TSLRIC price review determination for the UCLL and UBA services non-recurring charges

Methodology document

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Content

0   Introduction

0.1 Background

Unbundled Copper Local Loop (UCLL) and Unbundled Bitstream Access (UBA) are services that allow alternative operators' access to the local loop infrastructure of Chorus.

The Telecommunications Act 2001 (the Act) requires the Commerce Commission (the Commission) to determine a price for the UCLL and UBA services. In the first instance the Commission is required to benchmark prices against comparable countries under the 'initial pricing principle' (IPP). If an access seeker or Chorus Limited is not satisfied with the price (either the UCLL or UBA) determined under the IPP, the Act provides that the party can ask the Commission to calculate a price for that service in accordance with the 'final pricing principle' (FPP), which is Total Service Long Run Incremental Cost (TSLRIC) for UCLL and UBA.

The Commission reviewed the benchmarked UCLL price on 3 December 2012 and determined the UBA benchmarked price on 5 November 2013. However, the Commission has received FPP requests both for UCLL and UBA: the UCLL FPP request was received in February 2013, the UBA FPP request was received in January 2014. Therefore, the Commission needs to determine a price for the UCLL and UBA services in accordance with the FPP.

TERA Consultants (TERA) has been mandated by the Commission to calculate a price for the UCLL and UBA services in accordance with the FPP which is TSLRIC. This includes the assessment of all service components that are either core non-recurring charges or sundry non-recurring charges.

A consultation paper addressing these service components was issued by the Commission in September 2014[1]. Responses from interested parties were received in October 2014.

The Commission sought the view of interested parties on all topics and has reviewed the submissions and the cross-submissions sent by all the interested parties.

A second draft version of this document was published in July 2015. The Commission sought the view of interested parties on several documents and models including the present document and has reviewed the submissions and the cross-submissions sent by all the interested parties.

This draft version has been updated to produce the current final version.

On this basis, the Commission asked TERA Consultants to propose an assessment of cost oriented non-recurring charges prices consistent with the TSLRIC principles.

This paper aims at detailing TERA Consultants' approach and findings.

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[1]   See document – 'Consultation on setting prices for service transaction charges for UBA and UCLL services' 25 September 2014

0.2 Scope of the analysis

Two main principles, detailed below, drive the choice of the methodological approach to adopt for this assessment:

- Prices must be cost oriented: if prices are set too low, it will not allow Chorus to cover the costs incurred by the provision of the services. At the opposite, if prices are set too high, it would favour Chorus at the expense of alternative operators.

- Prices must reflect the costs of an efficient operator: indeed, respecting the cost orientation principle should not aim at covering potential inefficiencies of the incumbent, and alternative operator must not pay any potential inefficiency (if any). Setting prices to the costs of an efficient operator therefore gives the incumbent an incentive to reduce its inefficiencies in order to minimize its real costs.

Considering those principles, four methodologies that could be used in order to set the prices for non-recurring activity charges have been considered:

1. **Bottom Up modelling of wholesale transaction charges**: this approach consists in breaking down all non-recurring activities in elementary tasks, to which would be assigned a specific labour time, transport time, material cost. Wholesale charges would then be calculated as the cost incurred by the combination of elementary tasks required to complete each non-recurring activity. Such an approach seems the most appropriate to ensure that wholesale prices are cost oriented without supporting any potential inefficiency. However, the implementation of this approach requires a large amount of data regarding the non-recurring activities process (times, materials, detailed process): Chorus is not in a position to provide such detailed inputs as most transaction charges activities are outsourced from service companies. Chorus has indeed no access to the service companies times and materials inputs. As a consequence, such an approach cannot be implemented in the New Zealand context.

2. **Setting wholesale transaction charges to Chorus' costs**: such an approach appears as the easiest to carry out, as it consists in extracting relevant costs from Chorus accounts to set its non-recurring activities prices. Using Chorus' costs as a basis enables us to not have to implement a Bottom Up model. However, the outputs from this approach would include costs from inefficiencies (if any) and would therefore not be consistent with the TSLRIC principle.

3. **Setting prices to Chorus' costs with efficiency adjustments**: such an approach relies on Chorus' actual costs for each non-recurring activity, but includes some adjustments in order to ensure that potential inefficiencies in Chorus' processes are not charged to alternative operators. Inefficiencies could

be identified by comparing Chorus costs to those of other operators (international indexation).

4. **International benchmark of wholesale transaction charges**: this approach consists in gathering information regarding prices of international operators' non-recurring activities similar to those provided by Chorus, and setting Chorus wholesale prices as an average of the benchmarked prices (this approach has been followed during the IPP in order to set monthly rentals). However, such an approach does not account for each country's characteristics, such as labour cost, and could therefore lead to significant inaccuracies in the setting of Chorus wholesale price list.

One of the particularities of New Zealand as regards non-recurring charges is that most activities are outsourced by Chorus (as well as by local fibre companies). As a consequence, Chorus and local fibre companies are only able to provide the details of their contracts with the service companies but had no or limited data on the durations of the specific activities, material costs, transport costs, etc. of each individual activities. In particular, the contracts with service companies include a pricing structure that is built at a higher level of aggregation as compared to the STD price list (generic activities named "service codes" correspond to several service components within the STD price list). As a consequence, a number of assumptions are required to move from the contracts charges for "generic activities" within the contracts with service companies to the cost of any STD service component.

Given the lack of detailed information enabling to perform a bottom-up assessment of non-recurring charges (theoretical preferred approach), the Commission and TERA had to find the most pragmatic approach in order to derive the non-recurring charges in the NZ context and to assess whether these charges are efficient.

Preliminary discussions between the Commission and TERA have led to consider option 3 as the most appropriate approach to estimate Chorus non-recurring activities charges based on the following criteria:

**Table 1 - Possible approaches to assess prices of
Chorus wholesale non-recurring activities**

Approach	Cost orientation (NZ context)	Efficiency	Feasibility
1/ Bottom Up modelling of wholesale transaction charges	Yes	Yes	No
2/ Setting wholesale transaction charges to Chorus' costs	Yes	No	Yes
3/ Setting prices to Chorus' costs with efficiency adjustments	**Yes**	**Yes**	**Yes**
4/ International benchmark of non-recurring activities charges	No	?	Yes

Source: TERA analysis

The present paper aims at establishing efficient NRC costs through an analysis of current service company processes and structures, removing any potential inefficiently incurred cost.

The non-recurring activities which will be analysed in this report are listed in appendix 4.1.

0.3 Structure of the document

This document has the following structure:

- Section 1: description of the non-recurring activities cost structure
- Section 2: Analysis of service companies' direct costs
- Section 3: Assessment of non-recurring activities prices.

1 Methodology

This section firstly presents the cost structure of non-recurring activities (§1.1), before detailing how the cost of each component of this structure will be assessed (§1.2, §1.3 and §1.4). Then the process to derive proposed prices will be explained (§1.5) and the methodology will be summarized (§0).

1.1 Chorus non-recurring activities cost structure

Based on information received from Chorus, in order to provide its non-recurring activities, Chorus relies on three subcontracted firms (the service companies). Chorus divides the country into 11 areas, called CSA (Company Service Area), in which one of the three service companies charges Chorus for the completion of the non-recurring activity. In each CSA, the choice of a service company by Chorus is made through a tender process. This procedure tends to ensure that in each CSA, the most efficient service company is chosen.

As a consequence, and according to Chorus explanations of their cost structure related to non-recurring charges, the costs of providing non-recurring activity transactions can be broadly broken down into 3 main components[2].

- Direct costs charged by service companies to perform the required field tasks, i.e. the cost of service companies' technical staff ;

- Service companies overheads which represent the charges by service companies for their indirect costs, such as field managers, dispatch centres, logistics, administrative staff, IT systems and corporate office rental. An allowance for service companies overhead is included in the contract between Chorus and the service companies.

- Chorus' own overheads which represent Chorus' own back office functions.

TERA understands from this breakdown of costs that all field activities and corresponding management activities are handled by service companies. However, we assume that remote activities which do not require exchange visit or end user's premises visit are handled directly by Chorus and not by a service company[3].

The following methodology details how those three components are assessed in the present report.

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[2] See document: Transaction Charges - response to CC questions 10 March 2014 FINAL.pdf, question 3.

[3] This assumption relies on the fact that for such activities, Chorus considers internal labour time instead of mapping the activity to a service code, which tends to suggest that service companies are not involved in such activities.

1.2 Service companies' direct costs

In order to assess the direct costs of each STD service component, TERA has been provided by Chorus with two documents which detail the cost breakdown per service company code.

- A spreadsheet which lists each of the non-recurring core activities, and provides the service company code relevant to each activity and any internal Chorus work required[4];

- A spreadsheet which lists all sundry non-recurring activities, and shows the underlying service company codes and charges[5].

Those 2 documents are detailed below.

1.2.1 Core transactions

The spreadsheet lists all core transaction charges, and defines the service company code relevant to each charge as well as any internal Chorus work required. From this document, 3 situations have been identified:

- **Non-recurring activities requiring field operations**: the Non-recurring activity is mapped to a service code, and has a fixed STD price attributed;

- **Non-recurring activities requiring remote operations only**: the Non-recurring activity is not mapped to any service code, but is characterized by a [   ]**CNZCI** record of Chorus internal work.

- **Non-recurring activities that correspond to works with variable scopes:** Non-recurring activity is mapped to a service code, and its price is determined on a case by case basis (POA – Price on Application).

Those 3 situations are described more in detail here below.

1.2.1.1 Non-recurring activities mapped to service codes with fixed STD prices

Service companies do not perform or charge Chorus based on the specific STD service component, but charge Chorus for the provision of aggregated groups of indicative tasks, identified by a code, called "service code". When Chorus needs to provide a non-recurring activity, they transfer the provision of the non-recurring activity to the active service company in the CSA, which will charge Chorus with the relevant codes, depending on the work completed. This averaging of charges paid by Chorus makes more complex the assessment of the costs of the non-recurring tasks.

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[4] File "STD Core charges to Code Mapping.xls"

[5] File "Master file STD Sundry Price Changes Workbook workings 2014.xls"

In order to assess service companies' direct costs for each STD service component, it is therefore necessary to understand which service codes apply for each non-recurring activity.

Chorus provided mapping that assigns service codes to STD service components (in a few cases, 2 service codes are assigned[6]). Service codes mapped to STD service components are considered the most relevant, or the one with more frequent occurrence, and give a good estimate of the real work process behind the provision of the non-recurring activity.

According to the mapping provided by Chorus, most of non –recurring activities can be associated with only seven codes within the STD price lists[7]. Other NRC are based on either an hourly labour rate for service companies or involve Chorus internal work only and so do not have codes associated with them. Those seven codes are described in more detail in section 2.2, but are summarized in table below.

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[6] Service codes [ ]**CNZCI** and [ ]**CNZCI** cover same scope of tasks, respectively for residential and business customers. The mapping provided by chorus assigns some non-recurring activities either to code [ ]**CNZCI** or [ ]**CNZCI**, as wholesale activities can be provided to either residential or business customers. Both codes will be assessed in the analysis, and wholesale transaction charges mapped to code [ ]**CNZCI** or [ ]**CNZCI** will then be calculated as an average of the costs of codes [ ]**CNZCI** and [ ]**CNZCI**.

[7] Chorus explained that "*Due to the complexity of the service company contracts, and not to drive unnecessary administrative costs, Chorus has where appropriate, aggregated costs to minimise the number of codes in use.*" (Response to Commission's clarification requests on transaction charges)

Table 2 - Description of the 7 service codes that apply for the provision of Chorus non-recurring core activities

Service code	Code description	Work description
[ ]**CNZCI**	Provision of a new service for a residential customer.	Primarily used for UCLFS new connections requiring a visit to the exchange and/or end-user's site. Also used for some miscellaneous work, e.g. premise wiring, site visits.
[ ]**CNZCI**	Disconnection or reconnection of a service or provision of new exchange service for residential customer.	Primarily used for UCLFS and UCLL new connections requiring a visit to the exchange for jumper only.
[ ]**CNZCI**	Provision of new or rearrangement of POTS service for business customer.	Essentially the same as [ ]**CNZCI** except for a "business" UCLFS connection rather than a (traditionally simpler) "residential" UCLFS connection.
[ ]**CNZCI**	Arrange an ADSL connection or disconnection.	Primarily used for UBA and UCLL connections that require a visit to the exchange and/or cabinet only.
[ ]**CNZCI**	Install xDSL service to a jack point in an end-user's premises.	Primarily used for UBA and UCLL new connections that require a visit to the end-user's site; including new connections that require premise wiring or splitter install.
[ ]**CNZCI**	Install xDSL service to a jack point in an end-user's premises.	Used for "full" installation of broadband including configuring end-user's modem/computer.
[ ]**CNZCI**	Miscellaneous provision job – bulk jumpering.	Bulk rate code for UCLL exchange jumpering – typically where RSP is moving from UBA or UCLFS to UCLL.

Source: Chorus

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For each service code, Chorus has provided a file which contains all data necessary to calculate the cost charged by service companies in all CSA[8]. This information is summarized in the table below.

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[8] All this data gives a service code cost per CSA. In order to set a national price for its non-recurring activities, Chorus then calculates an average national cost for each service code from the cost per CSA. The method used to calculate this average cost will be debated later (see section 2.1).

Table 3 - Information required in order to calculate the cost of a service code in a CSA

Service companies data provided by Chorus
Skilled labour rate
Time budgeted to complete task
Service company supplied materials
Transport Costs
Design, Records and Supervision Costs
Vehicle and Equipment Costs
Civil Subcontractor and Traffic Management Costs

Source: Chorus

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TERA chose to assess time budgeted to complete tasks, because other cost components of service codes (i.e. transport costs, labour rate, etc.) are specific to each country and therefore not relevant for comparison with other countries. The international indexation that TERA has carried out focuses on the "Time budgeted to complete the task" information.

This focus on times information relies on the following reasoning: the tender process ensures that Chorus benefits from a reasonably competitive price for each CSA zone[9]. It is to be noted that LFC select the same service companies as Chorus, which further supports the assumption that service companies are competitive. However, those tasks may not always correspond to the most efficient process today: indeed, the content of the service codes which service companies are required to carry out may include some inefficient process. Therefore, assessing the time spent to complete those tasks, through an international indexation, safeguards against inefficient/redundant tasks being asked of by Chorus to service companies, and then charged to alternative operators.

In order to complete this international indexation, TERA has reviewed all relevant data published by several regulatory authorities, and has identified 6 countries where information regarding the time required to complete wholesale non-recurring activities is available.

Therefore, the international indexation carried out by TERA is based on 6 countries, as summarized in the table below.

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[9] "The service companies were required to provide competitive tenders and price into the codes any average efficiencies they experience in their field costs." (Response to Commission's clarification requests on transaction charges)

Table 4 - Data used in the international indexation

Countries considered in the international indexation	Source of available data	Year of publication[10]
Denmark	Danish model BU LRAIC 2014 https://erhvervsstyrelsen.dk/gaeldende-prisafgoerelse-2015	2014
France	ARCEP – " Décision n° 01−135 de l'Autorité de régulation des télécommunications en date du 8 février 2001 demandant à France Télécom d'apporter des modifications à son offre de référence pour l'accès à la boucle locale " http://www.arcep.fr/uploads/tx_gsavis/01-135.pdf	2001
Italy	AGCOM – "Delibera CIR "Valutazione delle condizioni economiche dei servizi di accesso disaggregato a livello di rete locale contenute nell'offerta di riferimento di Telecom Italia del 12 maggio 2000 " http://www.agcom.it/documents/10179/538423/Delibera+14-00-CIR/f8e6fd91-390e-4b9d-97ef-1f71ee185b88?version=1.0	2000
Romania	BU Model 2010 http://www.ancom.org.ro/uploads/forms_files/129937748_optimized_hybrid_model_for_public_consultation.xls	2010
Spain	http://ftp.cmt.es/201305_Modelo_costes_altas_servicios_acceso_al_bucle.zip	2013
United Kingdom	Local loop unbundling: shared access pricing 2001 http://ofcom.org.uk/static/archive/oftel/publications/broadband/llu/shacprice0601.htm Draft Determination to resolve a dispute between Opal Telecom and Openreach about LLU bulk migration charges (2006) http://stakeholders.ofcom.org.uk/enforcement/competition-bulletins/closed-cases/all-closed-cases/cw_889/	2001 2006

Source: TERA analysis

It must be noted that comparing the times required to complete a given task is very complex, as every country has specific process, and operators provide specific non-recurring wholesale activities which do not always cover the same scope of elementary tasks.

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[10] Although some data sources were published more than 10 years ago, the time required to complete a given activity is not a data subject to significant variation over this period. Such data is therefore still relevant for comparison.

TERA has endeavoured to extract as much comparable information as possible from the available data, in order to restrict the comparisons between similar tasks only. The analysis carried out therefore provides the best possible estimates of the level of efficiency that could be reached for each service code.

1.2.1.2 Non-recurring activities not mapped to service codes with fixed STD prices

For some core transactions, Chorus did not provide service codes but indicated an average indicative internal labour time of [   ]**CNZCI**.

TERA understands from Chorus explanations[11] that those non-recurring activities do not require any field "technical work", neither at the exchange nor at the end user premises. The only work required for those tasks is remote "Internal work" for Chorus, which refer basically to data entry in Operational Support Systems. In its clarification documents[12], Chorus provided more details regarding the time range related to each of the activities.

Table 5 - Estimate time range related to internal wholesale activities

Service component	Time
UBA Only	
1.1 New connection – no site visit required (remote connection)	[ ]**CNZCI**
1.39 UBA service relinquishment	[ ]**CNZCI**
1.40 UBA service move address – remote connection without port	[ ]**CNZCI**
1.41 Data interleaving toggle	[ ]**CNZCI**

NB: No UCLL service component has been mapped by Chorus using the [   ]CNZCI approach

Source: Chorus

STD Core charges to Code Mapping.xls

As for STD non-recurring charges (NRC), also referred to as STD service components, mapped to a service code, those times will be assessed through our time-based international indexation in order to figure out if the times proposed are in line with best international practices.

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[11] Chorus letter to Commission "Mapping Chorus Service Company Codes to Transaction Charges" (21 January 2015)

[12] Chorus response to Commission's clarification requests on transaction charges

1.2.1.3   Non-recurring activities mapped to service codes with POA

This last situation refers to core transaction charges which have been mapped to service codes, but which have no standard STD price, as price of the transactions may vary significantly from one configuration to another. The prices for such non-recurring activities are flagged as POA (Price on Application) and are charged on a case by case basis. The analysis will only aim at assessing whether the use of a POA basis for the concerned non-recurring activities is relevant.

1.2.2   Sundry transactions

The file provided by Chorus[13] lists the sundry wholesale activities, and contains a spreadsheet which shows underlying service company costs. Considering the content of this file, 2 situations appear:

- In some cases, STD service components have been mapped to a service code. For those service code, an analysis of the time budgeted to complete the tasks will be performed as for the core charges. It must be noted that only a very limited number of non-recurring activities have been mapped to a service code. Indeed, only 5 service codes are used for such mapping

- In other cases, STD service components have not been mapped to any code. Price information provided is derived from the price from previous year, adjusted with a price index. For this situation, it was not possible to make any efficiency analysis.

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[13] File "Master file STD Sundry Price Changes Workbook workings 2014.xls"

Table 6 - Description of the 3 service codes that apply for the provision of Chorus non-recurring sundry activities

Service code	Code description	Work description
[ ]**CNZCI**	Arrange an ADSL connection or disconnection.	Primarily used for UBA and UCLL connections that require a visit to the exchange and/or cabinet only.
[ ]**CNZCI**	Handover Connection Service installation	Used when Handover connection service is required
[ ]**CNZCI**	No fault found	Used when a complaint have been registered and no fault have been found in the network after investigation
[ ]**CNZCI**	Network Availability Investigation	Used for investigation and manual testing on a line
[ ]**CNZCI**	Cancellation of maintenance task	Used when an order is cancelled after truck roll

Source: Chorus

Master file STD Sundry Price Changes Workbook workings 2014.xls

1.3 Service companies' overheads costs

Service companies' overhead costs are set in the contracts to [   ]**CNZCI** of their direct costs[14]. In our view this component of non-recurring activities costs does not require further analysis as it is part of the competitive process in place.

This [   ]**CNZCI** service companies overheads can be seen as a billing presentation as Chorus will consider the overall cost when selecting the most efficient service company. As a consequence, benchmarking it against other jurisdictions would not make sense.

1.4 Chorus overheads costs

Chorus' own overheads are the last component to assess in order to estimate total cost of non-recurring activities.

In the OPEX model developed by TERA to calculate UCLL and UBA TSLRIC recurring charges, TERA has broken down overall overheads costs based on the revenues. The amount of overheads related to "provisioning of Non-Recurring activities" therefore corresponds to the total amount of overheads cost that needs to be spread over the various non-recurring activity provided by Chorus. This total amount of wholesale overheads shall then be allocated to each non-recurring activity. Two approaches have been identified to implement this allocation.

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[14] 20140919_Confidential_B3_C_Q 8.2.4 170914

- The first approach consists in assessing the proportion of the total amount of overheads in the total revenue from those non-recurring activities, and to apply this percentage to each non-recurring activity (mark-up approach).

- The second approach requires calculating the proportion to the revenues generated by each non-recurring activity, and then calculate an amount of overheads on a per unit basis through the volumes of services effectively provided.

In theory, TERA would favour the second approach, which better ensures the overheads cost recovery as it captures the potential evolution of the number of occurrences of a given non-recurring activity and the evolution of revenues. However, this allocation requires a greater level of detail than the other one, which was not available to us and which therefore could not be conducted[15]. The first allocation approach is therefore retained in the present analysis.

1.5 Determination of non-recurring charges

Once all the costs have been assessed, the last step of the analysis consists in proposing an adjusted price list for all non-recurring activities.

It has to be noted that while some service codes apply for similar non-recurring activity (i.e. with same reference) in UCLL, UCLFS or UBA services, the real work completed by the service company may differ slightly depending on the wholesale service considered (UCLL, UCLFS, UBA).

The mapping of non-recurring STD activities to service codes and the assessment of service companies costs do not account for the distinction in the costs of non-recurring activities for different wholesale services. No other type of information was identified to make this distinction (international indexation, Chorus data). In order to account for this distinction, this last step consists, if necessary, in applying a gradient over costs of all non-recurring activities that correspond to a given service code, which modulate the cost calculated previously in accordance with the current variations of prices. The assessment of whether such gradient application is necessary is detailed in section 3.2.

1.6 Synthesis of the methodology followed to estimate UCLL and UBA non-recurring charges

The figure below summarizes the process followed to assess Chorus non-recurring activities charges.

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[15] Implementation of the second approach would have required to have the detail of the annual revenue per STD service component, for all service components of the STD price list. This level of detail was not available, as the categorization of revenues by STD service components did not match exactly with the STD price list provided by Chorus.

Figure 1 - The four steps of the methodology followed to estimate UCLL and UBA non-recurring charges

[ ]CNZCI

Source: TERA analysis

The rest of this document is structured as follows:

- Section 2 deals with the assessment of service companies costs:

  o First, it provides TERA's preliminary view on the method used to average costs per CSA in order to set national prices (§2.1);

  o Second, it deals with the assessment of times budgeted to complete the tasks included in each service code, for both core transactions (§2.2) and sundry transactions (§2.3).

- Section 3 details the assessment of non-recurring activities charges through the allocation of Chorus overheads costs to non-recurring activities.

2 Service companies' direct costs efficiency analysis

The analysis of the efficiency of service companies' direct costs through an international indexation (for relevant non-recurring activities) is the first step of the analysis. This section presents the implementation of the methodology described in the previous section.

2.1 Preliminary view about the determination of national costs from service companies' costs per CSA

As explained in detail in the previous section, in each CSA Chorus selects a service company in order to complete the non-recurring activities associated with a service code. As each CSA has specific geographic, socio economic and demographic characteristics, the cost of a given service code varies significantly from one CSA to another.

In order to derive the unique national cost of each service code, a weighted average of the cost of each CSA has been performed (each CSA being weighted by its number of active lines).

This approach differs from Chorus proposed approach where the national cost is calculated as the [   ]**CNZCI** of costs per CSA[16]. This calculation choice allows Chorus to protect itself from a potential geographical risk: if for some reason, volumes of services were to increase in a CSA where costs are high, and reduce in a CSA where costs are lower, the choice of a [   ]**CNZCI** average ensures that at the national level, the average cost still covers real costs for Chorus. On the contrary, if Chorus had chosen a simple average, weighted by the volume of lines per CSA, for example, a move of users from one CSA where costs are low to another CSA where costs are higher could make effective costs incurred by Chorus higher than the national weighted average calculated.

The table below sums up the costs for 7 codes per CSA and shows the weighted average national cost per volume of lines of each CSA, and the [   ]**CNZCI** average cost.

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[16] Chorus letter to Commission "Mapping Chorus Service Company Codes to Transaction Charges" (21 January 2015)

Table 7 – Service companies' direct costs per service code per CSA (NZD) All values CNZCI

CSA	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 01	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 02	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 03	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 04	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 05	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 06	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 07	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 08	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 09	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 10	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CSA 11	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Weighted Average	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
[ ]CNZCI	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
Delta	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Source: Chorus, TERA analysis

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Q25 s98 Copper fault data.xlsx

While weighted average cost reflects the real cost incurred by providing a service at the national level for Chorus for a given year, [   ]**CNZCI** cost, which is the cost used by Chorus to charge its non-recurring activities to alternative operators, is not correlated to the real cost incurred by Chorus.

This table shows that [   ]**CNZCI** numbers are always higher than average costs weighted by the volume of lines per CSA: in practice, this means that the cost charged by Chorus to alternative operator is between [   ]**CNZCI** higher than the real incurred cost.

TERA is of the view that such a calculation of average costs at the national level is not in line with the TSLRIC cost orientation principle as it artificially increases the costs incurred by Chorus. An effective application of cost orientation principle would tend to favour the use of a weighted average national cost. In order avoid under recovery of costs by Chorus, the weighted average costs should be re-assessed if significant change to the CSA mix is observed.

2.2 Core non-recurring activities

This section deals with the assessment of the time necessary to complete:

- The tasks included in each of the 7 service codes identified in the previous section;

- The non-recurring activities flagged as [   ]**CNZCI** record of internal work;

- The non-recurring activities flagged as POA.

2.2.1   Non-recurring activities mapped to a service codes

2.2.1.1   Result of the international indexation per service code

This section details the comparison that TERA was able to make with available data. A preliminary paragraph presents some assumptions that were made and which are common to all service codes comparisons, and how the results of the analysis shall be interpreted.

While the following sections give some details about the indexations that were made, the analysis itself has been realized in an excel file[17], which contains all the details about the products provided in compared countries, as well as about the implementation of the comparison.

2.2.1.1.1   Assumptions made in the international indexation and interpretation of results

As described in section 1, the international indexation focuses on labour time required to complete a given activity. By focusing on this specific metric, the indexation excludes all indicators that might be specific to each country and therefore subject to significant variations. The implication of this reasoning is that for each code, any operator in any country should be able to reach the same labour time as the lowest labour time encountered.

Therefore, for each service code, the labour time which will be retained for the assessment of service companies' direct costs is the lowest labour time observed. In this case, this indicates that more efficient processes could be identified by Chorus to be as efficient as the most efficient compared country.

Several assumptions were made when carrying out the following international indexation.

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[17] File "2014-20-Non recurring charges v3.xls"

- First, the figures used for New Zealand as a comparison basis are national average figures, weighted by the volume of lines in each CSA.

- For some countries, transport time is included in the data. It was not always possible to extract from available data the time that really corresponds to effective labour at the exchange/user premises. As a consequence, the times presented in the analysis are sometimes higher than effective required labour time, which seems to be a conservative approach for the assessment of service companies' direct costs[18].

- Some countries provided technician times and administrative times for the completion of a given activity. It is assumed that when a code applies, all costs are borne by the service company, and that there are no Chorus internal costs. As a consequence, TERA has chosen to sum up those times in order to reflect the total labour time of a given activity.

However, it can be envisaged that a shorter time to perform a given task is not the result of a more efficient process but the result of a company choice to hire more experienced or higher skilled staff (that would be counter-balanced by a higher pay).

To assess the impact of these companies' HR policies in the different benchmarked countries, several ways have been envisaged:

- Questions to NRAs of the benchmarked countries;
- Use of national indexes of telecommunications technicians;
- Use of inputs from the regulatory models of the different benchmarked countries.

Questions to NRAs of the benchmarked countries

The Commerce Commission and TERA Consultants have asked the NRAs of the different benchmarked countries for clarifications of the average level of education and experience of the staff performing the NRC activities.

Danish NRA DBA stated that the level of technicians' education and experience is not monitored by the regulatory authority. DBA underlined that fault handling on the existing network, setup of new customers and minor adjustments of the network (rewiring etc.) are performed by in-house technicians. External contractors are used when it comes to new deployments.

Italian NRA AGCOM answered they have no information on the level of technicians' education and experience.

Romanian NRA ANCOM specified that in their 2010 costing model, labour-related activities for the provision of LLU ancillary services are provided by two types of staff:

- Telecom technicians corresponding to undergraduate staff;

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[18] Each time a specific data point includes transport times, this is explicitly mentioned in the following international indexation.

- Skilled telecom technicians corresponding to graduate staff, with entry level or medium level of experience.

At the time of the Romanian NRA's modelling (2010), Romtelecom was not outsourcing NRC activities. Over the period of late 2011/early 2012 they have outsourced on a large scale.

Spanish NRA CNMC advised that two types of staff provide services for NRC activities:

- Technical operators with technical training/education and 3 to 10 years working experience perform field operations such as wiring, installation and field tests.
- Graduates (typically engineers) with a working experience in Telefonica between 2 and 6 years perform equipment configuration in MDF.

CNMC also advised that "all the activities at the customer's premises and at the local exchanges are outsourced. On the contrary administrative tasks are performed by Telefonica's staff; also activities related to network management (equipment configuration) are performed by Telefonica's engineers.

It has not been possible to get clarifications from the French or UK NRAs.

The data collected requesting clarifications to NRAs is mainly qualitative data and does not enable us to make an adjustment on the benchmark times to take into account different levels of education and/or experience.

An interesting output of these interactions with NRAs is that some operators within the benchmarked countries have chosen to have NRC activities performed by in-house technicians whereas others have preferred to outsource. However, this should not have material impact on the times required to perform the different NRC activities as even in the case of a subcontractors, the operator will provide all required information / training so that the sub-contractor can work in an efficient fashion.

Use of national indexes of telecommunications technicians

International comparators on the average wage of telecommunications technicians (or the best available proxy) have been collected (see Figure 2).
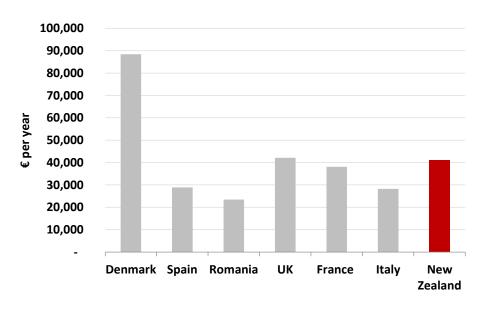
Figure 2 - Yearly average wage of telecommunications technicians

However, these nationally averaged figures are not necessarily representative of the benchmarked operators' choices to hire more or less experienced and more or less skilled technicians.

As a consequence, it has not been considered as the most suitable source to make adjustment on the benchmark times to take into account different levels of education and/or experience.

Use inputs from the regulatory models of the different benchmarked countries

The approach that better enables us to assess operators' choices to hire more or less experienced/skilled technicians is to consider the operators' inputs as used in the regulatory models.

This adjustment calculates the average wage for a technician in a country by applying to the actual technician's wage a ratio which compares average labour cost in New Zealand with average labour cost in the country being compared.

In order to compute this ratio, two approaches were considered:

- Compare hourly national average total costs;
- Compare monthly national gross average wages.

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[19] For all countries apart from Denmark www.payscale.com data are used (the best proxy index for telecommunications engineers/technicians is "Network Engineer").

For Denmark we used, "statistikbanken.dk" has been used
(http://www.statistikbanken.dk/statbank5a/SelectVarVal/Define.asp?Maintable=SLON21&PLanguage=1)
as the "Network Engineer" category did not render any data on www.payscale.com.

While the first approach seems more accurate, as it allows us to account for differences between countries such as number of worked hours per week, or total labour cost (i.e. fiscal differences), this information was not available for all countries.

Therefore, TERA has considered the national gross average monthly wage in the benchmarked countries and in New Zealand.

The actual technician's wages considered for this calculation come from the same sources as the task times for each country.

For example, in Denmark, the loaded hourly rate of a technician is 85.40 NZD. However, the national gross average month wage in Denmark is 8,596 NZD while it is 4,852 NZD in New Zealand. The Danish loaded rate adjusted for the comparison is therefore 55.83 NZD per hour.

In comparison, the loaded hourly rate from New Zealand service companies is [   ]**CNZCI**, which shows a delta of [   ]**CNZCI** compared with Denmark rates.

The same calculation, adjusted for average gross monthly wages ratio, shows that labour rates in NZ are [   ]**CNZCI** than in Spain, [   ]**CNZCI** than in Romania, [   ]**CNZCI** than in the UK, [   ]**CNZCI** than in France, and [   ]**CNZCI** than in Italy (see table below).

We note the adjustments for France and UK are very material. This is mainly due to the scope of costs included in the wages for these countries as these may be loaded with the cost of supervision, equipment, vehicles, etc. It is to be noted that these outliers are never selected as the "most efficient country" (see after). As a consequence, the approach remains conservative.

Table 8 – Calculation of mark-up and mark down to apply on task times

	Denmark	Spain	Romania	UK	France	Italy	New Zealand
National gross average month wage[20] (NZD)	8,596	4,396	988	6,425	5,777	4,660	4,852
Technician hourly wage (NZD)	85.30	30.00	9.00				[ ] **CNZCI**
Loaded technician hourly wage (NZD)	98.91	31.50	9.09	91.18	104.96	36.57	[ ] **CNZCI**
Adjusted technician hourly wage (NZD)	48.15	33.19	44.21				[ ]**CNZCI**
Adjusted loaded technician hourly wage	55.83	34.84	44.65	68.85	88.15	38.07	[ ]**CNZCI**
Delta with NZ	[ ]**CNZCI**	[ ]**CNZCI**	[ ]**CNZCI**	[ ]**CNZCI**	[ ]**CNZCI**	[ ]**CNZCI**	0.00%

Source: Helgi Library, NRAs, TERA analysis

These differences are likely to reflect a difference in technician experience and skills. Therefore, the times in the international comparison have been adjusted with those percentages. For each country, the delta calculated above has been applied on times as a mark-up (if country's adjusted labour rate is lower than New Zealand's) or a mark down (if country's adjusted labour rate is higher than New Zealand's).

2.2.1.1.2 Service codes [   ]CNZCI and [   ]CNZCI

Code [   ]**CNZCI** refers to the provision of new telephony service to a residential end user. This code is required when the provision of a new telephony service to an end user requires some work to be completed at end user's premises (for example, when there is no available intact line to be used). The table below provides an indicative detail of tasks that may be required when completing this service code.

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[20] http://www.helgilibrary.com/indicators/index/gross-average-monthly-wage-usd/

Table 9 - Description of code [   ]CNZCI

[ ]CNZCI	Provision new service for Residential customer
	Truck roll (implicit) to customer's premises
	Breakdown Intacts
	Install pair gain equipment
	Run jumpers
	Connect service lead at Network distribution point
	Install ETP and connect wiring
	Install Test Termination Unit
	Connect new service at ETP or Demarc point
	Install jack point and premises wiring
	Convert 3 wire to 2 wire
	Activate CMAR and other programmable systems

Source: Chorus

20140919_Con_B3_C_Q 8.1SoW_Provisioning_Services_ND0235_v1.6 pdf

As mentioned in section 1.2.1.1, TERA considered that code [   ]**CNZCI**, which refers to the provision of new telephony service for business end user, is similar to code [ ]**CNZCI** as for the tasks carried out. This assumption seems reasonable, as this distinction between residential and business users does not appear in Chorus non-recurring activities STD price list. Moreover, the provision of ADSL new service (code [   ]**CNZCI**) applies indifferently to residential and business users.

Therefore, TERA has chosen to compare the average time between code [   ]**CNZCI** labour time and code [ ]**CNZCI** labour time[21] to same activities in the compared countries.

Within the 6 countries compared, 3 countries provide services which include similar scope of tasks.

- In Denmark, the most similar task available in the reference offer is called "New Installation – Engineer assisted", which refers to the installation of a new line with work completed at the end user's premises.

- In Spain, the most similar task available in the reference offer is called "Unbundled connection over a vacant pair", as it includes transport to end user's premises in order to install ETP and connect wiring.

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[21] This average seems reasonable as there is no significant difference between code [ ]**CNZCI** labour time ([   ]**CNZCI**) and code [   ]**CNZCI** labour time

- In Romania, France, UK and Italy, no data is available for work at end user premises.

Figure 3 - Time to complete code [   ]CNZCI according to Chorus and according to the international indexation

[   ]**CNZCI**

Source: TERA analysis

It is decided to adopt the value of 69 minutes for service codes [   ]CNZCI and [   ]CNZCI.

2.2.1.1.3   Service code [   ]CNZCI

Code [   ]**CNZCI** refers to the provision of new telephony service for residential end users. This code is required when the provision of a new telephony service to an end user does not require any work to be completed at end user's premises but only at the exchange. The table below provides an indicative detail of tasks that may be required when completing this service code.

Table 10 - Description of code [   ]CNZCI

[ ]CNZCI	Disconnect/reconnect of Residential service at exchange/cabinet
	Truck roll (implicit) - to Cabinet / Exchange only
	RQ jumpers at MDF and cabinet
	Disconnect/reconnect at Network Distribution Point
	Disconnect/Reconnect at ETP. If required
	Recover CPE

Source: Chorus

20140919_Con_B3_C_Q 8.1SoW_Provisioning_Services_ND0235_v1.6 pdf

In the 6 countries benchmarked, it was also possible to find activities which includes similar scope of tasks as Chorus one.

- In Denmark, the most similar task available in the reference offer is called "New Installation – unassisted", which refers to the installation of a new line with work completed at the exchange.

- In Spain, the most similar task available in the reference offer is called "MPF transfer", as it consists in jumpering activities at the MDF.

- In Romania, the task used for comparison is called "Connection fee – full access – Basic testing of a line". It must be noted that this task included numerous tests that accounted for 2 hours of work we excluded from the scope of the comparison.

- In France, UK and Italy, it corresponds to the time planned to complete the connection of a line at the exchange point.

Figure 4 - Time to complete code [   ]CNZCI according to Chorus and according to the international indexation

[   ]**CNZCI**

Source: TERA analysis

It must be noted that for Romania, it was not possible to separate transport time from effective labour time. TERA has chosen to show the total time figure in the benchmark, which is a conservative approach for the estimation of the most efficient time.

It is decided to adopt the value of 30 minutes for service code [   ]CNZCI.

2.2.1.1.4   Service code [   ]CNZCI

Basically, this code corresponds to the connection/disconnection of an existing ADSL line. The work carried out for such task is therefore very similar to the work carried out in code [   ]**CNZCI**, which refers to the POTS service.

Table 11 - Description of code [ ]CNZCI

[ ]CNZCI	Disconnect/reconnect intact DSL connection
	Truck roll (implicit)
	Rearrange pair gain equipment
	Provide ADSL jumpering to existing POTS
	Conduct functional test of DSL
	Remove DSL and reinstate POTs only
	Conduct functional tests of POTs
	Confirm correct port (DSL?) allocated
	Recover Pair gain equipment

Source: Chorus

20140919_Con_B3_C_Q 8.1SoW_Provisioning_Services_ND0235_v1.6 pdf

As a consequence, for Romania, UK, France and Italy, TERA considered similar times as for code [ ]**CNZCI**.

- For Denmark, the task "New installation – Unassisted" for BSA/VULA was considered.

- For Spain, the task « Indirect naked connection over stb line with xds" was used

Figure 5 - Time to complete code [ ]CNZCI according to Chorus and according to the international indexation

[ ]**CNZCI**

Source: TERA analysis

It must be noted that for Romania, it was not possible to separate transport time from effective labour time. TERA has chosen to show the total time figure in the benchmark, which is a cautious approach for the estimation of the most efficient time.

It is decided to adopt the value of 26 minutes for service codes [ ]CNZCI.

2.2.1.1.5 Service code [ ]CNZCI

Basically, this code corresponds to the connection/disconnection of a new ADSL line, with the number of tasks to be completed at the end user premises. The work carried

out for such task is therefore very similar to the work carried out in code [　]**CNZCI**, which refers to the POTS service.

Table 12 - Description of code [　]CNZCI

[　]CNZCI Provision (half install) New DSL service
Truck roll (implicit) to customer's premises
Breakdown intacts
Rearranage pair gain equipment at customer's end
Run Jumpers
Connect wiring in ETP and install splitter
Install jack point and any prem wiring
Convert 3 wire to 2 wire
Install connect POTS
Verify correct DSLAM port allocation
Recover Pair gain equipment

Source: Chorus

20140919_Con_B3_C_Q 8.1SoW_Provisioning_Services_ND0235_v1.6 pdf

As a consequence, the time for this code was compared to the same indicative times as code [　]**CNZCI**.

Figure 6 - Time to complete code [　]CNZCI according to Chorus and according to the international indexation

[　]**CNZCI**

Source: TERA analysis

It is decided to adopt the value of 69 minutes for service codes [　]CNZCI.

2.2.1.1.6　Service code [　]CNZCI

Code [　]**CNZCI** is used for the "full" installation of the broadband service at customer premises, including the configuration of the end user modem, the setting of the wi-fi connection and a training of the user.

Table 13 - Description of code [   ]CNZCI

[ ]CNZCI	Provision (Full install) new DSL service
	Truck roll (implicit) to customer's premises
	Breakdown any intacts
	Rearrange pair gain at customer's end
	Run jumpers
	Connect wiring at ETP and install low pass filter
	Install low pass filter
	Install jack points and any prem wiring
	convert 3 wire to 2 wire working
	Install POTS CPE
	Confirm PC meets minimum requirements
	Install and confirgure DSL modem
	Verify correct port allocation
	Install and configure Ethernet adapter
	Install and configure WIFI devices
	Set up WiFi security
	Install and configure web browser and email client
	Resolve hadware/software conflicts
	Train customer

Source: Chorus

20140919_Con_B3_C_Q 8.1SoW_Provisioning_Services_ND0235_v1.6 pdf

Such service could not be found in any of the benchmarked countries. It must be noted that in all countries that were analysed, tasks such as configuration of Wifi, modem, web browser and email at end user premises are provided by the retail operator to its customer. Therefore, those tasks are never included in wholesale activities provided by the incumbent.

In absence of comparable data, it is decided to retain the current labour time for the service code [   ]CNZCI.

2.2.1.1.7   Service code [   ]CNZCI

Service code [   ]**CNZCI** refers to the provision of jumpering services at the exchange. It is therefore very similar to codes [   ]**CNZCI** and [   ]**CNZCI**. The difference with codes [   ]**CNZCI** and [   ]**CNZCI** is that code [   ]**CNZCI** applies when bulk jumpering is

ordered, i.e. when the service code is required several times: therefore, the most significant difference, in terms of process, between codes [ ]**CNZCI**, [ ]**CNZCI** and code [ ]**CNZCI** is the transport time to the exchange.

Table 14 - Description of code [ ]CNZCI

[ ]CNZCI	Miscellaneous provision Job - Bulk Jumpering
	Provide pots jumpering to existing ADSL service
	Provide ADSL jumpering to existing POTS
	Conduct functional test of DSL
	Remove DSL and reinstate POTs only
	Remove POTS and reinstate DSL only
	Conduct functional test of POTS
	Verify correct DSLAM port allocation
	IVR sign off of indivudual orders in real time

Source: Chorus

20140919_Con_B3_C_Q 8.1SoW_Provisioning_Services_ND0235_v1.6 pdf

As the transport time is excluded from the present benchmark, time figures for codes [ ]**CNZCI** and codes [ ]**CNZCI** should be quite similar: indeed, the current labour times provided by Chorus are [ ]**CNZCI** for code [ ]**CNZCI**, [ ]**CNZCI** for code [ ]**CNZCI**, and [ ]**CNZCI** for code [ ]**CNZCI** (which can be seen as an average of service codes [ ]**CNZCI** and [ ]**CNZCI**).

Based on this statement, when a country provided explicit figures for bulk services, those figures were used. This is the case for the United Kingdom. At the opposite, when no explicit bulk figure is available, TERA has considered the average time between code [ ]**CNZCI** and code [ ]**CNZCI**. This assumption means that whenever transport time has not been excluded from the time figures displayed, the time figure proposed are highly overestimated. Once again, this is considered to be a conservative approach for the assessment of efficient labour time figures.

Figure 7 - Time to complete code [ ]CNZCI according to Chorus and according to the international indexation

[ ]**CNZCI**

Source: TERA analysis

It is decided to adopt the value of 31 minutes for service codes [ ]CNZCI.

2.2.1.2 Synthesis

The table below summarizes the current (national weighted average) values for time budgeted to complete each service code, as well as the new proposed values considering the previous international indexation.

Table 15 - Summary of proposed time adjustments for core service codes

Code	Current time (min)	Proposed time (min)	Delta (%)
[ ]CNZCI	[ ]CNZCI	69	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	30	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	26	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	69	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	147	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	31	[ ]CNZCI

Source: TERA analysis

The recommended decreases vary between [   ]**CNZCI** compared to Chorus time.

2.2.2 Non-recurring activities flagged as [   ]CNZCI of internal work

As described in the previous section, a number of non-recurring activities are flagged as [   ]**CNZCI** of internal work, in the mapping provided by Chorus.

TERA understanding is that those non-recurring activities do not require any field "technical work", neither at the exchange nor at the end user premises. The only work required for those tasks is "Internal work" for Chorus, which refer basically to software adjustments in the IT system.

Within those non-recurring activities, no charge applies for activities related to service relinquishment. Other charges (service move address, change of plan, transfer of access seeker, etc.) can all be considered as remote connections and charged in accordance.

Considering this information, TERA has tried to extract from data available in the compared countries some time information for such work, i.e. for non-technical work which can be realized remotely.

Figure 8 - Time to complete remote non-recurring activities according to Chorus and according to the international indexation

[ ]**CNZCI**

Source: TERA analysis

It is decided to adopt the value of 7 minutes for the non-recurring activities which require remote work only.

2.2.3   Non-recurring activities flagged as POA

The assessment of the relevancy of POA has been conducted for all non-recurring activities, and in most cases has led to the conclusion that the POA was relevant. Therefore, the table below only lists the non-recurring activities for which a comment has been made.

Some of the recommendations provided by TERA state that some non-recurring activities which are currently POA, should not be POA but rather charged to either a fixed price, or a variable price but according to an identified driver (for example, a fixed given price per meter of wiring). While it could be expected, when such recommendations are made, that TERA provide a price level for such activities, it appears that such recommendations apply to sundry charges, for which very limited data was provided. It was therefore not possible for TERA to assess which prices should be applied instead of the current POAs.

Table 16 – POA service components

Service Component	Description	Charge	TERA's View on POA
UBA			
1.38 Multiple Order for a single End User support	Project management and additional transaction resources for coordination of multiple Orders or 10 or more connections for a single End User (see full requirements in UBA Operations Manual).	No charge	Should be a POA (if charges apply)
1.46 Relinquishment of Access Seeker Handover Connection.	Relinquishment of an existing Access Seeker Handover Connection. Charge covers time and materials to remove existing Handover Connection and associated cables and equipment.	Price on Application (POA). Basis for determining the charge is based on recovery of costs incurred (including contribution towards common costs unless already recovered).	An average figure could be used instead of a POA
1.48 Re-mapping Design Charge.	Design plan to reconfigure the affected network elements to map to the new Handover Point.	$1,989.29 Basis for determining the charge is the estimated equipment, time and materials incurred to design and implement a re-mapping including network rebuild design and systems changes.	Should be POA as it can significantly vary
1.49 Access Re-Mapping Fee.	Changes to each UBA Service connection to correctly map and charge for the new Handover Point.	$1.19 per End User Size of re-mapping work is directly related to number of end users. Charge reflects the estimated cost to re-map an End User.	Should not be POA (not expensive)

Service Component	Description	Charge	TERA's View on POA
1.40 Wiring and modem installation	On-premises wiring and/or modem installation required.	Wiring: Price on Application (POA). Modem installation: $38.01 Basis for determining the charge is based on recovery of costs incurred (including contribution towards common costs unless already recovered).	Should be charged according to a hourly rate for technican plus material depending on the installation. Recommended charge: 47.21 per hour + POA
3.2 Special Manual Pre-qualification Investigation Order.	Order by an Access Seeker for information relating to an End User's new service address.	$117.04 per hour Based on a service company hourly cost of [ ] CHORUS COI plus [ ] CHORUS COI administration charge and [ ] CHORUS COI to cover the estimated direct front office costs to manage each transaction. [ ] CHORUS COI mark up to cover common costs.	Best practice is rather to set a fixed rate for information request
3.5 Cancellation of Exception to BAU Support order.	Charge for cancelled Exception to BAU Support order.	Price on Application (POA). Actual project costs incurred.	Should be POA based on the tasks already performed.
3.10 Additional copies of invoice.	Hardcopies of invoices as requested by Access Seeker.	$111.27 per invoice. Based on per line itemisation and average forecast invoice length plus estimated time and materials of person to prepare and courier charge.	Same price as 1h of labour. Seems a lot for 1 copy of invoice
3.11 Additional billing information.	Providing any additional billing information requested by the Access Seeker.	Price on Application (POA). Based on time and material of analyst to prepare and deliver information.	Best practice is rather to set a fixed rate for information request
UCLL			

Service Component	Description	Charge	TERA's View on POA
1.4 Bulk Transfer (UCLFS 1.5)	Project management and additional and additional transaction resources for coordination of multiple MPF related transfers (see full requirements in UCLL Operations Manual) at the same exchange.	Price on Application (POA) Pricing to reflect underlying costs in additional resources and project management taking into account charges for each individual transfer	Several prices corresponding to several number of lines threshold should be set instead of POA
1.6 Bulk line transfer for a single End User support (UCLFS 1.7)	Project management and additional transaction resources for coordination of transfers of 10 or more MPFs for single End User (see full requirements in UCLL Operations Manual).	Price on Application (POA) Pricing to reflect underlying costs in additional resources and project management taking into account charges for each individual transfer	Several prices corresponding to several number of lines threshold should be set instead of POA
1.9 Remote Tie Cable Service installation (UCLFS 1.10)	Charge for Chorus installing the copper tie cable pairs used to connect the HDP on Chorus' MDF and the network cable to remotely located Access Seeker Equipment. (See full requirements in UCLL Operations Manual.)	Price on Application (POA) Based on cost of time and materials (including a 10% contribution towards common costs, unless already recovered)	We could imagine a fixed price + a price per meter However this product appears to have low volume.
3.3 Special Manual Pre-qualification Investigation Order (UCLFS 3.3)	Order by an Access Seeker for information relating to an End User's new service address where the Access Seeker has obtained End User authorisation to supply services to the End User's service address.	$117.04 per hour	Best practice is rather to set a fixed rate for information request
3.4 Manual line testing (UCLFS 3.4)	Measurements performed by a specialist group of service company staff to ascertain actual rather than theoretical estimated MPF electrical characteristics, such as might be required when an estimated result has returned a value that is marginal for an intended service.	$98.21 per hour	Best practice is rather to set a fixed rate

Service Component	Description	Charge	TERA's View on POA
3.9 Cancellation of Bulk Transfer Service request (UCLFS 3.9)	Charge for cancelled Bulk Transfer Service order	Price on Application (POA) Actual project costs incurred	Should be POA based on the number of transfers already performed
3.16 Tie Cable Maintenance Charge (UCLFS 3.16)	Maintenance of the tie cable.	Price on Application (POA) Based on cost of time and materials (including a 10% contribution towards common costs, unless already recovered)	There should be a fixed price

Source: Chorus

POA.docx

2.3 STD Sundry charges

This section deals with the assessment of the time necessary to complete:

- The tasks included in the service codes to which Sundry activities have been mapped;

- Some non-recurring activities not mapped to a service code, but for which the tasks included only involve labour time (plus transport in some cases)

Besides, it redefines the cost of some sundry charges (license fees) which are already accounted for in the OPEX model, in order to avoid double recovery of costs.

2.3.1   Non-recurring activities mapped to a service code

This section deals with the assessment of the time necessary to complete the tasks included in the 3 service codes identified in the previous section.

The international indexation was completed following the same principles as for non-recurring core activities.

2.3.1.1   Code [   ]CNZCI

Code [ ]**CNZCI** has been assessed in the previous section for non-recurring core activities. A 26 minutes labour time was adopted for this code.

2.3.1.2 Code [   ]CNZCI

Code [ ]**CNZCI** consists in the installation of Handover Connection Service. This installation includes a physical port at the Handover Point; and one or more fibre cables from the physical port to the Handover Point MOFDF.

Within the 6 compared countries, only Denmark is providing a similar service, which is called "Interconnection capacity – Setup".

Figure 9 – Time to complete [   ]CNZCI according to Chorus and according to the international indexation

[ ]**CNZCI**

Source: TERA analysis

In absence of more data, it is decided to use the current task time of service code [   ]CNZCI.

2.3.1.3 Code [   ]CNZCI

Code [   ]**CNZCI** is the code applied when there has been a request for a fault in the network and then no fault was found. Within the compared countries, Denmark is providing a similar service, which is called "unproductive fault handling";

Figure 10 – Time to complete code [   ]CNZCI according to Chorus and according to the international indexation

[ ]**CNZCI**

Source: TERA analysis

It is decided to adopt the value of 53 minutes for service code [   ]CNZCI.

2.3.1.4 Code [   ]CNZCI

Code [ ]**CNZCI** is used for manual line testing and manual prequalification investigation orders. It consists in carrying some remote functional tests on the line.

Two countries provide similar tasks information:

- For Romania, the task "Acceptance tests" for LLU was considered.

- For Spain, a combination of various tasks involving tests on the line was considered:

  o End to end test in central

  o Synchronism test

  o Bridge test

  o Management tasks were added.

Figure 11 - Time to complete code [ ]CNZCI according to Chorus and according to the international indexation

[ ]**CNZCI**

It is decided to adopt the value of 4 minutes for service code [ ]CNZCI.

2.3.1.5 Code [ ]CNZCI

This code refers to "cancellation charge (Post truck roll)", and "abortive end user site visit" activities.

Figure 12 - Time to complete code [ ]CNZCI according to Chorus and according to the international indexation

[ ]**CNZCI**

It is therefore decided to adopt the value of 7 minutes for the provision of service code [ ]CNZCI.

2.3.2 Non-recurring activities not mapped to a service code

For some non-recurring activities, mapping to a service code was not provided, but the detail of the tasks involved in the activity is known: a relevant international time indexation could therefore be carried out.

As no mapping was provided, it is assumed that those tasks are carried out directly by Chorus. The sundry services listed in table below fall into this category.

Table 17 – Sundry service components not mapped to a service code

handled in this section

Service Component	Ref
MPF move address	1.8 UCLL
Additional OO&T Training	3.6 UBA & 3.10 UCLL
Additional OFM Training	3.7 UBA & 3.11 UCLL
Additional copies of Invoice	3.10 UBA & 3.14 UCLL
Cancellation charge (Pre Truck Roll)	3.13 UBA

For the present assessment, it is assumed that trainings (OO&T and OFM) are considered as similar.

2.3.2.1 MPF Move address

MPF move address consists in project management of the coordinated MPF Relinquishment and MPF New Connection. It does not involve technical work.

Following the same reasoning as for core service components which were flagged as [   ]**CNZCI** of internal work, it is decided to adopt the value of 7 minutes for the sundry non-recurring activities which require remote management work only.

2.3.2.2 Trainings (OO&T and OFM)

Trainings are priced on a per hour basis. However, the current price may include travel costs such as taxi fares, airfares, accommodations or other expenses which may vary significantly from one training to another, depending on training site.

It is therefore suggested to split the price of this activity in 2 prices:

- A price for the training itself, on a per hour price, which reflect the cost of the agent who provides the training, i.e. the hourly cost of a Chorus agent.
- A POA part, which would allow to cover all travel charges.

No time analysis is therefore need for those activities.

2.3.2.3 Additional copies of invoices

As part of the efficiency analysis, it is assumed here that any efficient operator would implement modern BSS and OSS systems, which would include full B2B integration of accounting systems, enabling an RSP to electronically request additional invoices.

It is our view that such process should not incur any labour cost, and that its price should therefore be set to zero.

No time analysis is therefore need for those activities.

2.3.2.4 Cancellation charge (Pre truck roll)

Cancellation charge (Pre truck roll) consists in all the remote management work carried out before an agent is sent on site, until the cancellation is known.

It is assumed that this activity could therefore be flagged as [   ]**CNZCI** of Chorus internal work, and be assessed the same way as similar core non-recurring activities. This is described earlier in this report under section 1.2.1.1 *Non-recurring activities mapped to service codes with fixed STD prices*

Following the same reasoning, it is decided to adopt the value of 7 minutes for the sundry non-recurring activities which require remote management work only.

2.3.3 Activities which costs are recovered through OPEX allocation

Within the STD price list, 4 service components (2 for UCLL and 2 for UBA) refer to licence fees. :

- OO&T licence fee' (STD service component UCLL 3.12 and UBA 3.8) – Licence fee for provisioning software
- OFM licence fee' (STD service component UCLL 3.13 and UBA 3.9) – Licence fee for provisioning software

The costs behind the provisioning of such licenses are already captured in the OPEX model. Therefore, the price of such components should be set at zero, in order to avoid recovering twice the licences costs.

3   Non-recurring activities charges assessment

The previous analysis provides an estimate of a national efficient labour time for each service code. The following section details how to set non-recurring activities charges from this analysis.

3.1   Construction of total cost per service code

In the previous section, the time budgeted to complete service codes has been adjusted, as well as Chorus internal time to complete remote network management tasks.

The direct cost of those service codes and internal activities can therefore be calculated in accordance with the time adjustment, considering all other data (labour rates, transport cost, vehicle cost, etc…) as invariant.

When a non-recurring activity has been assigned [   ]**CNZCI** of internal work, the direct cost calculated is just the time assessed through an international indexation multiplied by the average wage of service companies in NZ.

Once this direct cost is calculated, a [   ]**CNZCI** mark-up is added to account for service companies overheads. This mark up only applies when work is completed by service companies: it does not apply to tasks which include only internal chorus work.

Last step is the allocation of Chorus Overheads. Chorus overheads related to the provision of non-recurring activities amounts to [   ]**CNZCI** for year 2014, while the total revenue related to non-recurring activities amounts to [   ]**CNZCI**. Chorus overheads therefore account for [   ]**CNZCI** of total non-recurring activities revenues. A [   ]**CNZCI** mark-up is therefore added to the cost previously calculated.

Table below shows the total charge calculated with current time data and calculated with adjusted time data, for the 7 core service codes.

**Table 18 - Summary of total costs for core service codes, including service companies'
and Chorus overheads**

Code	Current cost	Proposed cost	Delta (%)
[ ]CNZCI	[ ]CNZCI	118.96	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	54.62	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	45.35	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	131.27	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	208.53	[ ]CNZCI
[ ]CNZCI	[ ]CNZCI	31.21	[ ]CNZCI

Source: TERA analysis

3.2 Price proposal

This last sections aims at proposing some prices per non-recurring activities on the basis of the costs calculated previously, by applying if necessary a gradient over costs of all non-recurring activities that correspond to a given service code, which modulate the cost in accordance with the existing variations of prices.
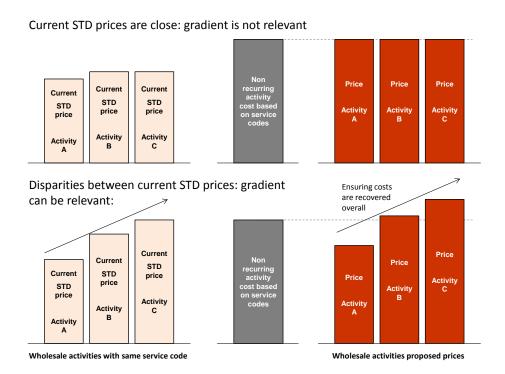
3.2.1   Non-recurring core activities

3.2.1.1   Assessment of requirement of a gradient application

This sections aims at assessing whether the application of the gradient as described in the methodology is relevant.

A gradient will be envisaged when different activities mapped to the same service companies' code have materially different STD prices:

Figure 13 – Gradient implementation

Current STD prices are close: gradient is not relevant

Disparities between current STD prices: gradient can be relevant:

Wholesale activities with same service code

Wholesale activities proposed prices

Source: TERA consultants

The table below recalls the different prices that can be found in the core price list for non-recurring activities that rely on a same code.

Table 19 - Comparison between prices of non-recurring core activities per service code and related estimate costs[22]

Core service code	Price 1	Price 2	Total charge assessed
[ ]**CNZCI**	155.10		[ ]**CNZCI**
[ ]**CNZCI**	70.46		[ ]**CNZCI**
[ ]**CNZCI**	70.46	73.51	[ ]**CNZCI**
[ ]**CNZCI**	155.10	169.73	[ ]**CNZCI**
[ ]**CNZCI**	38.01		[ ]**CNZCI**
[ ]**CNZCI**	52.84		[ ]**CNZCI**

Source: Chorus and TERA analysis

STD Core charges to Code Mapping.xlsx

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[22] activities for which no charge is applied and activities for which charge is POA are excluded of the comparison

For only two service codes, the current pricing of related non-recurring activities may differ, and the difference is not significant, especially compared to the related cost level assessed through the international indexation analysis.

The application of a gradient in order to modulate prices of no-recurring activities according to their current prices does not seem relevant in this context.

3.2.1.2   Non-recurring core activities proposed price list

The table below sums up the proposed prices per non-recurring activity, in accordance with the analysis carried out.

Table 20 - Comparison between current and proposed prices of non-recurring core activities

Transaction Charge	Access type	Rates	Port change at DSLAM	Service code	STD Price	Proposed price
1.1 MPF new connection - individual new connection where site visit required	UCLL	Individual	NA	[ ]CNZ CI	$155.10	$131.27
1.1 MPF new connection - individual new connection where no site visit required	UCLL	Individual	NA	[ ]CNZ CI	$70.46	$45.35
1.2 MPF transfer - individual transfer	UCLL	Individual	NA	[ ]CNZ CI	$70.46	$54.62
1.3 Other service to MPF transfer - individual transfer	UCLL	Individual	NA	[ ]CNZ CI	$70.46	$54.62
1.1 MPF new connection - where no site visit required	UCLL	Bulk	NA	[ ]CNZ CI	$52.84	$31.21
1.2 MPF transfer	UCLL	Bulk	NA	[ ]CNZ CI	$52.84	$31.21
1.3 Other service to MPF transfer	UCLL	Bulk	NA	[ ]CNZ CI	$52.84	$31.21
1.1 New connection - no site visit required (remote connection)	UBA Only	NA	NA		$15.85	$6.94
1.1 New connection - exchange or cabinet visit required	UBA Only	NA	NA	[ ]CNZ CI	$73.51	$45.35

Transaction Charge	Access type	Rates	Port change at DSLAM	Service code	STD Price	Proposed price
1.1 New connection - site visit required	UBA Only	NA	NA	[ ]**CNZ CI**	$169.73	$131.27
1.39 UBA service relinquishment	UBA Only	NA	NA		No Charge	No Charge
1.40 UBA service move address - remote connection without port	UBA Only	NA	NA		$15.85	$6.94
1.40 UBA service move address - exchange or cabinet jumper only	UBA Only	NA	NA	[ ]**CNZ CI**	$73.51	$45.35
1.40 UBA service move address - site visit required	UBA Only	NA	NA	[ ]**CNZ CI**	$169.73	$131.27
1.41 Data interleaving toggle	UBA Only	NA	NA		$15.85	$6.94
1.9 Other broadband service to any UBA service change plan	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.10 Any UBA service to any other UBA service change plan	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.31 Transfer of Basic UBA Service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.32 Transfer of Basic UBA Service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.33 Transfer of EUBA Service from an Access Seeker to a BUBA Service with another Access Seeker	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.34 Transfer of EUBA Service from an Access Seeker to an EUBA Service with another Access Seeker	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.35 Transfer of other broadband service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.36 Transfer of other broadband service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	Yes	[ ]**CNZ CI**	$73.51	$45.35
1.9 Other broadband service to any UBA service change plan	UBA Only	NA	No		$15.85	$6.94

Transaction Charge	Access type	Rates	Port change at DSLAM	Service code	STD Price	Proposed price
1.10 Any UBA service to any other UBA service change plan	UBA Only	NA	No		$15.85	$6.94
1.31 Transfer of Basic UBA Service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	No		$15.85	$6.94
1.32 Transfer of Basic UBA Service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	No		$15.85	$6.94
1.33 Transfer of EUBA Service from an Access Seeker to a BUBA Service with another Access Seeker	UBA Only	NA	No		$15.85	$6.94
1.34 Transfer of EUBA Service from an Access Seeker to an EUBA Service with another Access Seeker	UBA Only	NA	No		$15.85	$6.94
1.35 Transfer of other broadband service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	No		$15.85	$6.94
1.36 Transfer of other broadband service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	No		$15.85	$6.94

Source: Chorus and TERA analysis

STD Core charges to Code Mapping.xlsx

3.2.1   Non-recurring sundry activities

Provided data has allowed the assessment of the efficiency of activities related to 3 service codes only, and of some other activities which only involve Chorus remote work. For other activities, it is therefore proposed not to change the current price list[23].

When a service component incurs transport costs to the end user site (i.e. for abortive end user site visit and cancellation charge post truck roll), the transport cost considered in the proposed price is the average transport cost of service codes which involve transport to the end user site. It must be noted that this is a conservative approach, as the cancellation may occur before the agent reaches the end user site.

The table below summarizes those specific activities and the related proposed prices.

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[23] The rationale for this proposal is that when no data is available for efficiency assessment, the best way to set the price of an activity is through a direct benchmark of prices of similar activities. Since this was the method used to set IPP prices, it is proposed to stay with current prices.

Table 21 - Comparison between current and proposed prices of non-recurring sundry activities

Service Component	Ref	Product	STD Price	Proposed price	Service company code
Manual Line Testing	3.4	UCLL	$99.66	$117.60	[ ]**CNZCI**
MPF Move Address	1.8	UCLL	$26.85	$8.21	-
Special Manual Pre-qualification Investigation Order	3.2	UBA Price List	$118.78	$117.60	[ ]**CNZCI**
Special Manual Pre-Qualification Investigation Order	3.3	UCLL	$118.78	$117.60	[ ]**CNZCI**
Additional OO&T Training	3.6	UBA Price List	$112.32	$58.70 + POA	-
Additional OFM Training	3.7	UBA Price List	$112.32	$58.70 + POA	-
Additional OO&T Training	3.10	UCLL	$112.32	$58.70 + POA	-
Additional OFM Training	3.11	UCLL	$112.32	$58.70 + POA	-
Additional copies of Invoice	3.10	UBA Price List	$112.32	$0.00	-
Additional copies of Invoice	3.14	UCLL	$112.32	$0.00	-
"Cancellation charge (pre truck roll)."	3.13	UBA Price List	$4.94	$8.21	-
Abortive End User site visit	3.4	UBA Price List	$99.66	$32.01	[ ]**CNZCI**
"Cancellation charge (Post truck roll)."	3.14	UBA Price List	$99.66	$32.01	[ ]**CNZCI**
Abortive End User site visit	3.8	UCLL	$99.66	$32.01	[ ]**CNZCI**
OO&T Licence Fee	3.12	UCLL	$24	$0.00	-
OO&T Licence Fee	3.8	UBA	$24	$0.00	-
OFM Licence Fee	3.13	UCLL	$24	$0.00	-
OFM Licence Fee	3.9	UBA	$24	$0.00	-
Access Seeker Handover Connection Installation – GigE capacity. Basic UBA Service only.	1.42	UBA Price List	$551.08	$524.24	[ ]**CNZCI**
Access Seeker Handover Connection Installation – GigE capacity. Enhanced UBA Services only.	1.43	UBA Price List	$551.08	$524.24	[ ]**CNZCI**
Access Seeker Handover Connection Installation – STM1 capacity.	1.44	UBA Price List	$551.08	$524.24	[ ]**CNZCI**
Access Seeker Handover Connection Installation – STM4 capacity.	1.45	UBA Price List	$551.08	$524.24	[ ]**CNZCI**
No fault found	3.3	UBA Price List	$112.63	$88.34	[ ]**CNZCI**

Service Component	Ref	Product	STD Price	Proposed price	Service company code
MPF Tie Pair Change or Re-Termination	3.5	UCLL	$61.25	$45.35	[ ]**CNZCI**
No fault found	3.6	UCLL	$112.63	$88.34	[ ]**CNZCI**

4   Appendices

4.1   Non-recurring core activities price list

Table 22 - Chorus wholesale non-recurring activities price list

Transaction Charge	STD Price
UCLL	
Individual rates:	
1.1 MPF new connection - individual new connection where site visit required	$155.10
1.1 MPF new connection - individual new connection where no site visit required	$70.46
1.2 MPF transfer - individual transfer	$70.46
1.3 Other service to MPF transfer - individual transfer	$70.46
Bulk rates (bulk rate for 20 or more simultaneous new connections at the same exchange):	
1.1 MPF new connection - where no site visit required	$52.84
1.2 MPF transfer	$52.84
1.3 Other service to MPF transfer	$52.84
UBA	
1.1 New connection - no site visit required (remote connection)	$15.85
1.1 New connection - exchange or cabinet visit required	$73.51
1.1 New connection - site visit required	$169.73
1.50 Additional charge for wiring	POA
1.50 Modem installation	$38.01
1.39 UBA service relinquishment	No Charge
1.40 UBA service move address - remote connection without port	$15.85
1.40 UBA service move address - exchange or cabinet jumper only	$73.51
1.40 UBA service move address - site visit required	$169.73
1.41 Data interleaving toggle	$15.85
Charges with port change at the DSLAM:	
1.9 Other broadband service to any UBA service change plan	$73.51
1.10 Any UBA service to any other UBA service change plan	$73.51
1.31 Transfer of Basic UBA Service from an Access Seeker to a Basic UBA Service with another Access Seeker	$73.51
1.32 Transfer of Basic UBA Service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	$73.51
1.33 Transfer of EUBA Service from an Access Seeker to a BUBA Service with another Access Seeker	$73.51
1.34 Transfer of EUBA Service from an Access Seeker to an EUBA Service with another Access Seeker	$73.51
1.35 Transfer of other broadband service from an Access Seeker to a Basic UBA Service with another Access Seeker	$73.51
1.36 Transfer of other broadband service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	$73.51

Charges with no port change at the DSLAM:	
1.9 Other broadband service to any UBA service change plan	$15.85
1.10 Any UBA service to any other UBA service change plan	$15.85
1.31 Transfer of Basic UBA Service from an Access Seeker to a Basic UBA Service with another Access Seeker	$15.85
1.32 Transfer of Basic UBA Service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	$15.85
1.33 Transfer of EUBA Service from an Access Seeker to a BUBA Service with another Access Seeker	$15.85
1.34 Transfer of EUBA Service from an Access Seeker to an EUBA Service with another Access Seeker	$15.85
1.35 Transfer of other broadband service from an Access Seeker to a Basic UBA Service with another Access Seeker	$15.85
1.36 Transfer of other broadband service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	$15.85

Source: Chorus

STD Core charges to Code Mapping.xlsx

4.2 STD core charges mapping to service codes

Transaction Charge	Access type	Rates	Port change at DSLAM	STD Price	Service code	Chorus Internal
1.1 MPF new connection - individual new connection where site visit required	UCLL	Individual	NA	$155.10	[ ]**CNZ CI**	
1.1 MPF new connection - individual new connection where no site visit required	UCLL	Individual	NA	$70.46	[ ]**CNZ CI**	
1.2 MPF transfer - individual transfer	UCLL	Individual	NA	$70.46	[ ]**CNZ CI**	
1.3 Other service to MPF transfer - individual transfer	UCLL	Individual	NA	$70.46	[ ]**CNZ CI**	
1.1 MPF new connection - where no site visit required	UCLL	Bulk	NA	$52.84	[ ]**CNZ CI**	
1.2 MPF transfer	UCLL	Bulk	NA	$52.84	[ ]**CNZ CI**	

Transaction Charge	Access type	Rates	Port change at DSLAM	STD Price	Service code	Chorus Internal
1.3 Other service to MPF transfer	UCLL	Bulk	NA	$52.84	[ ]**CNZ CI**	
1.1 New connection - no site visit required (remote connection)	UBA	NA	NA	$15.85		[ ] **CNZCI**
1.1 New connection - exchange or cabinet visit required	UBA	NA	NA	$73.51	[ ]**CNZ CI**	
1.1 New connection - site visit required	UBA	NA	NA	$169.73	[ ]**CNZ CI**	
1.39 UBA service relinquishment	UBA	NA	NA	No Charge		[ ] **CNZCI**
1.40 UBA service move address - remote connection without port	UBA	NA	NA	$15.85		[ ] **CNZCI**
1.40 UBA service move address - exchange or cabinet jumper only	UBA	NA	NA	$73.51	[ ]**CNZ CI**	
1.40 UBA service move address - site visit required	UBA	NA	NA	$169.73	[ ]**CNZ CI**	
1.50 UBA service move address - modem installation	UBA	NA	NA	$38.01	[ ]**CNZ CI**	
1.50 UBA service move address - additional wiring	UBA	NA	NA	POA	[ ]**CNZ CI**	
1.41 Data interleaving toggle	UBA	NA	NA	$15.85		[ ] **CNZCI**
1.9 Other broadband service to any UBA service change plan	UBA	NA	Yes	$73.51	[ ]**CNZ CI**	
1.10 Any UBA service to any other UBA service change plan	UBA	NA	Yes	$73.51	[ ]**CNZ CI**	
1.31 Transfer of Basic UBA Service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	Yes	$73.51	[ ]**CNZ CI**	
1.32 Transfer of Basic UBA Service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	Yes	$73.51	[ ]**CNZ CI**	

Transaction Charge	Access type	Rates	Port change at DSLAM	STD Price	Service code	Chorus Internal
1.33 Transfer of EUBA Service from an Access Seeker to a BUBA Service with another Access Seeker	UBA Only	NA	Yes	$73.51	[ ]**CNZ CI**	
1.34 Transfer of EUBA Service from an Access Seeker to an EUBA Service with another Access Seeker	UBA Only	NA	Yes	$73.51	[ ]**CNZ CI**	
1.35 Transfer of other broadband service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	Yes	$73.51	[ ]**CNZ CI**	
1.36 Transfer of other broadband service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	Yes	$73.51	[ ]**CNZ CI**	
1.9 Other broadband service to any UBA service change plan	UBA Only	NA	No	$15.85		[**CNZCI**]
1.10 Any UBA service to any other UBA service change plan	UBA Only	NA	No	$15.85		[**CNZCI**]
1.31 Transfer of Basic UBA Service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	No	$15.85		[**CNZCI**]
1.32 Transfer of Basic UBA Service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	No	$15.85		[**CNZCI**]
1.33 Transfer of EUBA Service from an Access Seeker to a BUBA Service with another Access Seeker	UBA Only	NA	No	$15.85		[**CNZCI**]
1.34 Transfer of EUBA Service from an Access Seeker to an EUBA Service with another Access Seeker	UBA Only	NA	No	$15.85		[**CNZCI**]
1.35 Transfer of other broadband service from an Access Seeker to a Basic UBA Service with another Access Seeker	UBA Only	NA	No	$15.85		[**CNZCI**]
1.36 Transfer of other broadband service from an Access Seeker to an Enhanced UBA Service with another Access Seeker	UBA Only	NA	No	$15.85		[**CNZCI**]

STD Core charges to Code Mapping.xlsx

4.3 STD sundry charges mapping to service codes

Service Component	Ref	Product	STD Price	Service company code
Access Seeker Handover Connection Installation – GigE capacity. Basic UBA Service only.	1.42	UBA Price List	$551.08	[ ]**CNZCI**
Access Seeker Handover Connection Installation – GigE capacity. Enhanced UBA Services only.	1.43	UBA Price List	$551.08	[ ]**CNZCI**
Access Seeker Handover Connection Installation – STM1 capacity.	1.44	UBA Price List	$551.08	[ ]**CNZCI**
Access Seeker Handover Connection Installation – STM4 capacity.	1.45	UBA Price List	$551.08	[ ]**CNZCI**
Re-mapping Design Charge.	1.48	UBA Price List	$1,989.29	
Access Re-Mapping Fee.	1.49	UBA Price List	$1.19	
Special Manual Pre-qualification Investigation Order	3.2	UBA Price List	$118.78	[ ]**CNZCI**
No fault found	3.3	UBA Price List	$112.63	[ ]**CNZCI**
Abortive End User site visit	3.4	UBA Price List	$99.66	[ ]**CNZCI**
Additional OO&T Training	3.6	UBA Price List	$112.32	
Additional OFM Training	3.7	UBA Price List	$112.32	
Additional copies of Invoice	3.1	UBA Price List	$112.32	
Cancellation charge (pre truck roll).	3.13	UBA Price List	$4.94	
Cancellation charge (post truck roll).	3.14	UBA Price List	$99.66	[ ]**CNZCI**
Additions to approved modem List	3.16	UBA Price List	$1,500.00	
MPF Move Address	1.8	UCLL	$26.85	
Special Manual Pre-Qualification Investigation Order	3.3	UCLL	$118.78	[ ]**CNZCI**
Manual Line Testing	3.4	UCLL	$99.66	[ ]**CNZCI**
MPF Tie Pair Change or Re-Termination	3.5	UCLL	$61.25	[ ]**CNZCI**
No fault found	3.6	UCLL	$112.63	[ ]**CNZCI**
Abortive End User site Visit	3.8	UCLL	$99.66	[ ]**CNZCI**
Additional OO&T Training	3.1	UCLL	$112.32	
Additional OFM Training	3.11	UCLL	$112.32	
Additional copies of Invoice	3.14	UCLL	$112.32	

Master file STD Sundry Price Changes Workbook workings 2014.xls