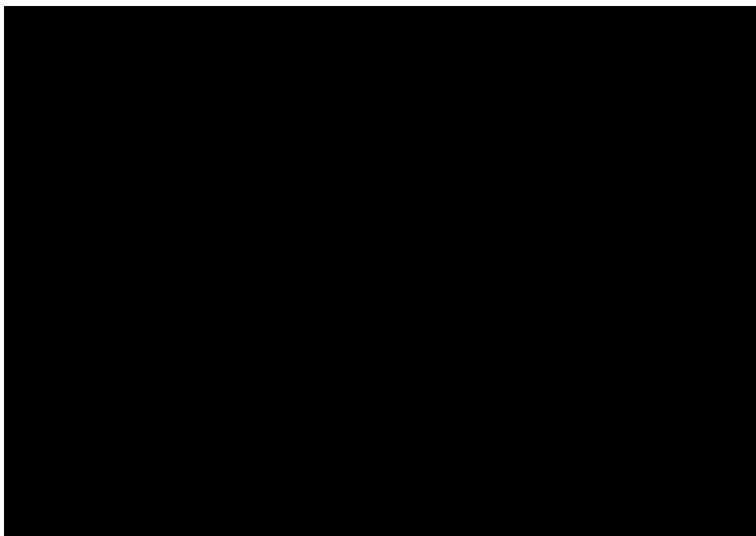
[c-i-c ends]

2.8 CA08 network land

Asset description

Network land is the value of the network land assets (such as freehold network land, structural land improvements, mains power connections, fencing, roads, paths, parking, drainage and landscaping) to accommodate the customer side of the main distribution frame. The main distribution frame is contained in the next asset class—network buildings/support. This asset class only reflects the cost of supporting the customer-side of the main distribution frame (which is exclusively used for connecting fixed line access services).

Network land relating to the core access network is included in CO08 network land.

Key points

- Network land contributes only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▮ **[c-i-c ends]** per cent in 2013-14).

- In the 2011 FADs, the cost allocation factors for network land were based on the cost allocation factors taken from the Analysys model and adjusted annually for changes in demand for ULLS and WLR. Under Telstra's proposed approach, the cost allocation factors is based on forecast SIOs for ULLS, WLR and other access services using other CAN assets. This move to a fully allocated approach appears to be the key consideration for this asset class.

Services using this asset class

Network land is used for declared and other fixed line services.

The declared fixed line services that require network land are ULLS and WLR. The other fixed line services that require network land are retail PSTN access, ISDN access and other DSL services (i.e. Telstra's business DSL S/HDSL).

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factors for network land for ULLS and WLR were initially based on the Analysys cost allocation factors for 2008-09.

The cost allocation factor for each year was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in ULLS and WLR SIOs for that year.

Telstra proposed allocation method

Under Telstra's revised model, the costs associated with network land are assumed to be driven by the number of fixed line SIOs.

The cost allocation factors for ULLS and WLR are derived by calculating the ratio of forecast ULLS or WLR SIOs to the combined SIO forecast for all services using network land (ULLS, WLR, PSTN retail access, ISDN access and other DSL services).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in the table below.

Table 2.8.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA08 network land for 2013-14

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
ULLS	[c-i-c starts] ⬛	⬛	⬛	⬛
WLR	⬛	⬛	⬛	⬛ [c-i-c ends]

The following chart shows Telstra's assumed share use of the network land asset class used by the various services for 2013-14.

Figure 2.8.2   Telstra's proposed allocation of CA08 network land for 2013-14

[c-i-c starts]
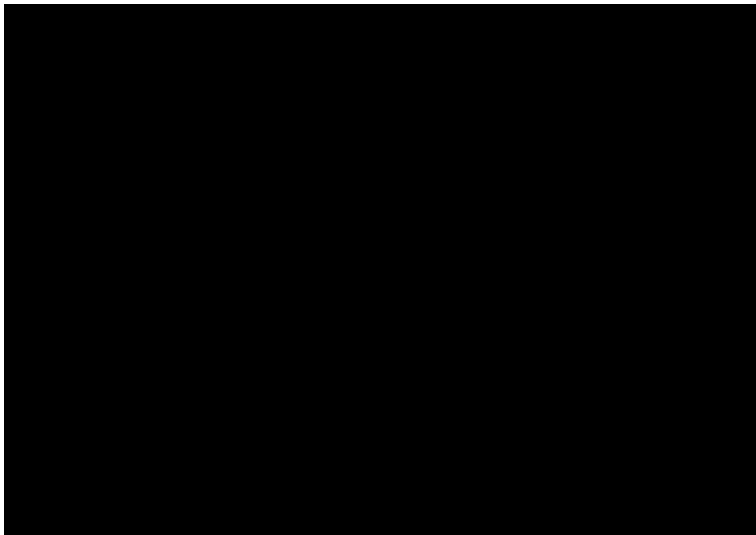
[c-i-c ends]

2.9   CA09 network buildings/support

Asset description

This asset class is the value and associated costs of the network building/support which used on the customer side of the main distribution frame located within Telstra exchange buildings. These assets are used exclusively for   connecting fixed line access services.

Network buildings/support assets relating to the core access network are included in CO09 network building/support.

Key points

- Network buildings/support contributes a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ▊ **[c-i-c ends]** per cent in 2013-14).

- In the 2011 FADs, the cost allocation factors for network buildings/support were based on the cost allocation factors taken from the Analysys model and adjusted annually for changes in demand for ULLS and WLR. Under Telstra's proposed approach, the cost allocation factors is based on forecast SIOs for ULLS, WLR and other access services using other CAN assets. This move to a fully allocated approach appears to be the key consideration for this asset class.

Services using this asset class

Network building/support is used for declared and other fixed line services.

The declared fixed line services that require network building/support are ULLS and WLR. The other fixed line services that require network building/support are retail PSTN access, ISDN access and other DSL services (i.e. Telstra's business DSL S/HDSL).

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factors for network buildings/support for ULLS and WLR were initially based on the Analysys cost allocation factors for 2008-09.

The cost allocation factor for each year was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in ULLS and WLR SIOs for that year.

Telstra proposed allocation method

Under Telstra's revised model, the costs associated with network building/support are assumed to be driven by the number of fixed line SIOs.

The cost allocation factors for ULLS and WLR are derived by calculating the ratio of forecast ULLS or WLR SIOs to the combined SIO forecast for all services using network building/support (ULLS, WLR, PSTN retail access, ISDN access and other DSL services).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in the table below.

Table 2.9.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA09 network buildings/support for 2013-14

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
ULLS	[c-i-c starts] ▮	▮	▮	▮
WLR	▮	▮	▮	▮ [c-i-c ends]

The following chart shows Telstra's assumed share use of the network building/support assets class used by the various services for 2013-14.

Figure 2.9.2   Telstra's proposed allocation of CA09 network buildings/support for 2013-14

[c-i-c starts]
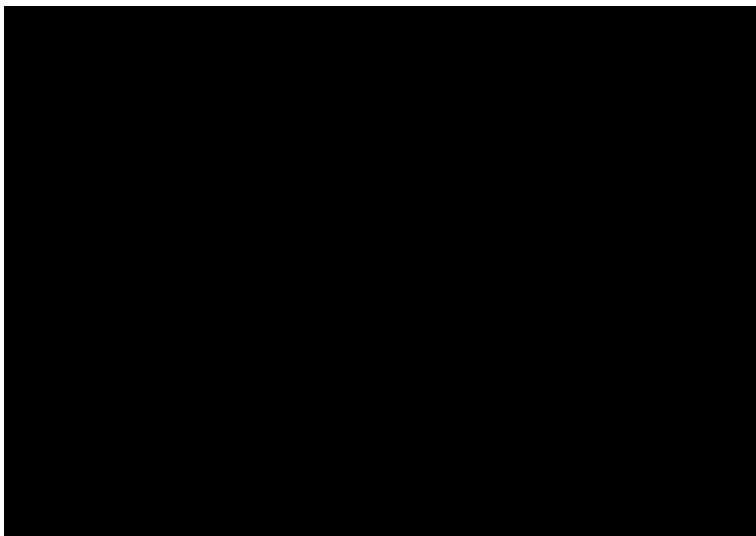
[c-i-c ends]

2.10 CA10 indirect capital assets

Asset description

The CAN indirect asset class contains mainly IT services equipment (both software and hardware). It also contains motor vehicles and mechanical aids.

Key points

- Indirect capital assets contribute a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ▮ **[c-i-c ends]** per cent in 2013-14).

- Telstra's proposed 'general allocator' approach for indirect capital assets is similar to the 'revenue share' approach adopted for this asset class in the 2011 FADs. The key differences are:

    o under Telstra's approach, all other CAN asset classes are used to calculate the general allocation factor. In the 2011 FADs, a smaller range of asset classes were used.

    o under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

- Although a similar framework is used to calculate cost allocation factors for indirect capital assets, it is expected to increase under Telstra's proposal. This is likely to be driven by the move to fully allocated model and the impact on cost allocation factors for other asset classes, on which the general allocation factors are based.

Services using this asset class

Indirect capital assets are assumed to be used for declared and other fixed line services and also for a range of non-fixed-line uses. The declared fixed line services that require indirect capital assets are ULLS and WLR.

Approach adopted for 2011 FAD

In the 2011 FAD, the initial cost allocation factor for indirect capital assets was based on a 'revenue share' approach. This involved the following three step process:

- First, the total annual revenue requirement for the first seven CAN asset classes was calculated for 2009-10.

- Second, the annual revenue requirement for the first seven CAN asset classes for each declared service was calculated for 2009-10.

- Third, the annual revenue requirement for each declared service calculated in the second step is divided by the total annual revenue requirement calculated in the first step to obtain the cost allocation factors for each declared service for that year.

Once the initial cost allocation factors were determined, they were adjusted each year by the forecast percentage changes in ULLS and WLR SIOs for that year.

Telstra's proposed allocation method

Telstra has proposed a 'general allocator' approach to allocate costs for indirect capital assets. Telstra's rationale for using a general allocator is that there is no logical, direct causal relationship that can be calculated between indirect capital asset and the relevant services.

The methodology used to calculate the general allocator for CAN indirect capital asset is similar to the revenue shares approach adopted in the 2011 FADs as described above. The two key differences between Telstra's approach and the 2011 FAD approach are:

- Telstra proposes to include all CAN asset classes except indirect capital assets (Telstra propose to include network land and network buildings/support on top of the seven CAN asset classes already included) in the calculations of the general allocator. In the 2011 FADs, only the first seven CAN asset classes were used (network land and network buildings/support were excluded from the calculations).

- The general allocation approach is adopted for each year of the regulatory period. In the 2011 FADs, this approach was only adopted for the first year, after which the cost allocation factors were adjusted for changes in demand for ULLS and WLR.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in the table below.

Table 2.10.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CA10 indirect capital assets for 2013-14

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
ULLS	[c-i-c starts] ■	■	■	■
WLR	■	■	■	■ [c-i-c ends]

Figure 2.10.2 shows Telstra's assumed share of CAN indirect capital assets by the various services for 2013-14.

Figure 2.10.2   Telstra's proposed allocation of CA10 indirect capital assets for 2013-14

[c-i-c starts]
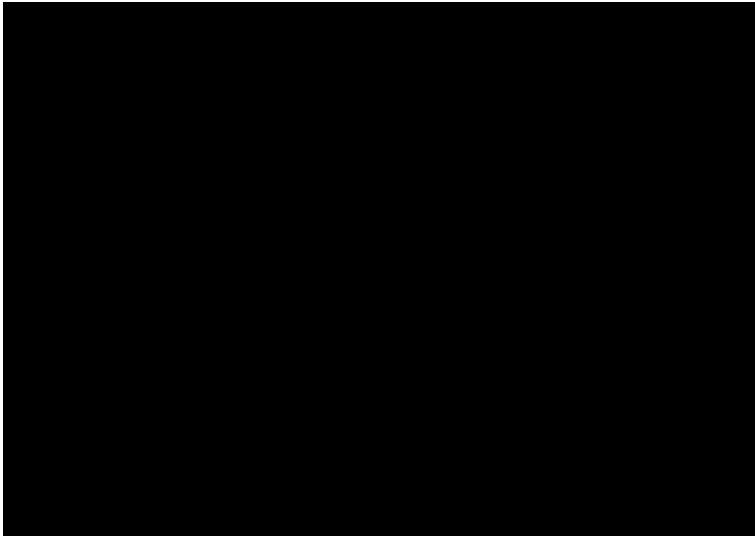
[c-i-c ends]

Note: "Other fixed line" includes all services in the CAN asset class (excluding ULLS and WLR) that use indirect capital assets while "non-fixed line" services are services using CAN indirect capital assets.

3 Core network asset classes

3.1   CO01 switching equipment (local)

Asset description

Local switching equipment contains voice aggregation devices (remote switching stages (RSS), remote aggregation units (RAU)) – including voice line cards, as well as local access switch (LAS) devices. The costs associated with these assets are driven by both the number of end user services connected and the volume of voice minutes that traverse the equipment.

Key points

- Switching equipment (local) contributes a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ▮ **[c-i-c ends]** per cent in 2013-14).

- Telstra has developed revised routing factors for a range of core asset classes (all switching equipment assets, inter-exchange cables and transmission assets) based on 'call dispersion' data. These revised routing factors replace those contained in the Analysys model, which were implicitly reflected in the cost allocation factors for the 2011 FADs.

- For local and trunk switching equipment, the 2013 FAD allocated costs to wholesale ADSL services. Telstra did not allocate any of these costs to wholesale ADSL in its proposal.

- The cost allocation factors from the Analysys model, which were reflected in the 2011 FADs, assumed that exchange building assets and other ancillary assets (including power and air-conditioning equipment) were included in the local switching equipment asset class. Under Telstra's proposed approach, these assets are included in other asset classes (CO07, CO08 and CO09 asset classes) and allocated to services based on allocation factors for those asset classes.

Services using this asset class

Local switching equipment is used for declared and other fixed line services.

The declared fixed line services that require local switching equipment are FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA), LCS and WLR. The other fixed line services that require local switching equipment are retail PSTN services (includes retail access, local, national, international and fixed-to-mobile calls) and ISDN voice services.

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factors for local switching equipment were based on the Analysys cost allocation factor for 2008-09, forecast minutes of use for PTSN OTA and LCS for each year, forecast SIOs for WLR for each year, and PSTN voice call minutes from previous years collected under the ACCC's regulatory accounting framework RKR.

The initial cost allocation factor for local switching equipment to PSTN OTA was based on the initial cost allocation factor from the Analysys model, but adjusted to take into account total peak voice traffic volume in 2002-03, rather than current volumes. The effect of this adjustment was to remove the part of the switching equipment the ACCC considered had been overprovisioned by Telstra. The initial cost allocation factors for local switching equipment to WLR and LCS were based on the initial cost allocation factors from the Analysys model.

The cost allocation factors for WLR, PSTN OTA and LCS for each year were then based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in WLR SIOs and minutes of use for PSTN OTA and LCS (respectively) for that year.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with local switching equipment are assumed to be driven primarily by the number of ports and line cards, which are in turn being driven by the number of SIOs, and the volume of calls measured by aggregate minutes of use (MOU).

A three-part allocation process is used to calculate the cost allocation factors for local switching equipment:

- First, using information from Telstra's asset register, local switching equipment is split into different equipment types on the basis of underlying cost driver – either SIOs or call volumes (measured by aggregate minutes of use).

- Second, a share of local switching equipment for which costs are driven by SIOs is allocated to WLR. The share allocated to WLR is the ratio of forecast WLR SIOs to the sum of all fixed line access services using local switching equipment (PSTN retail access and ISDN access).

- Third, a share of local switching equipment for which costs are driven by minutes of use is allocated to FOAS/FTAS and LCS. The share allocated to FOAS/FTAS and LCS is the ratio of forecast FOAS/FTASor LCS minutes of use (respectively) divided by total minutes of use for all services using local switching equipment (FOAS/FTAS, LCS, retail PSTN services and ISDN voice services). In this step, minutes of use are weighted using routing factors, which reflect the different loads that the various voice services place on local switching equipment.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 3.1.1.

Table 3.1.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CO01 switching equipment (local) for 2013-14

	2011 FAD approach %	Telstra proposed approach (%)	% point difference	% change
WLR	[c-i-c starts] ▮	▮	▮	▮
FOAS/FTAS	▮	▮	▮	▮
LCS	▮	▮	▮	▮ [c-i-c ends]

Figure 3.1.2 shows Telstra's assumed share of use of local switching equipment by the various services for 2013-14.

Figure 3.1.2   Telstra's proposed allocation of CO01 swithcing equipment (local) for 2013-14

[c-i-c starts]

31

[c-i-c ends]

3.2 CO02 switching equipment (trunk)

Asset description

Trunk switching equipment comprises switching equipment and control software used to provide fixed line voice services. The switches within trunk switching equipment are higher-order transit switches used in the network to control calls between local switches – such as STD calls – and are also generally used to interconnect to other fixed line and mobile networks operated by Telstra and third parties.

Key points

- Switching equipment (trunk) contributes only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]**█**[c-i-c ends]** per cent in 2013-14).

- Telstra has developed revised routing factors for a range of core asset classes (all switching equipment assets, inter-exchange cables and transmission assets) based on 'call dispersion' data. These revised routing factors replace those contained in the Analysys model, which where implicitly reflected in the cost allocation factors for the 2011 FADs.

- For local and trunk switching equipment, the 2013 FAD allocated costs to wholesale ADSL services. Telstra did not allocate any of these costs to wholesale ADSL in its proposal.

Services using this asset class

Trunk switching equipment is used for declared and non-declared fixed line services.

The declared fixed line services that require trunk switching equipment are FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA) and LCS. The other fixed line services that require trunk switching equipment are retail PSTN voice services (includes local, national, international and fixed-to-mobile calls) and ISDN voice services.

Approach adopted for the 2011 FAD

The initial cost allocation factor for this asset class to PSTN OTA was based on the cost allocation factor from the Analysys model. It was adjusted down to ensure the ratio of cost allocation factors between local switching equipment and trunk switching equipment was maintained following the over-provisioning adjustment made to the cost allocation factor for local switching equipment (see discussion of CO01 switching equipment (local)).

The initial cost allocation factor for LCS was adopted from the cost allocation factor from the Analysys model.

The cost allocation factors for PSTN OTA and LCS for each year were then based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in the minutes of use for PSTN OTA and LCS (respectively) for that year.

Telstra's proposed allocation method

Under Telstra's revised model, the cost driver for trunk switching equipment is call volumes (minutes of use).

Cost allocation factors for FOAS/FTAS and LCS are calculated as the ratio of forecast FOAS/FTAS and LCS minutes of use respectively divided by total minutes of use for all

services using trunk switching equipment (FOAS/FTAS, LCS, retail PSTN voice services and ISDN voice services). In this step, minutes of use are weighted using routing factors, which reflect the different loads that the various services place on trunk switching equipment.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 3.2.1.

Table 3.2.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CO02 switching equipment (trunk) for 2013-14

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
FOAS/FTAS	[c-i-c starts]■■	■■	■■	■■
LCS	■■	■■	■■	■■[c-i-c ends]

Figure 3.2.2 shows Telstra's assumed share of use of trunk switching equipment by the various services for 2013-14.

Figure 3.2.2   Telstra's proposed allocation of CO02 switching equipment (trunk) for 2013-14

[c-i-c starts]
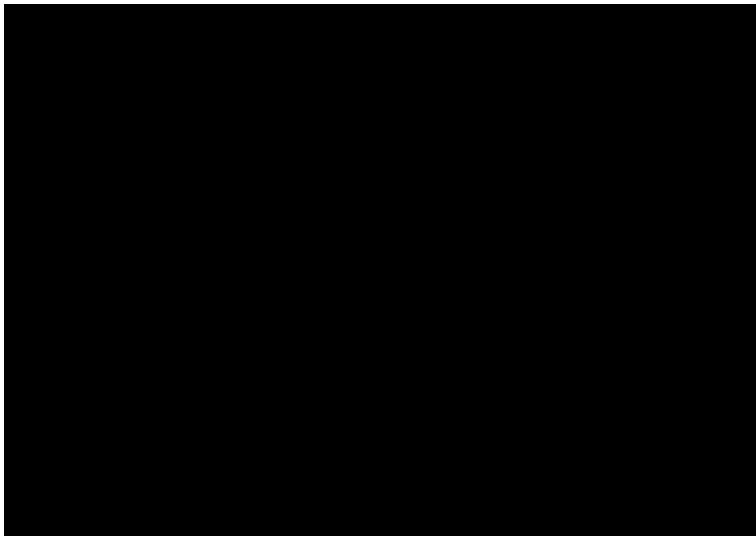
[c-i-c ends]

3.3 CO03 switching equipment (other)

Asset description

The other switching equipment contains miscellaneous equipment used to support the provision of fixed line voice services.

Key points

- Switching equipment (other) contributes only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ████ **[c-i-c ends]** per cent in 2013-14).

- Telstra has developed revised routing factors for a range of core asset classes (all switching equipment assets, inter-exchange cables and transmission assets) based on 'call dispersion' data. These revised routing factors replace those contained in the Analysys model, which where implicitly reflected in the cost allocation factors for the 2011 FADs.

Services using this asset class

Other switching equipment is used for declared and non-declared fixed line services.

The declared fixed line services that require other switching equipment are FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA) and LCS. The other fixed line services that require other switching equipment are retail PSTN voice services (includes local, national, international and fixed-to-mobile calls) and ISDN voice services.

Approach adopted for the 2011 FAD

In the 2011 FAD, the cost allocation factors for other switching equipment were based on the cost relativities from the Analysys model and the cost allocation factors for the local switching equipment and demand forecasts for LCS.

The initial cost allocation factor for PSTN OTA was based on the cost allocation factor from the Analysys model. It was adjusted down to ensure the ratio of cost allocation factors between local switching equipment and other switching equipment was maintained following the over-provisioning adjustment made to the cost allocation factor for local switching equipment (see discussion of CO01 – switching equipment (other)).

The initial cost allocation factor for LCS was adopted from the cost allocation factor from the Analysys model.

The cost allocation factors for PSTN OTA and LCS for each year were then based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in the minutes of use for PSTN OTA and LCS (respectively) for that year.

Telstra's proposed allocation method

Under Telstra's revised model, the cost driver for other switching equipment is assumed to be call volumes (minutes of use).

Cost allocation factors for FOAS/FTAS and LCS are calculated as the ratio of forecast FOAS/FTAS and LCS minutes of use (respectively) divided by total minutes of use for all services using other switching equipment (FOAS/FTAS, LCS, retail PSTN services and ISDN services). In this step, minutes of use are weighted using routing factors, which reflect the different loads that the various services place on other switching equipment.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 FAD approach and Telstra's proposed approach are provided in Table 3.3.1.

Table 3.3.1   Comparison of 2011 FAD approach vs Telstra's proposed approach for CO03 switching equipment (other) for 2013-14

Declared service	2011 FAD approach %	Telstra proposed approach %	% point difference	% change
FOAS/FTAS	[c-i-c starts] ■	■	■	■
LCS	■	■	■	■ [c-i-c ends]

Figure 3.3.2 shows Telstra's assumed share of use of other switching equipment by the various services for 2013-14.

Figure 3.3.2   Telstra's proposed allocation of CO03 switching equipment (other) for 2013-14

[c-i-c starts]
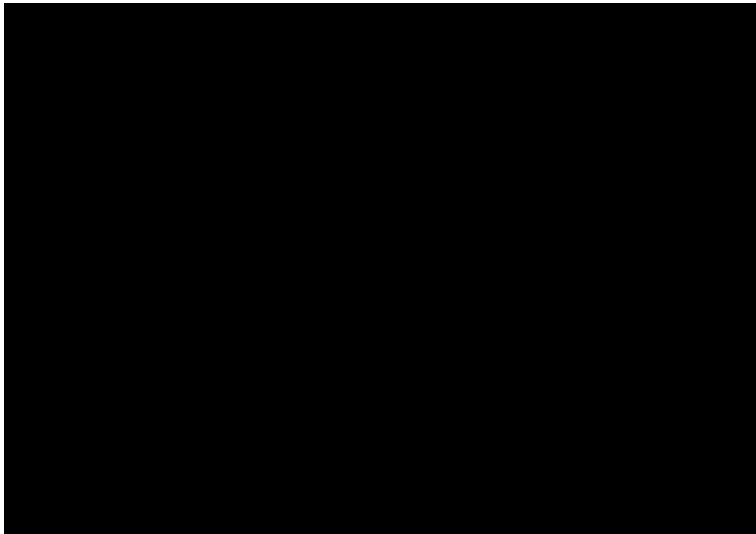
[c-i-c ends]

3.4   CO04 inter-exchange cables

Asset description

Inter-exchange cables are the fibre optic cables that connect Telstra's exchange buildings and are used to transmit data (including voice signals) throughout the network. This asset class also includes optical fibre cables that connect voice and broadband exchange based equipment (such as large pair gains systems and CAN based DSLAM) to the local exchange.

Key points

- Inter-exchange cables contribute a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]**██**[c-i-c ends]** per cent in 2013-14).

- Telstra has developed revised routing factors for a range of core asset classes (all switching equipment assets, inter-exchange cables and transmission assets) based on 'call dispersion' data. These revised routing factors replace those contained in the Analysys model, which where implicitly reflected in the cost allocation factors for the 2011 FADs.

- Telstra's proposed methodology for inter-exchange cables incorporates the concept of fibre kilometres into the calculation of the cost allocation factor. For example, a 3km length of cable containing two fibres is considered to represent 6 fibre km. The length of the optical fibre has been identified as a key cost driver of inter-exchange cables.

- Telstra's methodology for this asset class makes significant use of information from Telstra's internal infrastructure databases. This information is used to identify different streams of traffic on inter-exchange cables, including those that relate to declared services. The information from these databases represent how inter-exchange fibre is currently used and current traffic volumes (as opposed to future expected use or volumes).

Services using this asset class

The inter-exchange cables assets are used to provide a range of declared and non-declared fixed line services as well as a number of other non-fixed-line services (including mobile and non-ADSL data). Inter-exchange cables also support and carry service data through transmission systems, which is described in the next asset class (CO05 transmission equipment).

The declared services which use this asset class are LCS, FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA) and wholesale ADSL. Non-declared services using inter-exchange cables are retail PSTN voice services (includes (includes local, national, international and fixed-to-mobile calls) ISDN voice services and retail ADSL services.

Approach adopted for the 2011 and 2013 FADs

In the 2011 and 2013 FADs, the initial cost allocation factors for inter-exchange cables for the PSTN OTA, LCS and wholesale ADSL services were based on the Analysys cost allocation factor for 2008-09.

The cost allocation factors in subsequent years were based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in wholesale ADSL SIOs and forecast percentage change in volume of minutes for PSTN OTA and LCS services for that year.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with inter-exchange cables are assumed to be driven by the length of fibre-optic cables (fibre kilometres), number of services (SIOs) and volumes (minutes of use).The primary cost driver in Telstra's proposal is the length of optical fibre inter-exchange cables.

The proportion of total fibre km used by respective inter-exchange traffic streams (ADSL, PSTN voice, transmission, and mobiles and non-ADSL data) is first obtained from a combination of Telstra's internal databases.

Further allocations are then made for ADSL (allocated between retail and wholesale ADSL using SIO forecasts), PSTN (allocated between FOAS/FTAS, LCS and retail PSTN voice services using minutes of use, which are weighted using routing factors to reflect that inter-exchange cables are used in different ways for PSTN voice services), and transmission (allocations are based on the allocation factors for CO05: transmission equipment).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 and 2013 FAD approach and Telstra's proposed approach are provided in Table 3.4.1.

Table 3.4.1   Comparison of 2011/2013 FAD approach vs Telstra's proposed approach for CO04 inter-exchange cables for 2013-14

Declared service	2011/2013 FAD approach %	Telstra proposed approach %	% point difference	% change
FOAS/FTAS	[c-i-c starts]■	■	■	■
LCS	■	■	■	■
Wholesale ADSL	■	■	■	■[c-i-c ends]

Figure 3.4.2 shows Telstra's assumed share of use of inter-exchange cable by the various services for 2013-14.

Figure 3.4.2   Telstra's proposed allocation of CO04 inter-exchange cables for 2013-14

[c-i-c starts]
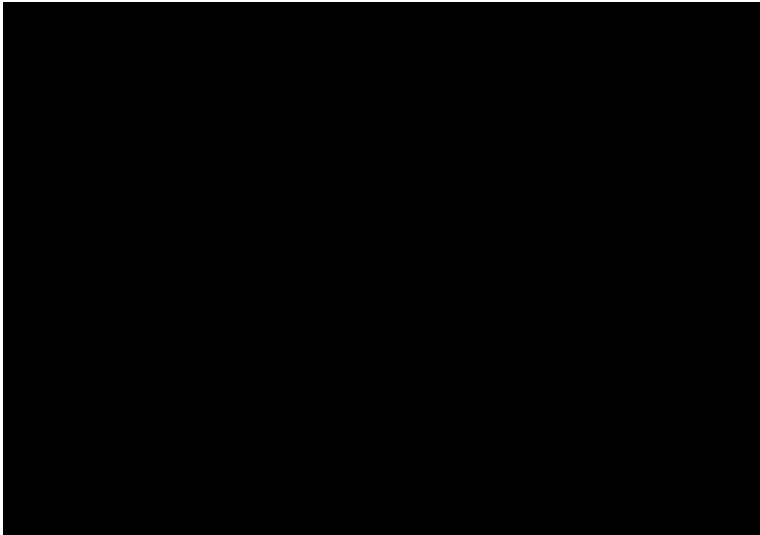
[c-i-c ends]

"Non-fixed-line" includes mobiles and non-ADSL data.

3.5 CO05 transmission equipment

Asset description

The transmission equipment asset class contains a mix of Synchronous Digital Hierarchy (SDH) transmission equipment, Plesiochronous Digital Hierarchy (PDH) transmission equipment and other transmission equipment. This transmission equipment is limited to electronic equipment (such as, switches, aggregation devices, synchronising devices and service ports) and does not include the optical fibre cable over which SDH and PDH transmission operate.; These cables are dealt with under the asset class for inter-exchange cables.

The SDH and PDH equipment consists of multiplexers that aggregate multiple digital streams into a single larger stream and is used as one means of sending data throughout Telstra's network. SDH transmission equipment is more modern and prevalent in Telstra's network and is capable of aggregating and sending greater quantities of data more efficiently than PDH equipment. SDH is mainly used for ADSL services, while PDH is used predominantly for PSTN services.

Key points

- Transmission equipment contributes a significant proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ▮▮▮ **[c-i-c ends]** per cent in 2013-14).

- Telstra has developed revised routing factors for a range of core asset classes (all switching equipment assets, inter-exchange cables and transmission assets) based on 'call dispersion' data. These revised routing factors replace those contained in the Analysys model, which where implicitly reflected in the cost allocation factors for the 2011/13 FADs.

- Telstra's methodology for this asset class makes significant use of information from Telstra's internal infrastructure databases. This information is used to identify different types of transmission equipment and the various traffic streams that use transmission equipment, including those that relate to declared services. The information from these databases represent how transmission equipment is currently used and current traffic volumes (as opposed to future expected use or volumes).

Services using this asset class

There are a range of fixed line and other services that use transmission equipment. The declared fixed line services that use transmission equipment are FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA), LCS and wholesale ADSL. Other fixed line services that also use transmission equipment are retail PSTN voice services (local, national, international and fixed to mobile calls), ISDN voice services, and retail ADSL services.

Transmission equipment is also used for non-fixed line services (including mobiles and non-ADSL data).

Approach adopted for 2011 and 2013 FADs

In the 2011 and 2013 FADs, the initial cost allocation factor for transmission equipment for LCS was based on the Analysys cost allocation factor for 2008-09. The cost allocation factor for LCS in subsequent years was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in minutes of use for LCS for that year.

For PSTN OTA and Wholesale ADSL, the cost allocation factors were based on the Analysys cost allocation factors, but adjusted to account for higher rates of growth in data traffic using transmission equipment. The ACCC made these adjustments because it considered that the Analysys cost allocation factors — developed in 2007-08 — did not contemplate the subsequent increase in the volume of data traffic using transmission equipment, and in the absence of the adjustments would have over-allocated costs of transmission equipment to PSTN OTA and Wholesale ADSL.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with transmission equipment are assumed to be driven by the number of services (SIOs) and volume (minutes of use).

Telstra's asset register is first used to identify the three primary categories of transmission assets; SDH, PDH and other transmission equipment. A Telstra internal infrastructure database is then used to identify the proportion of these assets that is utilised by ADSL services, PSTN services and 'other' services (which includes mobile and non-ADSL data).

Further allocations are then made for ADSL (allocated between retail and wholesale ADSL using SIO forecasts), and PSTN (allocated to FOAS/FTAS, LCS and retail voice services using minutes of use – minutes of use is weighted using routing factors to reflect that transmission equipment is used in different ways for PTSN voice services).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 and 2013 FAD approach and Telstra's proposed approach are provided in Table 3.5.1.

Table 3.5.1   **Comparison of 2011/2013 FAD approach vs Telstra's proposed approach for CO05 transmission equipment for 2013-14**

Declared service	2011/2013 approach FAD %	Telstra proposed approach %	% point difference	% change
FOAS/FTAS	[c-i-c starts]■	■	■	■
LCS	■	■	■	■
Wholesale ADSL	■	■	■	■[c-i-c ends]

Figure 3.5.2 shows Telstra's assumed share use of the transmission equipment assets class by the various services for 2013-14.

Figure 3.5.2   **Telstra's proposed allocation of CO05 transmission equipment for 2013-14**

[c-i-c starts]

41

[c-i-c ends]

3.6 CO06 core radio bearer equipment

Asset description

Core radio bearer equipment contains assets used to support the SDH and PDH transmission network in regional and remote areas. These assets are used in place of fibre optic cables.

Key points

- Core radio bearer equipment contributes a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▮▮**[c-i-c ends]** per cent in 2013-14).

- Telstra has adopted the same platform allocations for this class as CO05 transmission equipment, as these assets are primarily used to support transmission equipment and also because the relative size of this asset class is small compared to other asset classes.

Services using this asset class

There are a range of fixed line and other services that use core radio bearer equipment. The declared fixed line services that use core radio bearer equipment are FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA), LCS and wholesale ADSL. Other fixed line services that also use core radio bearer equipment are retail PSTN voice services (local, national, international and fixed to mobile calls), ISDN voice services, and retail ADSL services.

Core radio bearer equipment is also used for non-fixed line services (including mobiles and non-ADSL data).

Approach adopted for the 2011 and 2013 FADs

In the 2011 FADs, the initial cost allocation factors for core radio bearer equipment for PSTN OTA, LCS and wholesale ADSL services were based on the Analysys cost allocation factor for 2008-09.

The cost allocation factor in subsequent years was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in wholesale ADSL SIOs and forecast percentage change in volume of minutes for PSTN OTA and LCS services for that year.

Telstra's proposed allocation method

Under Telstra's revised model, the costs associated with core radio bearer equipment are assumed to be driven by the number of services (SIOs) and volume (minutes of use).

Telstra has adopted the same platform allocations as CO05 transmission equipment for this asset class to identify the proportion of core radio bearer equipment that is utilised by ADSL services, PSTN services and 'other' services (which includes mobile and non-ADSL data). The same platform allocations as transmission equipment are used because core radio bearer equipment is primarily used to support transmission equipment and also because the relative size of this asset class is small compared to other asset classes

Further allocations are then made for ADSL (allocated between retail and wholesale ADSL using SIO forecasts), and PSTN (allocated to FOAS/FTAS, LCS and retail voice services using minutes of use – minutes of use is weighted using routing factors to reflect that transmission equipment is used in different ways for PTSN voice services).

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 and 2013 FADs approach and Telstra's proposed approach are provided in Table 3.6.1.

Table 3.6.1   Comparison of 2011/2013 FAD approach vs Telstra's proposed approach for CO06 core radio bearer equipment for 2013-14

Declared service	2011/2013 FAD approach %	Telstra proposed approach %	% point difference	% change
FOAS/FTAS	[c-i-c starts]■	■	■	■
LCS	■	■	■	■
Wholesale ADSL	■	■	■	■[c-i-c ends]

Figure 3.6.2 shows Telstra's assumed share of use of core radio bearer equipment by the various services for 2013-14.

Figure 3.6.2   Telstra's proposed allocation of CO06 core radio bearer equipment for 2013-14

[c-i-c starts]
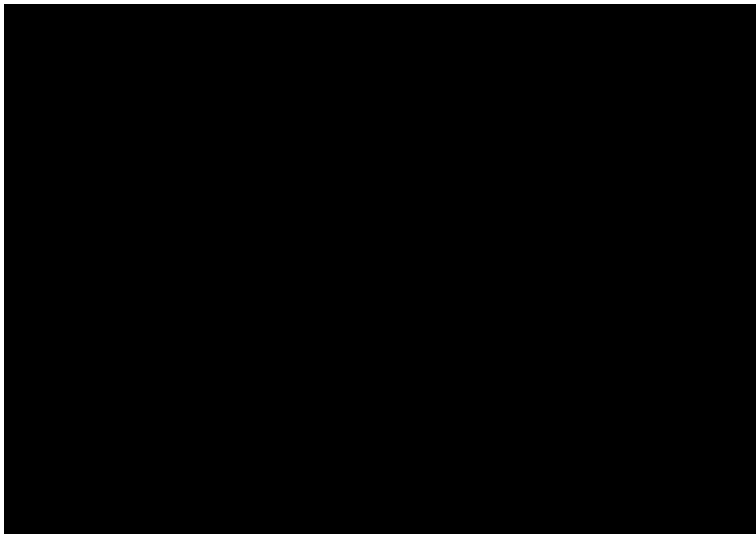
[c-i-c ends]

3.7   CO07 other communications plant and equipment

Asset description

Other communications plant and equipment contains racks, ironworks and tie cables used in Telstra exchange buildings.

Key points

- Other communications plant and equipment contributes only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▇**[c-i-c ends]** per cent in 2013-14).

- Telstra's proposed 'general allocator' approach for other communications, plant and equipment is similar to the 'revenue share' approach adopted for this asset class in the 2011 FADs. The key differences are:

  o under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

  o under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

- Telstra's proposed approach to other communications plant and equipment also includes an allocation to third party use to reflect the use of Telstra's exchange buildings (and associated equipment) by other users, including NBN Co. This allocation was based on internal Telstra information on current use of Telstra facilities by third parties (as opposed to forecast use).

Services using this asset class

Other communications plant and equipment are used for declared and non-declared fixed line services, as well as a range of other non-fixed-line uses.

The declared services that require other communications plant and equipment are WLR, FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA), LCS and wholesale ADSL services. The non-declared services using this asset class include retail PSTN services, retail ADSL, ISDN and other DSL services.

Other communications plant and equipment are used to support use of Telstra's facilities by third parties (including NBN Co or access seekers that install their own equipment). Other communications plant and equipment is also assumed to support non-fixed-line services such as mobiles and non-ADSL data.

Approach adopted for the 2011 and 2013 FADs

In the 2011 FAD, the initial cost allocation factor for other communications, plant and equipment was based on a 'revenue share' approach. This involved the following three step process:

- First, the total annual revenue requirement for the first six core asset classes was calculated for 2009-10.

- Second, the annual revenue requirement for the first six core asset classes for each declared service was calculated for 2009-10.

- Third, the annual revenue requirement for each declared service calculated in the second step is divided by the total annual revenue requirement calculated in the first step to obtain the cost allocation factors for each declared service for 2009-10.

Once the initial cost allocation factors were determined, they were adjusted each year by the forecast percentage changes in PSTN OTA and LCS demand for that year.

Telstra's proposed allocation method

Under Telstra's proposed approach, a share of other communications plant and equipment is first allocated to third party use (such as other access seekers that install their own equipment or NBN Co installing equipment for use in the NBN). This allocation is based on internal Telstra information on third party use of exchange buildings and values of exchange buildings and related facilities.

Telstra has proposed a 'general allocator' approach to allocate remaining costs for other communications plant and equipment. Telstra's rationale for using a general allocator is that there is no logical, direct causal relationship that can be calculated between this asset class and the relevant services.

The methodology used to calculate the general allocator for other communications plant and equipment is similar to the revenue share approach adopted in the 2011 FADs as described above. The two key differences between Telstra's approach and the 2011 FAD approach are:

- under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

- under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 and 2013 FAD approach and Telstra's proposed approach are provided in Table 3.7.1.

Table 3.7.1   Comparison of 2011/2013 FAD approach vs Telstra's proposed approach for CO07 other communications plant and equipment for 2013-14

Declared service	2011/2013 FAD approach %	Telstra proposed approach %	% point difference	% change
WLR	[c-i-c starts] ■	■	■	■
FOAS/FTAS	■	■	■	■
LCS	■	■	■	■
Wholesale ADSL	■	■	■	■ [c-i-c ends]

Figure 3.7.2 shows Telstra's assumed share of use of other communications plant and equipment by the various services for 2013-14.

Figure 3.7.2   Telstra's proposed allocation of CO07 other communications, plant and equipment for 2013-14

[c-i-c starts]

[c-i-c ends]

3.8   CO08 network land

Asset description

Network land comprises freehold network land, structural land improvements, mains power connections, fencing, roads, paths, parking, drainage and landscaping. It excludes the share of network land used for CAN network land asset class (this land is included in CA08 network land).

Key points

- Network land contributes a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]**███**[c-i-c ends]** per cent in 2013-14).

- Telstra's proposed 'general allocator' approach for network land is similar to the 'revenue share' approach adopted for this asset class in the 2011 FADs. The key differences are:

    o under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

    o under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

- Telstra's proposed approach to network land also includes an allocation to third party use to reflect the use of Telstra's exchange buildings (and associated equipment) by other users, including NBN Co. This allocation was based on internal Telstra information on current use of Telstra facilities by third parties (as opposed to forecast use).

Services using this asset class

Network land is used for declared and non-declared fixed line services, as well as a range of other non-fixed-line uses.

The declared services that require network land are WLR, FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA), LCS and wholesale ADSL services. The non-declared services using this asset class include retail PSTN services, retail ADSL, ISDN and other DSL services.

Network land is used to support use of Telstra's facilities by third parties (including NBN Co or access seekers that install their own equipment). Network land is also assumed support non-fixed-line services such as mobiles and non-ADSL data.

Approach adopted for the 2011 and 2013 FADs

In the 2011 FAD, the initial cost allocation factor for network land was based on a 'revenue share' approach. This involved the following three step process:

- First, the total annual revenue requirement for the first six core asset classes was calculated for 2009-10.

- Second, the annual revenue requirement for the first six core asset classes for each declared service was calculated for 2009-10.

- Third, the annual revenue requirement for each declared service calculated in the second step is divided by the total annual revenue requirement calculated in the first step to obtain the cost allocation factors for each declared service for 2009-10.

Once the initial cost allocation factors were determined, they were adjusted each year by the forecast percentage changes in PSTN OTA and LCS demand for that year.

Telstra's proposed allocation method

Under Telstra's proposed approach, a share of network land is first allocated to third party use (such as other access seekers that install their own equipment or NBN Co installing equipment for use in the NBN). This allocation is based on internal Telstra information on third party use of exchange buildings and values of exchange buildings and related facilities.

Telstra has proposed a 'general allocator' approach to allocate remaining costs for network land. Telstra's rationale for using a general allocator is that there is no logical, direct causal relationship that can be calculated between this asset class and the relevant services.

The methodology used to calculate the general allocator for network land is similar to the revenue share approach adopted in the 2011 FADs as described above. The two key differences between Telstra's approach and the 2011 FAD approach are:

- under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

- under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 and 2013 FAD approach and Telstra's proposed approach are provided in Table 3.8.1.

Table 3.8.1   Comparison of 2011/2013 FAD approach vs Telstra's proposed approach for CO08 network land for 2013-14

Declared service	2011/2013 FAD approach %	Telstra proposed approach %	% point difference	% change
WLR	[c-i-c starts] ■	■	■	■
FOAS/FTAS	■	■	■	■
LCS	■	■	■	■
Wholesale ADSL	■	■	■	■ [c-i-c ends]

Figure 3.8.2 shows Telstra's assumed share of use of other communications plant and equipment by the various services for 2013-14.

Figure 3.8.2   Telstra's proposed allocation of CO08 network land for 2013-14

[c-i-c starts]
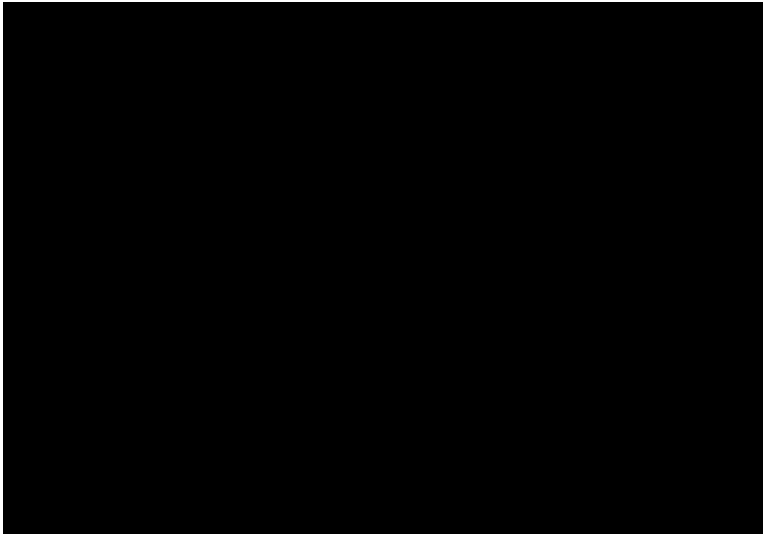
[c-i-c ends]

3.9 CO09 network buildings/support

Asset description

Network buildings/support are core assets reflecting the values and associated costs of the customer side of the MDF within Telstra exchange buildings. The share allocated to CAN network buildings/support asset class is excluded from this asset class.

Key points

- Network buildings/support contributes a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▉**[c-i-c ends]** per cent in 2013-14).

- Telstra's proposed 'general allocator' approach for network buildings/support is similar to the 'revenue share' approach adopted for this asset class in the 2011 FADs. The key differences are:

  - under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

  - under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

- Telstra's proposed approach to network buildings/support also includes an allocation to third-party use to reflect the use of Telstra's exchange buildings (and associated equipment) by other users, including NBN Co. This allocation was based on internal Telstra information on current use of Telstra facilities by third parties (as opposed to forecast use).

Services using this asset class

Network buildings/support is used for declared and non-declared fixed line services, as well as a range of other non-fixed-line uses.

The declared services that require network buildings/support are WLR, FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA), LCS and wholesale ADSL services. The non-declared services using this asset class include retail PSTN services, retail ADSL, ISDN and other DSL services.

Network buildings/support is used to support use of Telstra's facilities by third parties (including NBN Co or access seekers that install their own equipment). Network buildings/support is also assumed support non-fixed-line services such as mobiles and non-ADSL data.

Approach adopted for the 2011 and 2013 FAD

In the 2011 FAD, the initial cost allocation factor for network buildings/support was based on a 'revenue share' approach. This involved the following three step process:

- First, the total annual revenue requirement for the first six core asset classes was calculated for 2009-10.

- Second, the annual revenue requirement for the first six core asset classes for each declared service was calculated for 2009-10.

- Third, the annual revenue requirement for each declared service calculated in the second step is divided by the total annual revenue requirement calculated in the first step to obtain the cost allocation factors for each declared service for 2009-10.

Once the initial cost allocation factors were determined, they were adjusted each year by the forecast percentage changes in PSTN OTA and LCS demand for that year.

Telstra's proposed allocation method

Under Telstra's proposed approach, a share of network buildings/support is first allocated to third party use (such as other access seekers that install their own equipment or NBN Co installing equipment for use in the NBN). This allocation is based on internal Telstra information on third party use of exchange buildings and values of exchange buildings and related facilities.

Telstra has proposed a 'general allocator' approach to allocate remaining costs for network buildings/support. Telstra's rationale for using a general allocator is that there is no logical, direct causal relationship that can be calculated between this asset class and the relevant services.

The methodology used to calculate the general allocator for network buildings/support is similar to the revenue share approach adopted in the 2011 FADs as described above. The two key differences between Telstra's approach and the 2011 FAD approach are:

- under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

- under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 and 2013 FAD approach and Telstra's proposed approach are provided in Table 3.9.1.

Table 3.9.1 **Comparison of 2011/2013 FAD approach vs Telstra's proposed approach for CO09 network buildings/support for 2013-14**

Declared service	2011/2013 FAD approach %	Telstra proposed approach %	% point difference	% change
WLR	[c-i-c starts] ■	■	■	■
FOAS/FTAS	■	■	■	■
LCS	■	■	■	■
Wholesale ADSL	■	■	■	■ [c-i-c ends]

Figure 3.9.2 shows Telstra's assumed share of use of other communications plant and equipment by the various services for 2013-14.

Figure 3.9.2   Telstra's proposed allocation of CO09 network buildings/support for 2013-14

[c-i-c starts]
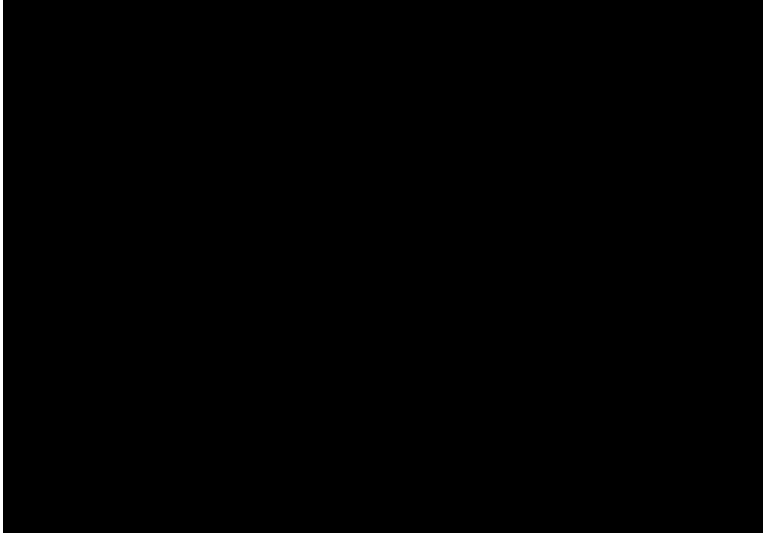
[c-i-c ends]

3.10 CO10 indirect capital assets

Asset description

Indirect capital assets are predominantly made up of IT software and hardware. It also contains equipment related to motor vehicles and mechanical aids.

Key points

* Core indirect capital assets contributes a material proportion towards the total fixed line revenue requirement (**[c-i-c starts]**▇▇▇**[c-i-c ends]** per cent in 2013-14).

* Telstra's proposed 'general allocator' approach for indirect capital assets is similar to the 'revenue share' approach adopted for this asset class in the 2011 FADs. The key differences are:

  * under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

  * under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

Services using this asset class

Indirect capital assets are used for declared and non-declared fixed line services, as well as a range of other non-fixed-line uses.

The declared services that require indirect capital assets are WLR, FOAS and FTAS (formally known as PSTN OA and PSTN TA or collectively as PSTN OTA), LCS and wholesale ADSL services. The non-declared services using this asset class include retail PSTN services, retail ADSL, ISDN and other DSL services. Indirect capital assets are also assumed support non-fixed-line services such as mobiles and non-ADSL data.

Approach adopted for 2011 and 2013 FADs

In the 2011 FAD, the initial cost allocation factor for indirect capital assets was based on a 'revenue share' approach. This involved the following three step process:

* First, the total annual revenue requirement for the first six core asset classes was calculated for 2009-10.

* Second, the annual revenue requirement for the first six core asset classes for each declared service was calculated for 2009-10.

* Third, the annual revenue requirement for each declared service calculated in the second step is divided by the total annual revenue requirement calculated in the first step to obtain the cost allocation factors for each declared service for 2009-10.

Once the initial cost allocation factors were determined, they were adjusted each year by the forecast percentage changes in PSTN OTA and LCS demand for that year.

Telstra's proposed allocation method

Telstra has proposed a 'general allocator' approach to allocate all costs associated with indirect capital assets. Telstra's rationale for using a general allocator is that there is no logical, direct causal relationship that can be calculated between indirect capital asset and the relevant services.

The methodology used to calculate the general allocator for indirect capital assets is similar to the revenue shares approach adopted in the 2011 FADs as described above. The two key differences between Telstra's approach and the 2011 FAD approach are:

- under Telstra's approach, the first six core asset classes and CO12 data equipment are used to calculate the general allocation factor. In the 2011 FAD, data equipment was not used in this calculation (this asset class was only added to the FLSM in 2013).

- under Telstra's approach, the general allocation factor is calculated annually. In the 2011 FADs, it was calculated using the revenue share approach for the first year only, then adjusted in line with changes in demand for declared services.

Telstra's proposed approach to indirect capital assets is equivalent to the approach adopted for core asset classes CO07-CO09, except that it does not include an allocation to third party use.

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2011 and 2013 FAD approach and Telstra's proposed approach are provided in Table 3.10.1.

Table 3.10.1   Comparison of 2011/2013 FAD approach vs Telstra's proposed approach for CO10 indirect capital assets for 2013-14

Declared service	2011/2013 FAD approach %	Telstra proposed approach %	% point difference	% change
WLR	[c-i-c starts]█	█	█	█
FOAS/FTAS	█	█	█	█
LCS	█	█	█	█
WADSL	█	█	█	█[c-i-c ends]

Figure 3.10.2 shows Telstra's assumed share of use of core indirect capital assets by the various services for 2013-14.

Figure 3.10.2   Telstra's proposed allocation of CO10 indirect capital assets for 2013-14

[c-i-c starts]
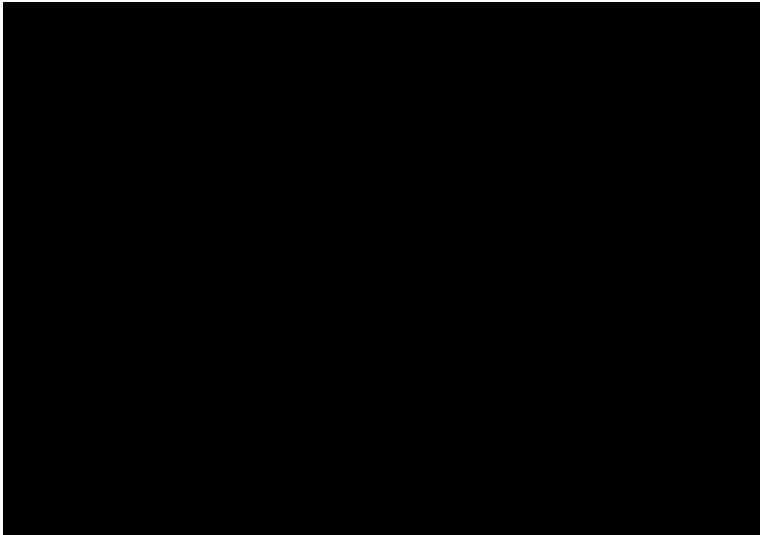
Note: "Other fixed line" includes all services in the Core asset class (excluding WLR, FOAS/FTAS, LCS and WADSL) that use indirect capital assets.

3.11   CO11 LSS equipment

The line sharing service (LSS) allows access seekers to share the copper line that connects consumers to Telstra's exchanges. It allows access seekers to provide fixed internet services using their own equipment while an alternative provider supplies the voice service over the same line.

The LSS asset class contains no access network costs because these costs are recovered through the prices charged for WLR and Telstra's retail line services. The specific assets used to provide the LSS have been fully depreciated and Telstra has made no further capital investments in these assets. The cost of LSS is therefore confined to operating expenditure (and a share of tax allowance).

All LSS equipment costs relate to the LSS and no other service. The allocation factor for LSS is therefore 1 under both the approach adopted in 2011 FAD and Telstra's proposed cost allocation framework.

LSS equipment contributes only a minor proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ▌ **[c-i-c ends]** per cent in 2013-14).

3.12 CO12 data equipment

Asset description

This asset class includes equipment necessary to provide fixed line broadband services, specifically the equipment and software required to route and aggregate DSL traffic. This includes IP routers and switches, DSLAMs (ISAMs and ASAMs) and data network software.

Key points

- Data equipment contributes a significant proportion towards the total fixed line revenue requirement (**[c-i-c starts]** ▉ **[c-i-c ends]** per cent in 2013-14).

- Telstra's proposed allocation factors would allocate the costs for the data equipment asset class solely to DSL services. This is a different approach than was used to determine the Analysys model allocation factors (on which the 2013 wholesale ADSL FAD cost allocation factors are based), where data equipment costs were assumed to be also allocated to other services, including ISDN and other platforms (e.g. digital data access services). The extent to which data equipment is used for other non-DSL services will be a consideration for this FAD inquiry.

Services using this asset class

The only declared service using data equipment is wholesale ADSL. Under Telstra's proposal, the other services assumed to use data equipment are retail ADSL services and other DSL services (such as Telstra business DSL and SHDSL services).

Approach adopted for the 2013 wholesale ADSL FAD

Unlike other asset classes, which were established as part of the 2011 FAD inquiry, the data equipment asset class was developed as part of the wholesale ADSL FAD inquiry in 2013. During that inquiry, the ACCC requested information from Telstra regarding the assets used to supply wholesale ADSL. Based on this information, the ACCC identified a number of assets that needed to be added to the FLSM to enable the estimation of prices for wholesale ADSL. As a result the ACCC added the data equipment asset class, which included DSLAMs (and associated housing, racks and ADSL line cards), switches, servers, routers, and associated software.[2]

The initial cost allocation factor for data equipment (to wholesale ADSL) was based on the Analysys model allocation factor for 2008-09. The cost allocation factor for subsequent years was based on the cost allocation factor from the previous year and adjusted by the forecast percentage change in wholesale ADSL SIOs for that year.

Telstra proposed allocation method

Under Telstra's revised model, the costs associated with data equipment are assumed to be driven by the number of fixed line SIOs.

The cost allocation factor is derived by calculating the ratio of forecast wholesale ADSL SIOs to the combined SIO forecast for all services using data equipment (wholesale ADSL, retail ADSL and other DSL).

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[2]   ACCC, *Public inquiry to make a final access determination for the Wholesale ADSL service, Final Report, Public Version*, May 2013, pp. 26-28

Current versus Telstra's proposed allocation factors

Cost allocation factors for 2013-14 based on the 2013 FAD approach and Telstra's proposed approach are provided in the table below.
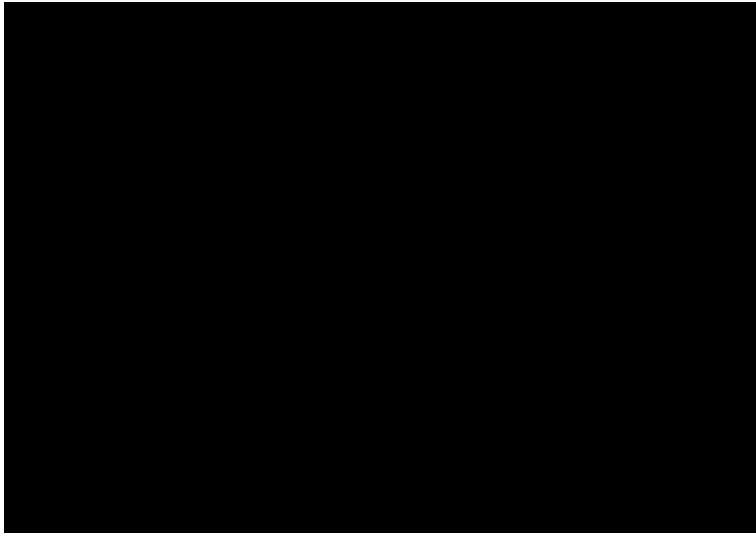
Table 3.12.1   Comparison of 2013 FAD approach vs Telstra's proposed approach for CO12 data equipment for 2013-14

Declared service	2013 FAD approach %	Telstra proposed approach %	% point difference	% change
WADSL	[c-i-c starts]■■	■■	■■	■■[c-i-c ends]

The following chart shows Telstra's assumed share of the data equipment asset class by the various services for 2013-14.

Figure 3.12.2   Telstra's proposed allocation of CO12 data equipment for 2013-14

[c-i-c starts]

[c-i-c ends]