

Technical Advice on connection charges for the ULLS, LSS and WADSL services: Final Report (Replacement Public Version)

Australian Competition & Consumer Commission

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EXECUTIVE SUMMARY

Background

The ACCC is undertaking a public inquiry to make final access determinations (FADs) for the declared fixed line services. UXC Consulting has been engaged by the ACCC to provide technical advice that will assist the ACCC in setting the connection charges for a selection of these services.

Scope

The scope of works requires UXC Consulting to review the original cost models for Line Sharing Service (LSS) and Unconditioned Local Loop Service (ULLS) connections to estimate charges. This has required UXC Consulting to:

- Update the inputs to the existing cost model by undertaking an update to the original 'time and motion like' study and investigating whether any of the existing assumptions should be updated, such as for new practices or procedures to do this work efficiently; and
- Extend the existing model to estimate the costs of connections and disconnections in relation to the wholesale ADSL service.

The ACCC also sought our advice on comments made by Telstra in its submission¹ to the ACCC's Draft Decision² on connection and disconnection charges. The relevant Telstra comments were related to LSS and ULLS disconnection charges.

We have reviewed ACCC documentation and costing information from previous regulatory processes, which has informed:

- our consideration of updates and changes to the cost models used to date to determine the ACCC's regulated charges for the ULLS and LSS services; and
- the development of an appropriate model to estimate connection charges for the wholesale ADSL service.

We have also reviewed information provided by Telstra both formally by letter and informally in meetings with the ACCC and UXC Consulting. That information has also informed development of the updated model as follows:

- revised costs for direct contracting rates for jumpering, travel, vehicle, tool and material costs and associated contractor-related overhead costs [c-i-c starts] [REDACTED] [c-i-c ends];
- retention of the cost structure and costs for Telstra's indirect costs for contract management and back-of-house costs as contained in the original ACCC models; and
- use of Australian Bureau of Statistics (ABS) industry-specific indices for escalation of Telstra's back-of-house labour costs from the original models.

Further, we have relied on our own experience and knowledge of Telstra's networks.

This is the second and final report prepared by UXC providing technical advice on connection and disconnection charges for ULLS, LSS and wholesale ADSL services. This report is an updated to our initial report of 12 March 2015 and reflects information provide by Telstra in its submission to the ACCC's draft decision on connection charges.

¹ 8th May 2015: written submission to the ACCC – Response to the ACCC's Draft Decision on non-price terms and conditions and connection charges

² Telecommunications Final Access Determination Inquiries - Non-price terms and conditions and connection charges for fixed line services: Draft Decision, March 2015

Outcomes

Development of Updated Model

UXC has made a number of revisions to the original modelling, including:

- The original individual models for (i) single LSS connections, (ii) single LSS disconnections, (iii) single ULLS connections, (iv) LSS Managed Network Migration (MNM) connections and (v) ULLS connections have been consolidated into a single model. The update has also included models for wholesale ADSL Type A connections, Type B connections, all other types of wholesale ADSL completed connections, ULLS MNM Cancellations and ULLS Call Diversion;
- Telstra has significantly changed its management of external contractors. Those changes are, among other things, intended to materially improve the efficiency of the direct activities involved in connection activities;
- the updated model assumes all work activities that UXC considers necessary for the connection of the included services are carried out by contractors;
- with the exception of 'jumper over extra' activity the model excludes the costs associated with the additional activities as described by Telstra in establishing connection/disconnection charges for ULLS, LSS and wholesale ADSL services;
- "Wholesale ADSL Type A" simply involves an administrative procedure confined to back of house activities;
- "Wholesale ADSL Type B" and "All other (wholesale ADSL) completed installation or transfer requests" are analogous to an LSS service connection;
- the updated model provides for both band-based pricing and pricing averaged across the four bands for single LSS connections, single ULLS connections and wholesale ADSL connections (except Type A):
 - due to the uniformity of input costs disaggregation across Bands 1 to 4 has not been applied to LSS and ULLS MNM connections; nor has it been applied to Type A wholesale ADSL connections;
- given that Telstra is now [c-i-c starts] [REDACTED] [c-i-c ends], UXC Consulting expects that there would be a material reduction in those internal costs. However in the absence of any substantive new information, the 10% uplift on contractor costs in the model to cover the contract management costs incurred by Telstra has been retained; and
- A single figure of 8 minutes has been included for single LSS and single ULLS Digital Activation Centre (DAC) activity (previously 4 minutes for LSS DAC activity), 8.5 minutes for ULLS call diversion and 1.2 minutes for ULLS MNM cancellations.

Model Outcomes

With one possible exception the model outcomes confirm that Telstra's revised contractor arrangements appear to have resulted in significant efficiencies in the connection of LSS, ULLS and wholesale ADSL services. Specifically:

- For each of the LSS and ULLS connection charges (whether single or MNM) the updated model has produced consistently lower prices, ranging from ~10% (single LSS Band 1) to ~26% (LSS MNMs) for the 2015/16 year. Where Band-based prices have been modelled, average price reductions across the four Bands are ~7.5% (Single ULLS) and ~12.5% (Single ULLS) for 2015/16;

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- LSS disconnection charges are lower, by as much as ~50% (Band 4) to ~55% (Band 2), and by ~54% on average across the four Bands, for the 2015/16 year; and
 - The inclusion of wholesale ADSL services has reduced Type A connection prices by ~8%, with an average reduction for Type B prices across the four Bands of ~45% for 2015/16. For Type B connections, on a per Band basis the reductions range from ~42% (Band 4) to ~46% (Band 1) for the same year.

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1. BACKGROUND

1.1 Introduction and Objective

The Australian Competition and Consumer Commission (ACCC) has engaged UXC Consulting to provide technical advice that will assist the ACCC in setting the connection and disconnection charges for the unconditioned local loop service (ULLS), the line sharing service (LSS) and wholesale asymmetric digital subscriber line (ADSL) services.

UXC Consulting understands that the context of this consultancy work is that the ACCC has commenced a public inquiry to make final access determinations (FADs) for the declared fixed line services.

UXC Consulting understands that the overall objective of the consultancy is to provide technical and costing advice in regard to connection and disconnection charges for these services, as per below (extract from consultancy brief):

Objective

The main objective is to provide the ACCC technical advice that will assist the ACCC in setting the connection and disconnection charges for the ULLS, LSS and wholesale ADSL services. The ACCC may publish the subsequent report or refer to in its draft or final decision for the fixed line services FAD.

1.2 Scope

UXC Consulting understands that the scope of work includes the following requirements:

For the current FAD inquiry, review the cost model developed in 2004/05 to estimate the costs of connection and disconnection work for the ULLS, LSS and wholesale ADSL service.

Deliverables Required

1. A written report, in draft and final versions, containing:
 - 1.1. Explanation/description of what is technically and operationally involved in connecting and disconnecting ULLS, LSS and wholesale ADSL services.
 - 1.2. Explanation of the technical and operational assumptions used to estimate the costs involved in undertaking connections and disconnections for the ULLS, LSS and wholesale ADSL service.
 - 1.3. Review and update of the previous 'time and motion' study for ULLS and LSS to estimate the time and costs involved in connection and disconnection activities. Extension of this 'time and motion' study to the wholesale ADSL service.
 - 1.4. Description of any new practices or procedures generally adopted within the industry to do this work efficiently since the original model for ULLS and LSS was developed 2004/05.
 - 1.5. Making the necessary modifications to extend the existing model to estimate the costs of connections and disconnections in relation to the wholesale ADSL services.
 - 1.6. Developing inputs to the existing cost model to reflect any changes in the technical assumptions (resulting from the assessment under clause 1.2 above) and the results from the 'time and motion like' study (conducted under clause 1.3 above)

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- The ACCC subsequently advised³ that it no longer requires advice on an ‘early termination charge’ for the Wholesale ADSL service.
 - It also requested⁴ the inclusion of estimated charges for ULLS call diversion and ULLS MNM cancellations, along with technical advice in response to comments made by Telstra⁵ on a LSS and ULLS disconnection charge, in its submission of 8 May 2015.

1.3 ACCC Draft Decision

On 25th March 2015, the ACCC released its draft decision⁶ on the non-price terms and conditions for the:

- fixed line services and the wholesale ADSL service
- mobile terminating access service (MTAS)
- domestic transmission capacity service (DTCS).

The draft decision included price terms for connection charges for fixed line telecommunication services. The ACCC has also published a public version of UXC Consulting’s initial report on connection charges and information provided by Telstra on the cost of its connection works.

The ACCC sought submissions from the industry on the draft report and on the UXC Consulting initial report, with submissions closing on 8th May 2015. This report has updated our initial report to take account of relevant sections of the industry responses received.

³ by email on 5th February 2015

⁴ By email on 28th May 2015

⁵ “8 May 2015 written submission to the ACCC – Response to the ACCC’s Draft Decision on non-price terms and conditions”

⁶ Telecommunications Final Access Determination Inquiries - Non-price terms and conditions and connection charges for fixed line services: Draft Decision, March 2015

2. INPUT CONSIDERATIONS

2.1 Documentation from previous ACCC processes

UXC Consulting has reviewed the ACCC documentation and costing information from previous regulatory processes. These documents, listed in “Attachment A: ACCC References”, have informed:

- our consideration of updates and changes to the cost models used to date to determine the ACCC’s regulated charges for the ULLS and LSS services; and
- the development of an appropriate model to estimate the connection charges for the wholesale ADSL connection services.

Where appropriate UXC Consulting has also outlined its considered views on the information provided.

In this regard the cost models used by the ACCC to set the regulated charges for the ULLS and LSS have reflected the following cost components for connection work:

- jumpering, travel, vehicle, tool and material costs;
- “jumper over extra” costs, for connections that involve running a jumper (to) a second main distribution frame;
- associated contractor overhead and Telstra indirect contract management costs; and
- back-of-house costs.

The ACCC has previously used third party contract quotes provided by Telstra to estimate the costs of the jumpering, travel, vehicle, tool and material costs, jumper over extra costs and contractor overheads. Telstra also provided estimates for the costs incurred for connection work undertaken by its own staff. Telstra’s contract management costs were estimated by applying a percentage mark-up to the contractor costs. The ACCC used a ‘time and motion’ study by a previous consultant to estimate the back-of-house costs involved in connection and disconnection work.

That cost structure was subsequently incorporated in cost models used by the ACCC to determine indicative connection and (where appropriate) disconnection prices for both the ULLS and LSS for the periods of 1st January 2008 to 30th June 2008 and from 1st July 2008 to 31st July 2009⁷ (LSS) and for each financial year from 2005-06 to 2008-09⁸ (ULLS). The indicative charges were determined for both single services and for MNM process used for the transfer of multiple services.

The cost models included:

- estimates of the direct contractor costs incurred for connection activity;
- a 10% mark-up on contractor costs to cover Telstra’s indirect costs;
- estimates of the costs incurred by Telstra’s internal staff in undertaking connection/disconnection jumpering activities (in place of third party contractors) for the LSS ;

⁷ “October 2007 LSS Pricing Principles and Indicative Prices confidential Version”

⁸ “June 2008 ULLS Pricing Principles and Indicative Prices Confidential Version”

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- an estimate of the proportion of LSS connections/disconnections undertaken by contractors and by Telstra staff; and
 - estimates of Telstra’s back of house (DAC and IDS) costs.

The ACCC subsequently used the outputs from these models to determine the regulated charges for the ULLS and LSS (both for single services and for MNMs) for the financial years from 2009-10 to 2013-14.⁹

2.2 Existing ACCC Pricing Models for connection/disconnection/call diversion/cancellation charges

The existing ACCC pricing models for the LSS and ULLS connection charges were last updated in 2007 and 2008 respectively, and used Telstra’s contractor rates as advised in its schedule of rates (SORs) for 2008. Four separate models were developed:

- Single LSS connection and disconnection model
- MNM LSS connection model 2008-09
- Single ULLS connection model
- MNM ULLS connection model

To determine charges for the 2011 FAD, the ACCC set regulated charges by indexing the charges estimated using the 2007 and 2008 models.

Simple models were developed by the ACCC in its “ March 2008 final determination Chime and Telstra ULLS Confidential Version” for the cancellation of ULLS services where pre-jumping had occurred as part of an MNM migration process (paragraph 1484, p. 275) and for fixed ULLS call diversion charges (paragraph 1807, p 327).

A more detailed description of the models follows in sections 2.3.1 and 2.3.2, along with relevant assumptions and source data.

2.2.1 The 2007 LSS and 2008 ULLS Models

1. Single LSS Connection Model

This model includes single LSS connections undertaken by both contractors and by internal Telstra staff. The structure of this model for single LSS connections undertaken by contractors is shown below. The structure for remaining connections (performed by internal Telstra staff) is identical.

[c-i-c]

Table 2.2.1.1

Key Features and Assumptions

- Jumping and travel, jumper over extra¹⁰ and materials costs are derived from Telstra’s 2008 SORs for contractor activity, which is undertaken only after Telstra issues the relevant

⁹ 2011 FAD indexed ULLS and LSS connection and disconnection charges.xls

Ticket of Work (TOW). The structure of the model for remaining connections (i.e. connection activity undertaken by Telstra's internal staff) was very similar to that for contractor work, although [c-i-c starts] [REDACTED] [c-i-c ends];

- Although the model includes provision for the cost of materials, the cost had been set to zero on the basis that it is already included in contractor charges¹¹
- The indirect costs margin, DAC and IDS costs are based on Telstra's advised costs reviewed and adjusted by the ACCC's consultant at the time to reflect efficient costs;¹²
- Annual labour and material costs were escalated year on year by the latest available Australian Bureau of Statistics (ABS) data for the Information media and telecommunications sector¹³;
- The weighting factor for contractor versus other connections activity was 64%/36%¹⁴; and
- The charges estimated by the model apply a single rate for Central Business District (CBD) (Band 1), urban (Band 2) and rural (Band 3) areas. The model contains no charges for other (Band 4) areas (e.g. remote).

2. MNM LSS Connection Model

The structure of this model (Table 2) is similar, but not identical, to that for single LSS connections undertaken by contractors.

[c-i-c]

Table 2.2.1.2

The differences are;

- The model is based on a minimum of 20 connections for an individual MNM LSS connection activity;
- The model assumes that all connections are performed by contractors and therefore no allowance is made for non-contractor connections;
- The jumper over extra cost is excluded; and,
- The indirect costs in this model do not include any costs for activities performed at Telstra's DAC or IDS.

¹⁰ Jumper over extra charge is to cover connections that involve running a jumper between two different distribution frames.

¹¹ October 2007 LSS Pricing Principles and Indicative Prices confidential Version.pdf

¹² August 2007 final determination Request and Telstra dispute LSS Confidential Version

¹³ Australian Bureau of Statistics publication 6345.0 Wage Price Index, Australia
Australian Bureau of Statistics publication 6427.0 - Producer Price Indexes, Australia

¹⁴ August 2007 final determination Request and Telstra dispute LSS Confidential Version

3. Single ULLS Connection Model

The structure of this model is shown below for single ULLS connections and disconnections undertaken by contractors. Unlike the LSS single connection model it contains no provision for physical connections performed by Telstra staff.

[c-i-c]

Table 2.2.1.3

Key Features and Assumptions

- Jumpering, travel, vehicle, tools and materials costs are derived from Telstra's 2008 SORs for contractor work;
- Although the model includes provision for the cost of materials, the cost had been set to zero on the basis that it is already included in contractor charges¹⁵
- The indirect costs margin, DAC and IDS costs are based on Telstra's advised costs reviewed and adjusted by the ACCC's consultant at the time to reflect efficient costs¹⁶;
- Annual labour and material costs were escalated year on year by the latest available ABS data for the Information media and telecommunications sector¹⁷; and
- The charges estimated by the model apply a single rate for CBD (Band 1), urban (Band 2) and rural (Band 3) areas. The model contains no charges for other (Band 4) areas (e.g. remote).

4. MNM ULLS Connection Model

The structure of this model (Table 2) is similar, but not identical, to that for single ULLS connections.

[c-i-c]

Table 2.2.1.4

The differences are:

- No single visit jumpering. In this respect Telstra can have MNM jumpering activity undertaken in one visit or in two separate visits. The ACCC has previously indicated that a two stage MNM process to be the approach more consistent with statutory criteria¹⁸; and
- The charges estimated by the model do not provide for geographic pricing per band.

¹⁵ October 2007 LSS Pricing Principles and Indicative Prices confidential Version.pdf

¹⁶ March 2008 final determination Chime and Telstra ULLS Confidential Version

¹⁷ Australian Bureau of Statistics publication 6345.0 Wage Price Index, Australia
Australian Bureau of Statistics publication 6427.0 - Producer Price Indexes, Australia

¹⁸ August 2007 final determination Request and Telstra dispute LSS Confidential Version

5. Wholesale ADSL

The ACCC first declared the Wholesale ADSL service in February 2012. The ACCC's previous connection model, developed in 2005 did not therefore include connection charges in relation to this service.

The ACCC advised in its final access determination¹⁹ that it had not received any submissions on the proposed level of the connection charges in its March 2013 Draft Report, and also had not received any further information during the inquiry process on the underlying costs of these connections. For these reasons the wholesale ADSL FAD maintained Telstra's wholesale prices that applied at the time, noting that it would reconsider these charges during the next FAD inquiry. The ACCC's FAD prices terms which were based on Telstra's then list prices are shown below.

Connection type	Charge per connection
Completed Type A Transfer standard Transfer Request via LOLO/LOLIG	\$22.50
Completed Type B Transfer standard Transfer Request via LOLO/LOLIG	\$80.00
All other completed installation or transfer requests	\$80.00

Table 2.2.1.5

As outlined in Section 1.2 UXC Consulting has updated and extended the ACCC's existing pricing model for ULLS and LSS charges to estimate the costs of connections for the three wholesale ADSL connections listed above. This update is based on the underlying costs that those charges are expected to recover.

6. ULLS Call Diversion

The ULLS call diversion charge regulated by the ACCC contains both an up-front fixed charge and an ongoing monthly rate. The ACCC based its decision regarding the up-front charge on a time and motion study prepared by a consultant the ACCC engaged as part of a previous regulatory process²⁰. The study had determined that ULLS call diversion is performed entirely within Telstra's DAC²¹, and estimated that it took Telstra staff 8.5 minutes to perform tasks associated with call diversion²².

The ACCC had previously set the monthly ongoing charge at Telstra's list price. The ACCC did not include any component for the cost of any diverted call, based evidence that call diversion was

¹⁹ Wholesale ADSL Final Access Determination - May 2013

²⁰ ACCC's Unconditional Local Loop Service Access Dispute between Telstra and Chime Statement of Reasons for Final Determination, March 2008, p. 174.

²¹ ACCC's Unconditional Local Loop Service Access Dispute between Telstra and Chime Statement of Reasons for Final Determination, March 2008, p. 322.

²² ACCC's Unconditional Local Loop Service Access Dispute between Telstra and Chime Statement of Reasons for Final Determination, March 2008, p. 322.

typically not in place for a very long period (between 1 to 14 days²³), and as such the costs associated with any calls that are diverted were not considered material; the more relevant consideration was the cost of establishing the call diversion mechanisms.

7. ULLS MNM Cancellations

The 2011 FAD sets a regulated charge for the cancellation of a ULLS MNM process. The ACCC has set two regulated charges associated with the cancellation of a MNM; a fixed charge where the entire MNM process is cancelled, and a per service rate where an access seeker cancels a subset of services to be transferred as part of the MNM process.

The ACCC set the entire MNM cancellation rate based on the fixed amount for the ULLS MNM charge. The per service charge only applies where pre-jumpering has already occurred as part of the MNM transfer process. This per service charge is based on the rate Telstra is charged by its contractor for performing this pre-jumpering work as part of the MNM transfer process²⁴, plus an allowance of 1.2 minutes for tasks performed at the DAC by Telstra's staff²⁵.

2.3 Telstra Information

In response to a formal request from the ACCC dated 5th December 2014, Telstra provided information regarding third party contractor costs for connection of ULLS, LSS and wholesale ADSL services. "Attachment B: Telstra References" lists those and other relevant Telstra documents.

Telstra has provided information formally by letter and email, and informally in meetings with the ACCC and UXC Consulting.

Written Telstra Information

Telstra supplied two letters to the ACCC in response to its information request and a formal submission in response to the ACCC's draft decision on connection charges²⁶:

- 9 Jan 2015 letter to the ACCC - Connection and disconnection charges as part of the fixed line services FAD inquiry.
 - This letter advised that Telstra has moved to a fundamentally different contractor model to the one in place at the time Telstra previously provided data to the ACCC for the purposes of determining regulatory prices for connection of ULLS and LSS. Telstra provide three tables listing the various charges it incurs with these new contractual arrangements, which are discussed further in Section 2.3.1;

²³ ACCC's Unconditional Local Loop Service Access Dispute between Telstra and Chime Statement of Reasons for Final Determination, March 2008, p. 322.

²⁴ ACCC Unconditional Local Loop Service, Pricing Principles and Indicative Prices, June 2008, p. 39.

²⁵ *ibid*

²⁶ ACCC *Final Access Determination Inquiries Non-price terms and conditions and connection charges for fixed line services* Draft Decision, March 2015

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- 4 February 2015 letter to the ACCC – connection and disconnection charges as part of the fixed line services FAD inquiry.

This letter provided the following information:

- a link to the Telstra Wholesale - Structural Separation Undertaking (SSU) webpage, with particular reference to the processes and systems for service qualification, service activation & provisioning and fault rectification for the services relevant to this paper. This confirmed earlier email advice from Telstra on 27th January 2015. These matters are discussed further in Section 2.3.2.
 - Schematic diagrams showing the end-to-end connectivity path for a ULLS and LSS respectively. These diagrams are shown for reference purposes in Section 3.
 - A description of the additional activities undertaken under contract and paid as an uplift to the SORs for specific connection activities (contained in Table 1 of the letter of 4 February 2015, which is also included in Attachment C of this report).
 - The current SORs paid to for the relevant work items involved in the connection of LSS, ULLS and wholesale ADSL services, along with associated fees paid for contractor overhead costs (contract management and management fees). It also provided a mapping of those SORs to each type of connection activity for ULLS, LSS and wholesale ADSL services.
These matters are discussed further throughout Section 3.
- 8 May 2015 written submission to the ACCC – In response to the ACCC’s Draft Decision on non-price terms and conditions and connection charges. With regard to connection charges this submission provided Telstra’s feedback on the following matters:
 - Minor technical errors in the cost model;
 - Revised sub-contractor rate that removes costs associated with maintenance activities;
 - Geographic distribution of copper lines;
 - Proportion of single and multiple jumpering for ULLS single connections;
 - Wholesale ADSL connection and early termination charges;
 - LSS disconnection charges;
 - ULLS connection and disconnection charges; and
 - A correction to the SOR mapping for the VULL connection charge.

This report has taken that feedback into account, to the extent that it is material, in the relevant sections.

Other Telstra Information

Telstra provided a range of information during three separate meetings on 15th and 23rd January 2015 and following its submission of 8th May 2015 a meeting on 15th June 2015. Some information provided at these meetings or in Telstra submission of 8th May augmented information provided in

Telstra letters of 9th January and 4th February 2015. Those matters are discussed further in Section 2.3.2.

2.3.1 Telstra Management of External Contractors

In its letter of 9th January 2015 Telstra advised that, in 2010, it significantly changed its management of external contractors. The following extract from that letter describes the changes.

“In 2010, Telstra made a significant change to the management of its external contractors in an effort to increase flexibility, productivity and efficiency of these arrangements. [c-i-c starts] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] [c-i-c ends]

The Telstra letter also indicated the following:

- Under the current arrangements, Telstra has agreed SORs that are to be paid to [c-i-c starts] [REDACTED] [c-i-c ends] for carrying out works that are specific and integral to the connection activities summarised for each SOR code.
- Telstra also advised that additional tasks are often necessary to complete the specified ULLS/LSS or wholesale ADSL connection activity, and the costs associated with those additional activities are added to the base SOR unit costs.

Section 2.3.3 considers these additional activities in more detail.

- In addition to the rates paid directly to [c-i-c starts] [REDACTED] [c-i-c ends], Telstra pays [c-i-c starts] [REDACTED] [c-i-c ends], for overhead costs. [c-i-c starts] [REDACTED] [c-i-c ends]. Telstra pays these overhead costs directly and separately to the agreed SOR.

The SOR data provided by Telstra shows a consistent [c-i-c starts] [REDACTED] [c-i-c ends] uplift to the SORs to meet the additional overhead costs payable to [c-i-c starts] [REDACTED] [c-i-c ends].

The SORs also contain cross-references to the 2008 SORs supplied to the ACCC, which were used in the development of the ACCC’s 2008 models for determining indicative ULLS and LSS connection and disconnection charges. Those models have been described earlier in more detail in Section 2.2.

2.3.2 Further Information Requests

Meetings between Telstra, the ACCC and UXC Consulting were held on 15th and 23rd January 2015. In addition a meeting was held on 15th June 2015, to discuss information provide by Telstra in its submission of 8th May 2015 and subsequent supporting information requested by the ACCC of 4th June. These meetings were held as both (i) information sessions, with Telstra outlining more detail

regarding the information provided, and (ii) as a forum for the ACCC and UXC Consulting to request further information from the Telstra representatives. The further information Telstra provided is summarised in “Attachment B: Telstra references”.

Information provided by Telstra in response to those questions included the following:

1. Telstra advised informally that the DAC and IDS (i.e. the back of house costs in the 2008 model) are now known by different terms. The processes and systems contained in the Telstra Wholesale SSU webpage describe Telstra’s current back of house processes. However it is unclear from those descriptions what the new terms are, and at the time of writing the initial report (and the final report) Telstra has not provided any further information on those new terms or how those changes map to the previously named and described DAC and IDS processes or costs.
2. Telstra has supplied advice on the mapping of the relevant items in the SORs to the LSS and ULLS connection charges.
3. With one exception, Telstra has advised²⁷ that the quantum of the uplift in the SOR costs for additional activities represents less than [c-i-c starts] [REDACTED] [c-i-c ends] of the total rates paid.
 - o The exception was for SOR item II-12a1 - “Run Jumper Exchange MDF²⁸ (Non Associated)”, where Telstra advised of the unit rates both with and without the additional activities costs across each of Bands 1, 2, 3 and 4. The uplift ranged from [c-i-c starts] [REDACTED] [c-i-c ends] for Bands 1 to 3, and [c-i-c starts] [REDACTED] [c-i-c ends] for Band 4. This is broadly consistent with Telstra’s advice of an uplift of [c-i-c starts] [REDACTED] [c-i-c ends] across all of the SORs.
4. Telstra has provided all of its SORs disaggregated across Bands 1 to 4.²⁹ Telstra has not advised of any change to the distribution of services as contained in the 2008 models across those four bands.
5. At the time of preparing this report Telstra had not advised of any material change to the indirect costs.

2.3.3 Additional Activities Information

In its letter of 4th February 2015 Telstra advised that the additional activities included in the SORs contained in Tables 1 and 2 of that letter³⁰ comprise:

- [c-i-c starts] [REDACTED]
- [REDACTED]

²⁷ 4 February 2015 letter to the ACCC – connection and disconnection charges as part of the fixed line services FAD inquiry

²⁸ Main Distribution Frame

²⁹ Previous cost models only disaggregated connection charges across Bands 1, 2 and 3 for single ULLS connections.

³⁰ Also included as Attachment C to this report

-
- [REDACTED]
[REDACTED]
 - [REDACTED]
 - [REDACTED]
 - [REDACTED]
[REDACTED]
[REDACTED] and
 - [REDACTED] [c-i-c ends]

UXC Consulting's Views

UXC Consulting has carefully assessed the additional tasks described by Telstra, and has formed the following views:

- Based on our experience and knowledge of Telstra's networks, and in particular the customer access network (CAN), the activities described by Telstra are mostly part of regular maintenance activities. The notable exception is the [c-i-c starts] [REDACTED] [REDACTED] [c-i-c ends], which is incorporated separately in the modelling.
In this regard UXC Consulting understands that (other [c-i-c starts] [REDACTED] [REDACTED] [c-i-c ends]) the need to undertake the activities described above can be, and often are, revealed through other processes unrelated to LSS, ULLS and wholesale ADSL connection activities, including but not necessarily limited to customers reporting service difficulties and faults and from routine preventative maintenance;
- These activities would typically only be required for some, but not all, connections;
- Network maintenance is a normal and ongoing program of work for an efficient operator to ensure that the network remains in good working order for all customers (i.e. both retail and wholesale);
- As such, network maintenance costs are incurred on an annual basis, and in our view such costs are more appropriately recovered from recurring charges. In support of our opinion we note that Telstra has an obligation to provide services that are in good working order, and maintenance activities are integral to ensuring that services provided using Telstra's networks continue to operate satisfactorily. Our understanding is that one of the purposes of recurring charges is the recovery of costs incurred from operating and maintaining Telstra's networks.

Further in this regard, UXC Consulting has formed the view that the SOR categories should not dictate the way in which Telstra allocates costs to its various internal cost accounts. By way of additional clarification, Telstra should not allocate its additional costs to internal accounts for connection activities simply because it incorporates the payment of those costs to its contractors as part of a consolidated SOR. In our view consistency in allocation of costs is a far more important consideration. We have also formed the view that the allocation of costs between internal accounts covering connection/disconnection activities and accounts covering regular network maintenance should be straightforward, since

Telstra has clearly demonstrated in its description of the allocation of SORs that the payments to contractors to be properly disaggregated for the purposes of allocation to the appropriate accounts.

For these reasons UXC Consulting has formed the view that that it is not appropriate to include the costs associated with the additional activities as described by Telstra in establishing connection/disconnection charges for ULLS, LSS and wholesale ADSL services. On this basis, and in the absence of more detailed information, for our initial report³¹ we reduced the subcontractor rates contained in Table 1 of Telstra's letter of 4th February by [c-i-c starts] ■■■ [c-i-c ends] to reflect the removal of those costs for the purposes of estimating charges for all LSS, ULLS and wholesale ADSL connections, while retaining a [c-i-c starts] ■ [c-i-c ends] mark-up on those revised subcontractor costs to cover Telstra's overhead costs paid directly to [c-i-c starts] ■■■ [c-i-c ends].

In its submission of 8th May 2015 Telstra disagreed with the exclusion of the additional activities costs; however it did not address any of the issues identified by UXC Consulting in support of their exclusion. Accordingly we can find no reason to change our conclusion in this regard.

However, Telstra's submission of 8th May 2015 did provide a more detailed assessment of the costs excluded by UXC Consulting, by recalculating the Schedule of Rates for third party sub-contractors without the costs associated with the additional work for each cost category. Those recalculated costs are shown in this report at "**Attachment C: Telstra Schedule of Rates**".

UXC Consulting has used those more detailed costs in modelling the contractor components of the prices for connection/disconnection activities for the ULLS, LSS and wholesale ADSL services.

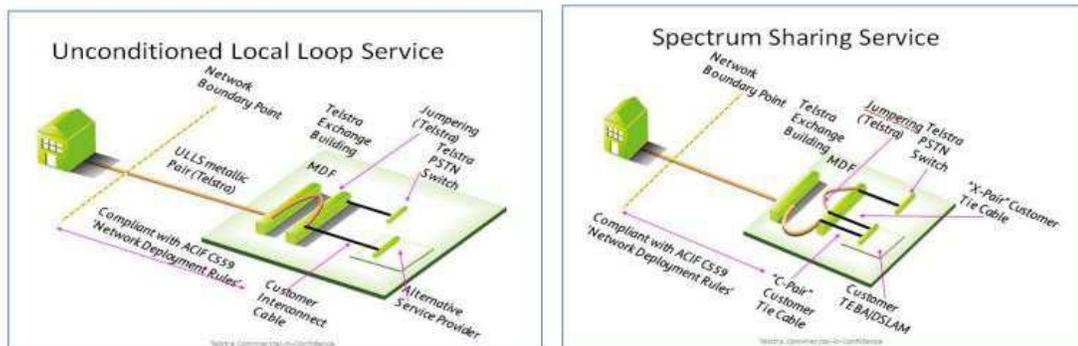
³¹ UXC Consulting -
Technical Advice ULLS LSS and WADSL Initial Report v1.3, March 2015

3. ACCC COST MODEL UPDATES

The updated model follows the same structure as those discussed in section 2.2.1 of this report. Included in each main model overview description is a reference to the following Sections that outline UXC Consulting's more detailed analysis:

- Third party contractor costs (Sections 3.1 and 3.2), which cover:
 - The direct costs for jumpering (including travel, vehicle, tools and materials costs);
 - An allowance for jumper over extra costs(where that is included in the current models);
 - Contracting overheads;
- Telstra's indirect costs (Section 3.3);
- Telstra's back of house costs (Section 3.4).

The following schematic diagrams provided by Telstra³² show the respective end-to-end connectivity path for a ULLS and LSS (also referred to by Telstra as the Spectrum Sharing Service, or SSS). These diagrams have informed the more detailed model considerations in Sections 3.1 and 3.2.



3.1 New Third-Party Contractor Arrangements

As outlined in Section 2.3 Telstra has significantly changed its arrangements for managing contractor activities for, but not limited to, connection and disconnection activities for the LSS, ULLS and wholesale ADSL service. Telstra has also mapped individual SOR codes to the types of connections and disconnections³³ for the purposes of determining which SOR charges should be applied to those individual service charges along with a table containing a detailed description of the activities undertaken for each of those SOR types. That mapping table is reproduced below, and the detailed description table in Attachment E.

³² 4 February 2015 letter to the ACCC – connection and disconnection charges as part of the fixed line services FAD inquiry and
8 May 2015 written submission to the ACCC – Response to the ACCC's Draft Decision on non-price terms and conditions and connection charges.

³³ *ibid*

Connection/Disconnection Type	Reference SORs – refer to Attachment E for detailed description
LSS Single Connections	II-13a1 or II-13a2.
LSS Single Disconnections	II-12a1 or II-12b3
LSS Managed Network Migration (MNM) connection charges	II-15a3 or II-15a4
ULLS single connection charges : a. In use ULLS (IULL) b. Transfer ULLS (TULL) c. Vacant ULLS (TULL) and d. Enhanced Vacant ULL (eVULL)	For all ULLS single connection types : <ul style="list-style-type: none"> • II-14b1 or II-14b2 For all IULL, TULL and eVULL single connection types : <ul style="list-style-type: none"> • II-14b1 or II-14b2 For all VULL single connection types : <ul style="list-style-type: none"> • II-14a1
ULLS MNM connection charges	II-15a1 or II-15a2
ULLS cancellation charges	II-14b2

Table 3.1.1: SOR Mapping

It is noted that the above table does not map SOR codes to the wholesale ADSL connection charges. In this regard, Telstra has verbally advised that³⁴:

- Wholesale ADSL Type A simply involves an administrative procedure confined to back of house activities; and
- Wholesale ADSL Type B is analogous to an LSS service connection.

Telstra’s advice is consistent with the ACCC’s view that “the installation work for the LSS and wholesale ADSL is functionally similar, as each involves the installation of jumpers between a Digital Subscriber Loop Access Module (DSLAM) and Public Switched Telephone Network (PSTN) switch and removal of the existing jumpers on the Main Distribution Frame (MDF). As a result, the efficient, forward-looking cost of connecting the LSS and ADSL services will be similar.”³⁵

Our own analysis of the activities required to provide Type A and Type B wholesale ADSL services³⁶ as defined by Telstra also confirms that the procedures involved for “all other completed (wholesale ADSL) installation or transfer requests” (hereinafter referred to in this report as “all other wholesale ADSL connections”) are analogous to those for type B wholesale ADSL services i.e. LSS service connections. We have accordingly augmented Table 3.1.1 below to include wholesale ADSL services, showing the same reference SORs as for LSS connections.

³⁴ Telstra/ACCC/UXC Consulting meeting of 23rd January 2015

³⁵ “October 2007 LSS Pricing Principles and Indicative Prices confidential Version.pdf” p100

³⁶ Telstra Wholesale Rate Card for Reference Services – Version 6.0 – 19-12-2014

Connection/Disconnection Type	Reference SORs – refer to Attachment E for detailed description
LSS Single Connections	II-13a1 or II-13a2.
LSS Single Disconnections	II-12a1 or II-12b3
LSS Managed Network Migration (MNM) connection charges	II-15a3 or II-15a4
ULLS single connection charges: a. In use ULLS (IULL) b. Transfer ULLS (TULL) c. Vacant ULLS (TULL) and d. Enhanced Vacant ULL (eVULL)	For all ULLS single connection types : <ul style="list-style-type: none"> • II-14b1 or II-14b2 For all IULL, TULL and eVULL single connection types : <ul style="list-style-type: none"> • II-14b1 or II-14b2 For all VULL single connection types : <ul style="list-style-type: none"> • II-14a1
ULLS MNM connection charges	II-15a1 or II-15a2
ULLS cancellation charges	II-14b2
Wholesale ADSL Type A Connections	No reference SORs (Back of house costs only)
Wholesale ADSL Type B Connections	II-13a1 or II-13a2.
All other wholesale ADSL connections	II-13a1 or II-13a2.

Table 3.1.2: SOR Mapping (including wholesale ADSL and ULLS cancellations)

3.1.1 Impact of New Contractor Arrangements

Telstra has advised that its changes to the management of its external contractors are intended to increase flexibility, productivity and efficiency of these arrangements. UXC Consulting has taken this to mean that Telstra expects to achieve lower costs for its LSS, ULLS and wholesale ADSL connection activities (as well as to all other activities undertaken by contractors). In this regard we would expect these new arrangements to be a key driver of lower prices for the associated wholesale service prices.

Telstra has also advised that contractors now also perform all connection activities. The current model for single LSS connections³⁷ shows that the costs of these activities when performed by Telstra's internal staff are [c-i-c starts] [REDACTED] [c-i-c ends]. UXC Consulting expects that this will also be a key driver of lower prices for LSS connections.

The impact of these drivers on the resulting prices produced by the updated model are outlined in more detail in Section 4.

³⁷ The models for all other connections do not include any allowance for costs associated with work undertaken by Telstra staff.

has been retained where it is already included. Telstra's submission provided updated information on this cost⁴² for 2014/15, which has been incorporated into the updated model and indexed for the forward years by the same index applied to the "jumpering and travel" category.

Also previously included were LSS connections undertaken by Telstra's own workforce. Telstra advised verbally on 15th January 2015 and on 5th February 2015 that all such work is now conducted by [c-i-c starts] [redacted] [c-i-c ends].

3.2.2 Single ULLS Connections

The alternative SOR categories as mapped by Telstra are as follows:

- II-14b1 Single Ticket of Work for ULLS
- II-14b2 Programmed multiple Ticket of Works in designated exchanges for ULLS

The "jumpering, travel, vehicle, tools" category for the original single ULLS model used a weighted average of single jumpering and multiple jumpering contractor charges. UXC Consulting has taken the SOR categories listed above to be analogous to those original single and multiple jumpering categories, and we have included the associated charges for Bands 1 to 4 in the updated model.

Telstra submission of 8th May 2015⁴³ included an update on the weighting of the volume of work for single jumpering and multiple jumpering contractor work, which has been incorporated in the updated modelling.

3.2.3 ULLS Call Diversion

For the up-front fixed rate, and in the absence of any new information, it has been decided to maintain the DAC activity time for performing the call diversion activities at 8.5 minutes as previously determined by the ACCC. The rate itself is determined by multiplying this time by the appropriate hourly salary for Telstra back of house staff for each of the years covered by the model.

Also in the absence of any information to the contrary, for the on-going monthly rate it has been decided to retain, and inflate to current dollars, Telstra's 2008-09 list price.

3.2.4 LSS Managed Network Migrations (MNM)

The alternative SOR categories as mapped by Telstra are as follows:

- II-15a3 Bulk - SSS Jumper Task completed in single visit
- II-15a4 Bulk - SSS Jumper Task completed in two visits

The ACCC has previously determined the process involving two separate visits to be appropriate for estimating its indicative prices LSS MNM connections⁴⁴. Based on the available documentation UXC Consulting can see no compelling reason to vary that determination. Accordingly, we have used SOR category II-15a4 in the updated model.

⁴² "8 May 2015 written submission to the ACCC – Response to the ACCC's Draft Decision on non-price terms and conditions"

⁴³ ibid

⁴⁴ "August 2007 final determination Request and Telstra dispute LSS Confidential Version.pdf"

The SOR rates supplied by Telstra for these categories are identical across Bands 1 to 4. Therefore there is no basis for differentiation of these charges by band in the updated model. The original model also did not contain any differentiation by band.

3.2.5 ULLS MNMs

The alternative SOR categories as mapped by Telstra are as follows:

- II-15a1 Bulk - ULL Jumper Task completed in single visit
- II-15a2 Bulk - ULL Jumper Task completed in two visits

As for the LSS MNM connections, the ACCC has previously determined the process involving two separate visits to be appropriate for estimating its indicative prices ULLS MNM connections⁴⁵. Based on the available documentation UXC Consulting can see no compelling reason to vary that determination. Accordingly, we have used SOR category II-15a2 in the updated model.

The SOR rates supplied by Telstra for these categories are identical across Bands 1 to 4. Therefore there is no basis for differentiation of these charges by band in the updated model. The original model also did not contain any differentiation by band.

3.2.6 ULLS MNM Cancellations

As indicated in Section 2.2.1, the model for estimating these charges is based on the ACCC's determination of March 2008⁴⁶ for cancellations of individual services where pre-jumpering has occurred. The ACCC based this charge on the amount that Telstra advised was charged by third party contractors for pre-jumpering and subsequent removal of the pre-jumper wires, plus an allowance of 1.2 minutes of DAC costs for DAC work undertaken leading up to and during the pre-jumpering stage.

The figure used by the ACCC for the third party contract work was the same figure used in the ACCC's 2008 model for ULLS MNM connections for this activity. For the updated ULLS MNM Connection model (Section 3.2.5 immediately above) the relevant SOR category is II-15a2.

In the absence of any new information it was decided to retain both the DAC activity time of 1.2 minutes and the amount charged by third party contractors for pre-jumpering and subsequent removal of the pre-jumper wires. As foreshadowed in the preceding paragraph the relevant Telstra SOR category is:

- II-15a2 Bulk - ULL Jumper Task completed in two visits.

3.2.7 Wholesale ADSL Connections - Type A

As described in Section 3.1 these connections are analogous to LSS connections, albeit without any requirement for jumpering activity. As such, no SOR categories are relevant for this type of service.

⁴⁵ "March 2008 final determination Chime and Telstra ULLS Confidential Version.pdf"

⁴⁶ "March 2008 final determination Chime and Telstra ULLS Confidential Version.pdf", p281

3.2.8 Wholesale ADSL Connections - Type B

Also as described in Section 3.1 these connections are analogous to LSS connections, but with the requirement for jumpering activity. Accordingly, the appropriate SOR category is II-13a1 for Bands 1 to 4 in the “jumpering and travel” category for the updated model.

3.2.9 All Other Wholesale ADSL Connections

As described in Section 3.1, all other wholesale ADSL connections are analogous to those for Type B wholesale ADSL services. Accordingly, the appropriate SOR category is II-13a1 for Bands 1 to 4 in the “jumpering and travel” category for the updated model. For this reason the cost model for these services is incorporated into the model for Type B wholesale ADSL connections.

3.2.10 Disconnection Charges Review

In its Draft Decision of March 2015 the ACCC indicated that it draft decided was to not allow Telstra to impose a single LSS disconnection charge. The ACCC provided the following reasons in support of this decision:

In 2008, the ACCC decided not to allow a disconnection charge for the ULLS. The reasoning is set out in the ACCC’s 2008 Pricing Principles for the ULLS, which state:

The ACCC considers that the current two-step procedure required by Telstra includes inefficient costs because it requires the removal of a jumper as a separate process before the reconnection of a separate jumper and service and this occurs irrespective of the reason for disconnecting the ULLS. The ACCC considers that this introduces costs of a second jumpering activity that could be avoided by the alignment of disconnection and connection processes whenever the churn of an end-user customer to another provider causes the ULLS disconnection.

In relation to disconnections which do not result from churn but simply from the cessation of an end-user customer’s service, the ACCC considers that the jumper could be left in place until either the C-pair port or equipment-side port is re-used. The ACCC accordingly does not consider it necessary to implement an approach that charges for disconnections for such a scenario. The ACCC further considers that any inefficiency or confusion in the management of the MDF in exchanges would be minimal, transitory and outweighed by the factors in favour of disallowing disconnection costs.

The ACCC considers that this reasoning in relation to disconnections for ULLS is equally applicable to the LSS.

The ACCC notes concerns raised by iiNet and TPG about the application of an LSS disconnection charge, particularly in light of the migration to the NBN. The ACCC notes that the migration from the fixed line network to the NBN is expected to take a number of years to complete. The ACCC considers that end-users on the copper may churn to another provider before the copper line is decommissioned and that additional costs of associated disconnections can be avoided by aligning the disconnection with the connection of the new service, which is efficient and allows the costs to be recovered through the connection charge. In relation to disconnections that are not part of a churn, the ACCC considers the jumper could be left in place until the copper network is decommissioned in that area, avoiding the need for a disconnection charge.

Telstra’s submission of 8th May 2015 in relation to this decision addressed both LSS and ULLS disconnections, as outlined below.

LSS Disconnections

Telstra⁴⁷ referred to the July 2011 FAD decision⁴⁸ in which the ACCC

“.....explicitly accepted Telstra’s submission that “it should be able to recoup its direct costs incurred in disconnections”. At that time, the ACCC clarified that LSS disconnection charges should only be levied where a service was being transferred to an access seeker that was not participating in the churn process. The intent

⁴⁷ “8 May 2015 written submission to the ACCC – Response to the ACCC’s Draft Decision on non-price terms and conditions”

⁴⁸ Final report - FAD for wholesale ADSL - public version (p122)

of this clarification was to ensure that charges were not levied twice for the same process, i.e. the connection and disconnection of a service as part of the churn process. Telstra is of the view that the same principle should continue to apply and is surprised that the ACCC does not appear to be adhering to the principle of allowing Telstra to recover its direct costs.”

Telstra also stated that it

“.....considers that the ACCC’s reliance on the arguments around the levying of a LSS disconnection charge when a customer is migrating to the NBN is erroneous.”

UXC Consulting understands Telstra to mean that it should be able to recover the direct costs of LSS disconnections where there is no accompanying reconnection of the service as the result of a churn process or migration to another equivalent service such as a ULLS, Telstra BigPond, fibre access or NBN service. Telstra provided a table that summarised its policy for levying disconnection charges, which is reproduced below.

Situation	Charge Y / N
Customer cancels LSS	Y
Customer cancels LSS and connects to TWI	Y
Customer transfers to another Wholesale provider using DSL/LSS Transfer process as a DSL service	N
Customer transfers to another Wholesale provider using DSL/LSS Transfer process as a Spectrum service	N
Customer has a Change of Number / Change of Lessee / Change of Class of Service	N
Cancellation of PSTN service	Y
Customer transfers to BigPond	N
Relocate to a new address (may maintain same number)	Y
Customer migrates to ULLS	N
Customer migrates to Fibre access, e.g. Point Cook	N
Customer premises is NBN Serviceable at the time the disconnection order is received	N

Table 3.2.1: Telstra’s policy with respect to levying disconnection charges

ULLS Disconnections

Telstra indicated that

“.....the ACCC appears to be relying on the reasoning set out in the 2008 Pricing Principles for the ULLS⁴⁹, which the ACCC references in its Draft Decision⁵⁰. In addition, Telstra notes that this reasoning was carried over to the ACCC’s April 2010 Final Determination related to a ULLS dispute between Telstra and Chime:

The ACCC considers that where a ULLS disconnection takes place as a result of an end-user churning their downstream services to another service provider, there is the potential for the removal of the existing jumpers to be combined with installing the new jumpers on the relevant line. Overall costs can be significantly reduced by combining the two processes and the costs of removing the jumpers would be subsumed into the relevant connection charge⁵¹.

⁴⁹ ACCC, Unconditioned Local Loop Service Pricing Principles and Indicative Prices, June 2008.

⁵⁰ Draft Decision, p63

⁵¹ ACCC, ULLS Access Dispute, Telstra / Chime, Reasons for Final Determination, April 2010, pp95.

Telstra considers that while the ACCC's reasoning may have been valid in 2008 and in 2010, this is no longer the case."

In support of this contention Telstra also provided data from 2008 to 2015, shown in Table 3.2.2 below, which shows a consistent trend resulting in nearly four times as many ULLS disconnections as there are in-place connections as at March 2015.

[c-i-c]

Table 3.2.2: ULLS Connections and Disconnections

Telstra indicated that it expects this trend to continue for some time, and that

"...there are likely to be some circumstances where Telstra is entitled to recover the direct costs associated with a (LSS) disconnection."

In further support of its contention that it should be allowed to apply a ULLS disconnection charge in some circumstances, Telstra expressed the view⁵² that if it were to leave the ULLS in place an access seeker would be able to continue to use it without Telstra's knowledge.

UXC Consulting's View

UXC Consulting has carefully reviewed Telstra's response to the ACCC's Draft Decision of March 2015 regarding LSS and ULLS disconnection charges. In so doing we have also considered the consultant's report⁵³ that informed the ACCC's original decisions on LSS and ULLS disconnection charges^{54,55}.

ULLS Disconnections

For ULLS disconnection charges the consultant assessed Telstra's contentions that:

If Telstra were to leave the ULLS in place:

- (a) Access Seeker would be able to continue to use it without Telstra's knowledge. In that regard, it would be very difficult for Telstra to check such use by the Access Seeker;
- (b) Telstra's systems would not identify the copper pair as being available, which means that the relevant copper pairs would not be available for use by another customer.

In its decision⁵⁶ the ACCC accepted the consultant's conclusion that Telstra's contentions could not be supported, for the reasons outlined by the consultant and repeated below:

- In regard to the first point the consultant concluded that, while technically possible, it would be unreasonable to expect an access seeker to continue to use a 'cancelled' ULLS to support its services to customers because faults could not be repaired and cancellation would permit Telstra to reallocate use of the copper pair without notification being given to the access seeker, thus, undermining the services provided by the access seeker using the 'cancelled' ULLS.

⁵² Meeting of 15th June 2015 between Telstra, the ACCC and UXC Consulting

⁵³ Consultel, Analysis of ULLS and LSS undertakings and subsequent submissions – final report, February 2006

⁵⁴ Draft decision - Assessment of Telstra's ULLS and LSS undertakings relating to connection and disconnection charges December 2005

⁵⁵ Final decision - Assessment of Telstra's LSS undertakings relating to connection and disconnection charges April 2006

⁵⁶ Ibid.

-
- On the second point, the consultant considered it implausible that Telstra's systems could not use the act of cancellation, as distinct from the act of physical disconnection, to establish the availability of a copper pair for use by other customers or Telstra. It noted that a cancelled PSTN service, and not physical disconnection of jumpers, is sufficient to mark the line as being available for re-supply. Moreover, leaving the jumper in place in the context of a ULLS cancellation would permit the provision of 'soft' dial tone, as occurs when a PSTN service is cancelled, thus enabling use of the line for emergencies.

The consultant also concurred with the views of various Access Seekers that there is no compelling reason to physically disconnect a ULLS jumper after the ULLS has been cancelled, and that the costs of performing this disconnection and removal of the jumper will be incurred when a new service is provisioned to one of the terminations, in which case the costs will be recovered by Telstra within the connection charge of the new service. Telstra had also advised that "there is no necessity to disconnect the ULLS in a timely manner".

The ACCC's draft view was that, the costs incurred by Telstra in physically disconnecting a ULLS from a particular copper pair, following its cancellation by an access seeker, could be subsumed and recovered in connection charges intended to recover costs involved in the re-use of the copper pair for the supply of new services. UXC Consulting understands that Telstra withdrew its ULLS disconnection undertaking prior to the ACCC's final decision in April 2006 and, prior to its submission of 8th May 2015, to the best of our knowledge had not sought to obtain approval for a regulated ULLS disconnection charge.

We have evaluated the consultant's conclusions and the ACCC's draft decision of December 2005 and concur with both the supporting arguments and the findings. We also note that Telstra's current arguments in favour of being allowed to apply a ULLS disconnection charge in some circumstances are silent on the reasons for the consultant's conclusions and ACCC's decision. Telstra's contention rests on the large and growing gap between ULLS connections and in-place ULLS connections.

UXC Consulting's considered view is that the growing volume of ULLS connections that are not part of an accompanying churn or migration process does not, of itself, mean that Telstra is not able to recover the direct costs associated with a ULLS disconnection. We believe that Telstra is still able to provision a new service using the copper pair circuit of a cancelled ULLS connection as and when required, and that the disconnection of the ULLS jumper can be undertaken at the same time, with only minimal risk of the access seeker continuing to use the ULLS service without Telstra's knowledge.

For these reasons we conclude that there is still no compelling reason to physically disconnect a ULLS jumper after the ULLS has been cancelled, and that the costs of performing this disconnection and removal of the jumper will be incurred when a new service is provisioned to one of the terminations, in which case the costs will be recovered by Telstra within the connection charge of the new service.

LSS Disconnections

In contrast to its conclusions for ULLS disconnections, the consultant was of the opinion⁵⁷ that it is necessary to disconnect and remove the jumper wires at some stage after a LSS cancellation. Unlike a ULLS line, the continued provisioning of the underlying PSTN service prevents the access seeker from experiencing any risk that the rest of the copper path will eventually be disconnected or may experience a fault. However, as Telstra proposed for a ULLS disconnection, this need not be scheduled immediately, and can be scheduled to be done when a technician is in the exchange for other tasks.

UXC Consulting has separately and independently formed the same opinion, and concurs with the consultant's findings in this regard.

For this reason UXC Consulting has concluded that Telstra should be allowed to levy a LSS disconnection charge, to recover the direct costs of LSS disconnections where there is no accompanying reconnection of the service as the result of a churn process or migration to another equivalent service such as a ULLS, Telstra BigPond, fibre access or NBN service. We are also of the opinion that the charge should take into account that the disconnection can be batched with other tasks undertaken in the exchange.

Telstra has listed the situations in which it currently levies an LSS disconnection charge, shown in Table 3.2.2 on page 24 of this report. UXC Consulting has reviewed that table and concurs with Telstra's proposed continued application of that charge.

3.2.11 LSS Disconnection Charges

The alternative SOR categories as mapped by Telstra are as follows:

- II-12a1 Run Jumper Exchange MDF (Non Associated)
- II-15b3 Programmed multiple Tickets of Work in designated exchanges for PSTN

For the reasons outlined in Section 3.2.10 UXC Consulting has included SOR category II-15b3 for modelling these charges.

3.3 Telstra's Indirect Management Costs

As indicated towards the end of Section 2.3.1, Telstra has not advised of any change in its own indirect costs for managing external contractors as a result of the changes in contractual arrangements discussed at section 2.3.1 above. In one respect, given that Telstra is now [c-i-c starts] [REDACTED] [c-i-c ends], UXC Consulting expects that there may be a material reduction in those internal costs. However this could be counter-balanced by extra costs incurred because Telstra has also advised that it [c-i-c starts] [REDACTED] [c-i-c ends]. Taking all factors into consideration we consider that retaining the 10% uplift is reasonable in the absence of further information about the quantum of actual changes.

⁵⁷ Consultel, Analysis of ULLS and LSS undertakings and subsequent submissions – final report, February 2006

3.4 Telstra Back of House Costs

Telstra advised informally that the DAC and IDS (i.e. the back of house costs in the 2008 model) are now known by different terms. The processes and systems contained in the Telstra Wholesale SSU webpage describe Telstra's current back of house processes. However it is unclear from those descriptions what the new terms are, and at the time of writing the initial report (and this report) Telstra had not provided any further information on those new terms or how those changes map to the previously named and described DAC and IDS processes or costs. UXC Consulting has retained the original names in the updated model for LSS and ULLS connections and disconnections in the absence of further information.

For wholesale ADSL connections, as described earlier in Section 3.1 the efficient, forward-looking cost of connecting the LSS and ADSL services are considered to be similar. On this basis it is reasonable to assume that the back of house costs for wholesale ADSL connections are also similar to those for LSS connections. This assumption is reflected in the modelling for wholesale ADSL service connections.

Key input parameters to the back of house components of the models are the hourly labour rates for the DAC and IDS, along with the annual labour rates for the IDS. The original models used rates determined by the ACCC in its final determinations for LSS⁵⁸ and ULLS disputes⁵⁹, which were carried through to its published pricing principles for both services^{60, 61}.

The original model used labour rates for 2005/06, and applied an industry-based ABS labour index⁶² to estimate the applicable labour rates for subsequent years. UXC Consulting has used the 2005/06 labour rates as a base, and used the latest ABS communications sector labour price index⁶³.

UXC Consulting's View

UXC Consulting notes that the original models used different times for the number of minutes of DAC activity for single LSS connections (4 minutes) and single ULLS connections (8 minutes). We also note that the LSS final arbitration determination⁶⁴ and indicative prices⁶⁵ made under the previous regulatory regime predated the ULLS equivalents^{66, 67}. In reviewing the supporting reasons given by the ACCC for determining the two figures in the relevant documents, plus the consultants'

⁵⁸ "August 2007 final determination Request and Telstra dispute LSS Confidential Version.pdf"

⁵⁹ "March 2008 final determination Chime and Telstra ULLS Confidential Version.pdf"

⁶⁰ "October 2007 LSS Pricing Principles and Indicative Prices confidential Version.pdf"

⁶¹ "June 2008 ULLS Pricing Principles and Indicative Prices Confidential Version.pdf"

⁶² ABS 6345 Labour Price Index 'Ordinary time hourly rates of pay excluding bonuses; Australia; Communication services; Private; All occupations'

⁶³ ABS 6345.0 Table 11a; Financial Year Index ; Ordinary time hourly rates of pay excluding bonuses ; Australia ; Communication services ; Private ; All occupations ;

⁶⁴ "August 2007 final determination Request and Telstra dispute LSS Confidential Version.pdf"

⁶⁵ "October 2007 LSS Pricing Principles and Indicative Prices confidential Version.pdf"

⁶⁶ "March 2008 final determination Chime and Telstra ULLS Confidential Version.pdf"

⁶⁷ "June 2008 ULLS Pricing Principles and Indicative Prices Confidential Version.pdf"

reports commissioned by the ACCC to assist with those decisions^{68, 69}, we note that the starting premise in the ULLS documents was for a DAC activity time of 4 minutes. However after comprehensive investigation by consultants on this issue the report⁷⁰ concluded that 8 minutes was a more appropriate figure for single ULLS connections.

Further in this regard, based on the descriptions of the activities for single LSS connections and single ULLS connections, and in the absence of direct information on DAC activity time for LSS, we have formed the view that it would be reasonable to use the same DAC activity time for single LSS connections for single ULLS and wholesale ADSL connections.

We have also reviewed the analysis of the DAC processes as described in the two consultants' reports, and can find no compelling reason for the DAC activity for single LSS connections to be less than for single ULLS connections. Given that the consultant (and subsequently the ACCC) has seen fit to change its position for the DAC activity time for the ULLS from 4 to 8 minutes, UXC Consulting considers it appropriate to apply the same figure of 8 minutes for single LSS DAC activity. This change has been reflected in the updated model.

For ULLS call diversions, in the absence of any other information, we have modelled the DAC activity time for ULLS call diversion as 8.5 minutes as determined by the ACCC in its LSS final arbitration determination⁷¹. We have similarly adopted an allowance of 1.2 minutes for the cost of DAC work undertaken leading up to, and during, the pre-jumpering stage for ULLS cancellations during a ULLS MNM process⁷².

3.5 Assumptions for Updated ACCC Model

In summary, UXC Consulting has applied the following assumptions in development of the updated pricing model for the ACCC:

- All LSS, ULLS and wholesale ADSL connection and disconnection activities are undertaken by contractors.
- LSS disconnections are not time critical, and can be batched with other tasks being undertaken at the exchange on the same visit.
- Type A wholesale ADSL connections simply involve an administrative procedure confined to back of house activities. As such the connection costs are assumed to be the same across Bands 1 to 4
- Type B wholesale ADSL connections are analogous to LSS service connections

⁶⁸ "Consultel, Analysis relating to Primus-Telstra LSS Dispute – interim report, February 2006 Confidential Version.pdf"

⁶⁹ "Layer 10, Analysis relating to ULLS access disputes—Primus, Chime, Optus, XYZed, Request, Powertel and Telstra, January 2008 Confidential Version.pdf"

⁷⁰ *ibid*

⁷¹ "August 2007 final determination Request and Telstra dispute LSS Confidential Version.pdf"

⁷² "June 2008 ULLS Pricing Principles and Indicative Prices Confidential Version.pdf"

- All other types of completed installation or transfer requests for wholesale ADSL are equivalent to a Type B wholesale ADSL connections.
- MNM costs are the same across Bands 1 to 4 for LSS connections and ULLS connections. Accordingly the revised model does not differentiate between the Bands for the connection charges for those two services
- Two visit process for LSS & ULLS MNMs⁷³
- The SORs used in the model are those provided in Table 5 of Telstra’s submission of 8th May 2015, which (with the exception of “jumper over extra” work) excludes the additional activities described in Section 2.3.3
- The jumper over extra charge in the current model has been retained to include an allowance for the Multiple Frame Exchange additional activity described in Section 2.3.3. The SORs used for this activity were supplied by Telstra by email on 14th June 2015, as shown in Attachment C.
- An uplift of [c-i-c starts] [REDACTED] [c-i-c ends] has been applied to the revised SOR Table 1⁷⁴ in a (revised) SOR Table 2⁷⁵ to meet the additional overhead costs payable to [c-i-c starts] [REDACTED] [c-i-c ends].
- DAC and IDS cost structure from the original model, have been retained. (Note: Telstra did advise informally that the names have changed.)
- The original 2005/06 DAC & IDS labour rates have been escalated from 2005/06 to 2013/14 by the ABS 6345 Labour Price Index ‘Financial Year Index ; Total hourly rates of pay excluding bonuses ; Australia ; Private and Public ; Information media and telecommunications’
- A consistent 8 minutes has been applied for DAC activity for single LSS and ULLS connections s, 8.5 minutes for ULLS call diversion and 1.2 minutes for ULLS MNM cancellations.
- Geographic distribution is based on number of lines in place as contained in Telstra’s 2014 CAN RKR data, for estimating average single LSS, ULLS and wholesale ADSL connection charges across Bands 1 to 4.
- Telstra indirect (contract management) costs included as a 10% mark-up on the adjusted [c-i-c starts] [REDACTED] [c-i-c ends] SOR rates, which is consistent with the existing ACCC model.

3.6 Updated ACCC Model

UXC Consulting has consolidated the original individual models for (i) single LSS connections, (ii) single LSS disconnections, (iii) single ULLS connections, (vi) LSS MNM connections and (v) ULLS connections into a single model. The update has also included models for wholesale ADSL Type A connections, Type B connections, all other types of wholesale ADSL completed connections, ULLS MNM Cancellations and ULLS Call Diversion. The updated model estimates prices from 2015/16 to 2018/19; however it can readily be extended to future years.

The consolidated model is contained in the embedded Excel workbook below.

[c-i-c]

⁷³ Sections 0 and 3.2.5 refer

⁷⁴ Contained in Attachment C

⁷⁵ *ibid.*



4. UPDATED MODEL PRICES

Estimated prices from the updated consolidated model are shown in separate sub-sections below for 2015/16 to 2018/19. For comparison, the most recent connection charges from the Telstra Wholesale Rate Card (which reflect the current regulated charges) are included to show the impact of the new SORs and model changes as described in this report.

4.1 Single LSS Connections

Table 4.1 below shows the comparison between the current prices for single LSS connections, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for single LSS connections. Average forward-looking prices across the four Bands are also shown.

Because there is no differentiation in the current price across Bands 1 to 4 that single current price is shown for all four bands.

Per connection	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Band 1	\$47.55	\$42.63	\$43.66	\$44.72	\$45.80
Band 2	\$47.55	\$43.65	\$44.70	\$45.78	\$46.89
Band 3	\$47.55	\$44.66	\$45.74	\$46.85	\$47.98
Band 4	\$47.55	\$45.79	\$46.89	\$48.03	\$49.20
Average	\$47.55	\$44.02	\$45.08	\$46.17	\$47.29

Table 4.1

4.2 Single ULLS Connections

Table 4.2 below shows the comparison between the current prices for single ULLS connections, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for single ULLS connections. There is no current price for Band 4, so the Band 3 price is shown in its stead.

Average forward-looking prices across the four Bands are also shown.

Per connection	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Band 1	\$55.60	\$51.62	\$52.87	\$54.15	\$55.46
Band 2	\$58.58	\$50.75	\$51.98	\$53.23	\$54.52
Band 3	\$63.66	\$55.63	\$56.98	\$58.36	\$59.77
Band 4	\$63.66	\$65.37	\$66.95	\$68.578	\$70.23
Average (Bands 1 to 4)		\$53.07	\$54.35	\$55.67	\$57.01

Table 4.2

4.3 ULLS Call Diversion

Table 4.3 below shows the comparison between the current prices for ULLS call diversions, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for ULLS call diversions. Because call diversion activities are confined to Telstra’s back of house there is no distinction between prices across all four bands.

	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Fixed amount (per ULLS call diversion)	\$10.26	\$11.34	\$11.62	\$11.90	\$12.19
Variable Amount (pro rata month)	\$13.79	\$14.95	\$15.31	\$15.68	\$16.06

Table 4.3

4.4 MNM LSS Connections

Table 4.4 below shows the comparison between the current prices for MNM LSS connections, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for MNM LSS connections. Because the direct contractor connection costs are identical across all four bands⁷⁶ the forward-looking price is independent of those bands.

Per connection	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Fixed amount (per MNM)	\$154.56	\$168.14	\$172.21	\$176.38	\$180.64
Variable Amount (per connection)	\$35.52	\$23.99	\$24.57	\$25.16	\$25.77
Minimum Exchange Charge (per exchange)	\$865.04	\$647.85	\$663.53	\$679.59	\$696.04

Table 4.4

4.5 MNM ULLS Connections

Table 4.5 below shows the comparison between the current prices for MNM ULLS connections, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for MNM ULLS connections. Because the direct contractor connection costs are identical across all four bands⁷⁷ the forward-looking price is independent of those bands.

⁷⁶ “4 February 2015 letter to the ACCC – connection and disconnection charges as part of the fixed line services FAD inquiry”

⁷⁷ “4 February 2015 letter to the ACCC – connection and disconnection charges as part of the fixed line services FAD inquiry”

	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Per connection					
Fixed amount (per MNM)	\$152.25	\$168.14	\$172.21	\$176.38	\$180.64
Variable Amount (per connection)	\$27.58	\$20.18	\$20.66	\$21.16	\$21.68
Minimum Exchange Charge (per exchange)	\$703.86	\$571.65	\$585.48	\$595.65	\$614.16

Table 4.5

4.6 MNM ULLS Cancellations

Table 4.6 below shows the comparison between the current prices for MNM ULLS cancellations, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for MNM ULLS cancellations. Because the direct contractor connection costs are identical across all four bands the forward-looking price is independent of those bands.

	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Per service in a MNM where pre-jumpering has occurred	\$22.06	\$15.09	\$15.46	\$15.83	\$16.21

Table 4.6

4.7 Wholesale ADSL Type A

Table 4.7 below shows the comparison between the current prices for wholesale ADSL Type A connections, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for wholesale ADSL Type A connections. Because there are no direct contractor connection costs for these types of connections and the back of house costs are assumed to be unchanged across the bands (Section 3.2) the forward-looking price is independent of those bands.

Per connection	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
	\$22.50	\$20.66	\$21.16	\$21.68	\$22.20

Table 4.7

4.8 Wholesale ADSL Type B and all other wholesale ADSL connections

Note: Also covers all other wholesale ADSL connections, for the reasons outlined in Section 3.2.9.

Table 4.8 below shows the comparison between the current prices for wholesale ADSL Type B connections, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the updated price model for wholesale ADSL Type B connections. Average forward-looking prices across the four Bands are also shown.

Because there is no differentiation in the current price across Bands 1 to 4 that single current price is shown for all four bands.

Per connection	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Band 1	\$80.00	\$42.63	\$43.66	\$44.72	\$45.80
Band 2	\$80.00	\$43.65	\$44.70	\$45.78	\$46.89
Band 3	\$80.00	\$44.66	\$45.74	\$446.85	\$47.98
Band 4	\$80.00	\$45.79	\$46.89	\$48.03	\$49.19
Average	\$80.00	\$44.02	\$45.08	\$46.17	\$47.29

Table 4.8

4.9 Single LSS Disconnections

Table 4.9 below shows the comparison between the current prices for single LSS disconnections, as shown in the Telstra Wholesale Rate Card, with the estimated forward-looking prices from the

updated price model for single LSS disconnections. Average forward-looking prices across the four Bands are also shown.

Because there is no differentiation in the current price across Bands 1 to 4 that single current price is shown for all four bands.

Per connection	Current Prices – Telstra Wholesale Rate Card	Updated Model Prices			
	Jul 2013 to Expiry Date	July 2015 to June 2016	July 2016 to June 2017	July 2017 to June 2018	July 2018 to June 2019
Band 1	\$42.69	\$20.49	\$20.98	\$21.49	\$22.01
Band 2	\$42.69	\$19.28	\$19.75	\$20.23	\$20.72
Band 3	\$42.69	\$19.72	\$20.20	\$20.69	\$21.19
Band 4	\$42.69	\$21.41	\$21.93	\$22.46	\$23.00
Average	\$42.69	\$19.59	\$20.074	\$20.55	\$21.05

Table 4.9

4.10 Assessment of Model Outcomes

4.10.1 Improved Efficiencies

As foreshadowed in Section 3.1.1, UXC Consulting expects lower prices to result from two key drivers of connection (and where applicable disconnection) activity efficiency improvements:

1. changes to the management of Telstra’s external contractors; and
2. the use of those contractors for all connection activities.

The first driver is common to all LSS, ULLS and wholesale ADSL connections and disconnection, while only LSS connections previously involved the use of higher cost internal Telstra staff.

In the absence of any further information on Telstra’s indirect and back of house costs, no conclusions could be drawn concerning any additional efficiencies that may have been achieved in these areas.

UXC Consulting observes that these efficiencies in managing direct connection and disconnection activities have been reflected in the resulting prices produced by the updated model. In this respect the comparison of:

- the current wholesale prices (July 2013 to expiry) as contained in the Telstra Wholesale Rate Card with
- the model outcomes

shows that for each of the LSS and ULLS connection and disconnection charges (whether single or MNM) the updated model has produced consistently lower prices than the current regulated prices. These consistently lower prices have also been observed for the wholesale ADSL connections.

5. SUMMARY OF FINDINGS AND CONCLUSIONS

5.1 Development of Updated Model

- The original individual models for (i) single LSS connections, (ii) single LSS disconnections, (iii) single ULLS connections, (iv) LSS MNM connections and (v) ULLS connections have been consolidated into a single model. The update has also included models for wholesale ADSL Type A connections, Type B connections, all other types of wholesale ADSL connections, ULLS MNM Cancellations and ULLS Call Diversion;
- Telstra has significantly changed its management of external contractors. Those changes are, among other things, intended to materially improve the efficiency of the direct activities involved in connection activities;
- the updated model assumes all work activities for the connection of the included services are carried out by contractors;
- with the exception of ‘jumper over extra’ activity the model excludes the costs associated with the additional activities as described by Telstra in establishing connection/disconnection charges for ULLS, LSS and wholesale ADSL services;
- “Wholesale ADSL Type A” simply involves an administrative procedure confined to back of house activities;
- “Wholesale ADSL Type B” and “All other (wholesale ADSL) completed installation or transfer requests” are analogous to an LSS service connection.
- the updated model provides for both band-based pricing and pricing averaged across the four bands for single LSS connections, single ULLS connections and wholesale ADSL connections (except Type A):
 - due to the uniformity of input costs disaggregation across Bands 1 to 4 has not been applied to LSS and ULLS MNM connections; nor has it been applied to Type A wholesale ADSL connections;
- given that Telstra is now [c-i-c starts] [REDACTED] [c-i-c ends], UXC Consulting expects that there would be a material reduction in those internal costs. However in the absence of any substantive information, the 10% uplift on contractor costs in the model to cover the contract management costs incurred by Telstra has been retained; and
- A single figure of 8 minutes has been included for single LSS and single ULLS DAC activity (previously 4 minutes for LSS DAC activity). However 8.5 minutes for ULLS call diversion and 1.2 minutes for ULLS MNM cancellations have been used.



5.2 Model Outcomes

With one possible exception the model outcomes confirm that Telstra's revised contractor arrangements appear to have resulted in significant efficiencies in the connection and disconnection of LSS, ULLS and wholesale ADSL services. Specifically:

- For each of the LSS and ULLS connection charges (whether single or MNM) the updated model has produced consistently lower estimated prices, ranging from ~10% (single LSS Band 1) to ~26% (LSS MNMs) for the 2015/16 year. Where Band-based prices have been modelled, average price reductions across the four Bands are ~7.5% (Single ULLS) and ~12.5% (Single ULLS) for 2015/16;
- LSS disconnection charges are lower, by as much as ~50% (Band 4) to ~55% (Band 2), and by ~54% on average across the four Bands, for the 2015/16 year; and
- The inclusion of wholesale ADSL services has reduced Type A connection prices by ~8%, with an average reduction for Type B prices across the four Bands of ~45% for 2015/16. For Type B connections, on a per Band basis the reductions range from ~42% (Band 4) to ~46% (Band 1) for the same year.

Attachment A: ACCC References

Documents

- August 2007 final determination Request and Telstra dispute LSS Confidential Version
- Consultel Confidential version of Comments on Telstra Response Regarding LSS Undertakings Interim Report, Feb 2006
- Consultel, Analysis of ULLS and LSS undertakings and subsequent submissions – final report, February 2006 Confidential Version
- Consultel, Analysis relating to Primus-Telstra LSS Dispute – interim report, February 2006 Confidential Version
- Consultel, Analysis relating to Primus-Telstra ULLS Dispute – interim report, March 2006 Confidential Version
- Consultel, Small scale MNMs between Wholesale ADSL, ULLS and LSS –Interim report, March 2007 Confidential Version
- Consultel, Transferring Services between ULLS and LSS – Draft report, August 2006 Confidential Version
- June 2008 ULLS Pricing Principles and Indicative Prices Confidential Version
- March 2008 final determination Chime and Telstra ULLS Confidential Version
- October 2007 LSS Pricing Principles and Indicative Prices confidential Version
- Layer 10, Analysis relating to ULLS access disputes—Primus, Chime, Optus, XYZed, Request, PowerTel and Telstra, January 2008 Confidential Version
- Draft decision - Assessment of Telstra's ULLS and LSS undertakings relating to connection and disconnection charges December 2005
- Final decision - Assessment of Telstra's LSS undertakings relating to connection and disconnection charges April 2006
- Final report - FAD for wholesale ADSL - public version
- Wholesale ADSL Final Access Determination - May 2013

Models

- 2011 FAD indexed ULLS and LSS connection and disconnection charges.xls
- Single LSS connection and disconnection model 2008-09.xls
- MNM LSS connection model 2008-09.xls
- Single ULLS connection model.xls
- MNM ULLS connection model.xls

Attachment B: Telstra References

- Telstra Wholesale Rate Card for Reference Services – Version 6.0 – 19-12-2014
- “9 Jan 2015 letter to ACCC - ULLS LSS and WDSL charges from TIs”, accompanied by:
 - Information from TIs re ULLS LSS and WDSL contractor rates 9 January 2015.xls
- “4 February 2015 letter to the ACCC – connection and disconnection charges as part of the fixed line services FAD inquiry”
- 8 May 2015 written submission to the ACCC – Response to the ACCC’s Draft Decision on non-price terms and conditions and connection charges.

Additional information provided in Telstra letter of 4 February 2015 and during meetings with the ACCC, UXC and Telstra on 15th and 23rd January 2015, in addition to a meeting on 15 June 2015 to discuss Telstra submission and some further information provided.

- a link to the Telstra Wholesale - Structural Separation Undertaking (SSU) webpage, with reference to the processes and systems for service qualification, service activation & provisioning and fault rectification for the services relevant to this paper.
- Schematic diagrams showing the end-to-end connectivity path for a ULLS and LSS respectively.
- A description of the additional activities undertaken under contract and paid as an uplift to the original SORs for specific connection activities (contained in Table 1 of letter of 9 January 2015).
- The current SORs paid for the relevant work items involved in the connection of LSS, ULLS and wholesale ADSL services, along with associated fees paid for the contractor’s overhead costs (contract management and management fees). It also provided a mapping of those SORs to each type of connection activity for ULLS, LSS and wholesale ADSL services.
- At the time of preparing this report Telstra had not provided information about whether its back of house costs had fundamentally changed and the quantum of any such change.

Attachment C: Telstra Schedule of Rates (Adjusted)

UXC Consulting has reproduced Tables 4 and 5 from Telstra's feedback of 8th May 2015 and in Telstra's email of 14th June 2015 below. Section 2.3.3 of this report refers.

[c-i-c]

The following table shows the per connection (all ULLS connections) costs for extra jumper work:

[c-i-c]

Attachment D: 2011 ACCC Indexed ULLS and LSS Connection Model

[c-i-c]

Attachment E: Description of SOR Tasks

(Reference: Telstra's 4 February 2015 letter to the ACCC- connection and disconnection charges as part of the fixed line services FAD inquiry.)

SOR	Description of tasks
<p>11-12 Run Jumpers Exchange MDF (Non Associated)</p>	<p>All work necessary to run jumpers at the exchange Main Distribution Frame (MDF) where this activity is not included in other SOR Items.</p> <p>This would require the running of jumpers for residential or multiple segment business orders, new or change of LI requests and may include any number of work orders at a single exchange site.</p> <p>Includes removal of any redundant jumper wire from the frame where possible providing it will not damage any existing services.</p> <p>This SOR includes Where required and approved by the cable assigner, the transfer or change of pairs within the exchange.</p> <p>Note: 11-12a1 may only be claimed where a Contractor is issued, at an individual exchange, 3 or less jumpering orders in the course of a day in an Exchange.</p>
<p>11-12a1 Run Jumpers Exchange MDF (Non Associated)</p>	<p>Refer to 11-12</p> <p>Note: 11-12a1 may only be claimed where a Contractor is issued, at an individual exchange, 3 or less jumpering orders in the course of a day in an Exchange.</p>
<p>11-12b3 Programmed multiple Ticket of Work in designated exchanges for PSTN</p>	<p>Refer to 11-12</p> <p>Multiple Ticket of Works SOR applicable to jumpering orders completed in exchanges of close proximity and/or within a reasonable travelling time of each other as detailed and agreed between Telstra & the Contractor regional representative.</p>
<p>11-13 Run Jumpers Exchange MDF (ADSL Only)</p>	<p>All work required to run jumpers at the Exchange for connection of a Customer ADSL service.</p> <p>This item includes testing of ADSL Jumpers and Completion of Ticket Of Work in relevant database, including OATS testing.</p> <p>Using (NPAMS) the contractor will be accountable to update all associated records in NPAMS where a single pair change or transfer is made during completion of TOW. Includes removal of any redundant jumper wire from the frame where possible providing it will not damage any existing services.</p>

SOR	Description of tasks
<p>II-13a1 Run Jumpers Exchange MDF to ADSL (Simplex)</p>	<p>Where ADSL is to be installed on an existing PSTN service. terminate required jumpers at the CMUX/ASAM MDF block.</p> <p>Includes: Synchronisation of customer's line by testing through an ADSL modem.</p> <p>Note: II-13a1 may only be claimed where a Contractor is issued. at an individual exchange, three or less ADSL Simplex jumpering orders in the course of a day in an Exchange.</p>
<p>II-13a2 Run Jumpers Exchange MDF to ADSL (Complex)</p>	<p>Where ADSL is to be installed and required to reuse existing disconnected ADSL ports.</p> <p>Includes: Removal of old jumpers from disconnected ADSL Port, and running of a new PSTN jumper on existing customer's service.</p> <p>Installation of an ADSL service as per Ticket Of Work, terminate required jumpers at the CMUX/ASAM MDF block.</p> <p>Synchronisation of customer's line by testing through ADSL modem.</p> <p>Note: II-13a2 may only be claimed where a Contractor is issued. at an individual exchange, three or less ADSL Complex jumpering orders in the course of a day in an Exchange.</p>
<p>II-13a6 ADSL Simplex</p>	<p>Programmed multiple Ticket of Works in designated exchanges for Simplex ADSL</p> <p>Multiple Ticket of Works SOR applicable to jumpering orders completed in exchanges of close proximity and/or within a reasonable travelling time of each other as determined and agreed between Telstra & the Contractor regional representative</p> <p>Note : II-13a6 is to be claimed where a Contractor is issued. at an individual exchange, four or more ADSL Simplex jumpering orders in the course of a day in an Exchange.</p>
<p>II-13a9 ADSL Complex</p>	<p>Programmed multiple Ticket of Works in designated exchanges for Complex ADSL</p> <p>Multiple Ticket of Works SOR applicable to jumpering orders completed in exchanges of close proximity and/or within a reasonable travelling time of each other as determined and agreed between Telstra & the Contractor regional representative.</p> <p>Note : II-13a9 is to be claimed where a Contractor is issued. at an individual exchange,</p>

SOR	Description of tasks
<p>II-14a1 Vacant Unconditioned Local loop (VULL) One Build</p>	<p>tam or mare ADSL Complex jumpering orders in the course of a day in an Exchange.</p> <p>Provide and prove jumpers from the exchange and all CCU's up to the NBD. Includes:</p> <ul style="list-style-type: none"> • Tagging of circuit • Prove dial tone and arrange for testing to NBO and advise the access seeker of completion • Required testing with the access seeker via the Data Activation Centre • Using NPAMS access the contractor will be accountable to update all associated records in NPAMS where a single pair change or transfer is made during an installation TOW <p>This item includes where required and approved by the cable assigner, the transfer of pairs from the exchange to the NBD up to 3 transfer attempts per service.</p> <p>Provision of services to Multi Level Developments.</p> <p>All work required to diagnose, locate and repair a faulty pair within the Customer Access Network</p> <p>Note When installing a VULL service in a multiple frame exchange that requires two or more jumpers to be run then contractor can claim II-13a3 for the second and subsequent jumpers</p> <p>Contractor to indicate on TOW that additional jumpers are required due multiple frame exchange</p>
<p>II-14b1 Unconditioned Local loop (ULL) Jumper Task at Exchange MDF</p>	<p>All work necessary to run jumpers at the exchange Main Distribution Frame (MDF) for this activity is not included in other Schedule 2 Items.</p> <p>This would require the running of jumpers where a single existing PSTN service is migrating to ULL or where an existing ULL service is transferring to another ULL Access Seeker.</p> <p>The Contractor is required to contact the DAC via SMS or phone to initiate activation of ULL TOW.</p> <p>Refer to Work Instruction 011147 for procedure on "When OAG is to be contacted"</p>

SOR	Description of tasks
	<p>This item includes where required and approved by the cable assigner, the transfer or change of pairs within the exchange</p> <p>Includes removal of any redundant jumper wire from the frame where possible providing it will not damage any existing services.</p> <p>Note:</p> <p>Note: II-14b1 may only be claimed where a Contractor is issued. at an individual exchange, 3 or less jumpering orders in the course of a day in an Exchange.</p> <ul style="list-style-type: none"> • When installing a ULL service in a multiple frame exchange that requires two or more jumpers to be run the contractor can claim II-13a3 for the second and subsequent jumper • Contractor to indicate on TOW that additional jumpers are required due multiple frame exchange
<p>II-14b2 Programmed multiple Ticket of Works in designated exchanges for ULL</p>	<p>Multiple Ticket of Works SOR applicable to jumpering orders completed in exchanges of close proximity and/or within a reasonable travelling time of each other as determined and agreed between Telstra & the Contractor regional representative.</p> <p>Note: SOR II-14b2 may only be claimed where a Contractor is issued. at an individual exchange, 4 or more jumpering orders in the course of a day in an Exchange.</p>
<p>11-15 ULUSSS Bulk Access Seeker Jumper Tasks at Exchange MDF</p>	<p>All work necessary to run jumpers at the exchange Main Distribution Frame (MDF).</p> <p>This would require the running of jumpers where existing PSTN services are migrating to a ULUSSS Access Seeker.</p> <p>This code includes the following:</p> <ul style="list-style-type: none"> • Receive tasks from Web Client • Complete Pre Jumper prior to TCD on the task • Complete cutover in conjunction with DAC on due date as per Web Client (ULL only) one call per 10 jumpers • Contact the DAC when no dialtone present on SSSJULL Cutovers • Complete work off in Web Client as per standard process <p>This includes the required testing with the access seeker via the Data Activation Centre (DAC) were applicable</p>

SOR	Description of tasks
	<p>This item includes where required and approved by the cable assigner, the transfer or change of pairs within the exchange</p> <p>Note:</p> <ul style="list-style-type: none"> • This schedule should only be used for Bulk Access Seeker Jumpers
11-15a1	ULL Jumper Task (11-15) completed in a single visit
11-15a2	ULL Jumper Task (U-15) completed in two visits
11-1583	SSS Jumper Task (11-15) completed in single visit
11-15a4	SSS Jumper Task (11-15) completed in two visits

Attachment F: Glossary of Terms and Acronyms

Term	
ABS	Australian Bureau of Statistics
ACCC	Australian Competition and Consumer Commission
ADSL	Asymmetrical Digital Subscriber Loop
ADSL Type A	analogous to LSS connections
ADSL Type B	analogous to LSS connections without any requirement for jumpering activity
CAN	Customer Access Network
CBD	Central Business District
DAC	Digital Activation Centre
DSLAM	Digital Subscriber Loop Access Module
eVULL(S)	enhanced Vacant ULLS
FAD	Final Access Declaration
IDS	Integrated Deployment Solutions
IULL(S)	In-use ULLS
Jumper	Copper wire connection between the two sides of a distribution frame or between distribution frames
jumper over extra	connection activity that involves running a jumper (to) a second main distribution frame
LSS	Line Sharing Service
MDF	Main Distribution Frame
MNM	Managed Network Migration
PSTN	Public Switched Telephone Network
SOR	Schedule of Rates
SSS	Spectrum Sharing Service (alternative name for LSS)
TOW	Ticket of Work

ULLS	Unconditioned Local Loop Service
VULL(S)	Vacant ULLS
WADSL	Wholesale ADSL