

Office of Utility Regulation

C&WG Reference Offer and Interconnection Rates

Consultation Document

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Office of Utility Regulation
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1. Introduction

The provision of interconnection and access services at reasonable and non-discriminatory rates is critical to the development of a well functioning, competitive telecommunications market. In particular, setting prices for interconnection and access services at cost can support the development of effective competition, providing efficient 'build or buy' signals to new entrants and enabling the provision of competing services in retail telecommunications markets.

One of the roles of the Office of Utility Regulation ("OUR") is to review and assess the interconnection and access charges included by C&WG in its Reference Offer ("RO"), in order to ensure that they are cost oriented. The current rates were determined in 2005 following a detailed review of C&WG's proposed interconnection and access charges and an assessment of its regulatory accounts. Following this review revised charges took effect on 1st February 2006.

The Director General ("DG") commenced a review of the current rates earlier this year and requested C&WG to submit its proposals in February 2009. The DG has assessed C&WG's proposals and this consultation document presents the initial findings of this review. In general the DG is pleased with the level of compliance demonstrated by C&WG with previous directions although there are also some specific aspects of the C&WG approach to setting rates which are inappropriate and need to be amended. We therefore consider that it would be more appropriate for C&WG to recalculate and resubmit to the Office its proposed charges in the light of the issues raised in this document.

In addition, our review has highlighted a number of issues related primarily to the transparency of C&WG's costing data and the format of its regulatory accounts. Going forward, we consider that these should be amended in order to support future reviews of C&WG's RO charges and ensure the cost orientation of such charges.

The DG would like to acknowledge the very high level of co-operation provided by C&WG in this work to-date.

This document does not constitute legal, technical or commercial advice; the Director General is not bound by this document and may amend it from time to time. This document is without prejudice to the legal position or the rights and duties of the Director General to regulate the market generally.

2. Structure of the Consultation

2.1 Structure of the Consultation document

This consultation is structured as follow:

- Chapter 3: sets out the legal framework and provides the regulatory background to the DG's review of the RO and interconnection rates;
- Chapter 4: presents background to the current RO and interconnection rates and summarises the C&WG proposed new RO and interconnection rates;
- Chapter 5: assesses compliance of the proposed RO and underlying methodology with the Law and OUR directions and also contains a detailed cost assessment;
- Chapter 6: presents three checks to further assess the appropriateness of the proposed RO and interconnection rates;
- Chapter 7: sets out a number of revisions to the proposed rates and their potential impact on the proposed rates;
- Chapter 8: outlines a number of issues going forward and questions to respondents; and
- Chapter 9: sets out the next steps.

2.2 Timetable for Responses to Consultation Paper

Responses to this document should be submitted in writing and should be received by the OUR before **5.00pm on 7th August 2009**. Written comments should be submitted to:

Office of Utility Regulation,
Suites B1 & B2,
Hirzel Court,
St Peter Port,
Guernsey, GY1 2NH.

Or by email to **info@regutil.gg**

In accordance with the OUR's policy on consultation set out in Document OUR 05/28 – "Regulation in Guernsey; the OUR Approach and Consultation Procedures", non-

confidential responses to the consultation are available on the OUR's website (www.regutil.gg) and for inspection at the OUR's Office during normal working hours. Any material that is confidential should be put in a separate annex and clearly marked so that it can be kept confidential. However, the DG regrets that he is not in a position to respond individually to the responses to this consultation.

3. Legal Background & Regulatory Framework

3.1 Legal Background

Section 10 of the Telecommunications (Bailiwick of Guernsey) Law, 2001 (“the Telecoms Law”) sets out the DG’s powers with regard to interconnection and access and describes the requirements that the DG may impose on *inter alia* any licensee whom he determines has a dominant position in a relevant market. The DG has determined (Documents OUR 01/14 and 08/07), that C&WG has a dominant position both in the fixed telecommunications network and services market and in the mobile telecommunications network and services market. The OUR further informed C&WG that the provision of section 10(2) of the Telecoms Law would apply to it thus requiring it in due course to;

- (a) make its procedures for the provision of interconnection and access publicly available on a non-discriminatory basis in a manner that is to the reasonable satisfaction of the DG;
- (b) offer a standard interconnection and access agreement (referred to as the “Reference Offer”) which is available under non-discriminatory terms, conditions and charges, and on a non-discriminatory basis, no less favourable than that offered to -
 - (i) any of C&WG’s own services; or
 - (ii) any associated company of C&WG’s or services of such a company;
- (c) provide interconnection or access on terms, conditions and charges that are transparent and cost-oriented having regard to the need to promote efficiency and sustainable competition and maximise consumer benefits;
- (d) provide interconnection or access at any technically feasible point in its telecommunications network; and
- (e) provide interconnection or access in a manner that is sufficiently unbundled so that the person requesting interconnection or access does not pay for telecommunications network components or telecommunications services that he does not require.

The legal responsibility is on C&WG to ensure that it provides such information as is necessary to fully demonstrate that any proposed charges for its interconnection and access services comply with its obligation under the Telecoms Law.

In addition, the Telecoms Law makes provision for the DG to direct changes to the standard interconnection and access offering and to require C&WG to justify its costs or charges for the provision of interconnection and access services.

3.2 Regulatory framework

Apart from having to comply with the Telecoms Law, the licensee also has to comply with the Licence conditions which the DG issued in 2001 and Directions which the DG has issued since.

The DG granted a ‘Fixed Telecommunications Licence’¹ to C&WG “to establish, operate and maintain the Licensed Telecommunications Network”. Part IV of this Licence includes a number of licence conditions applicable to dominant operators. As set out earlier, the DG has determined that C&WG has a dominant position both in the fixed telecommunications network and services market and in the mobile telecommunications network and services market.

The Licence also contains a section on information provision. Furthermore, in May 2005, the OUR published an information note on C&W Guernsey Interconnection and Access Charges², which provides detailed guidance to C&WG on the minimum level of information which C&WG should provide when submitting any proposed charges for interconnection and access services in order to ensure compliance with its obligations under the Telecommunications (Bailiwick of Guernsey) Law, 2001 and its licence. This followed a detailed review of the previous submission made by C&WG in November 2003³.

¹ OUR 01/18, available at <http://www.regutil.gg/docs/our0118.pdf>

² OUR 05/11, available at <http://www.regutil.gg/docs/our0511.pdf>

³ The details of this review are set out in OUR 05/09, available at <http://www.regutil.gg/docs/OUR0509.pdf>

4. C&WG proposed new RO and interconnection rates

4.1 *The 2006 OUR Review of C&WG RO*

The OUR completed its most recent review of the C&WG RO and interconnection rates in 2005-06⁴. In its Report on the Consultation and Decision Notice (OUR 05/09) the OUR summarized the main findings from the review of C&WG's Regulatory Accounts and interconnection charges. The OUR issued a number of directions to C&WG in order to address the issues which had previously been identified and more specifically, on how C&WG should calculate its interconnection and access charges.

This resulted in C&WG further developing its cost model in order to reflect the OUR directions, which culminated in a new submission of interconnection and access tariffs. The OUR made a number of revisions to this submission and the revised RO and interconnection rates have been in effect since February 2006⁵.

4.2 *New RO Submission by C&WG*

In October 2008 the DG indicated to the market that he would be conducting a review of the RO interconnection and access rates during 2009. The OUR requested C&WG to submit information on the appropriateness of the current rates and if necessary propose more appropriate rates and to submit this information by February 2009.

In February 2009 C&WG submitted proposals for new interconnection and access rates. The proposals were submitted in the form of a number of spreadsheets. Tables 1 to 3 show the differences between the current rates and the proposed rates for the various services.

⁴ OUR 05/09, available at <http://www.regutil.gg/docs/OUR0509.pdf>

⁵ The interconnection and access tariffs which took effect from February 2006 are published by C&WG within its Reference Offer, available on its website at <http://www.surecw.com/guernsey/page-605>

Table 1 Differences between C&WG current rates and proposed rates (for a 1 minute call)

SERVICE	PEAK			OFF-PEAK		
	Feb-06	Proposed	Change	Feb-06	Proposed	Change
On-Island Termination	0.347	0.406	16.9%	0.258	0.315	22.2%
On-Island Origination	0.605	0.455	-24.8%	0.436	0.352	-19.4%
On-Island Origination (with Operator Assistance)	194.654	254.597	30.8%	194.380	254.406	30.9%
On-Island Transit	0.248	0.265	6.7%	0.189	0.211	11.8%
Off-Island Transit	0.823	0.500	-39.2%	0.587	0.385	-34.5%
On-Island FreePhone Origination	0.605	0.455	-24.8%	0.436	0.352	-19.4%
On-Island LocalCall Origination	0.605	0.455	-24.8%	0.436	0.352	-19.4%
Calls via operator - to Jersey	195.194	254.775	30.5%	194.753	254.538	30.7%
Calls via operator - to UK	195.194	254.775	30.5%	194.753	254.538	30.7%
Calls via operator - to Irish Republic	195.194	254.775	30.5%	194.753	254.538	30.7%
Local Reverse Charge	127.512	244.831	92.0%	127.218	244.622	92.3%
Local Information Services	0.296	0.321	8.6%	0.223	0.253	13.5%
Weather Forecast - Guernsey Bailiwick	5.296	5.321	0.5%	5.223	5.253	0.6%
Guemsey Met. Office Info Line	25.960	25.787	-0.7%	25.681	25.596	-0.3%
Time (was Gsy, now UK)	0.296	10.500	3447.3%	0.223	10.385	4556.8%
Alarm	88.595	257.253	190.4%	88.045	257.078	192.0%
Emergency Services	150.059	211.217	40.8%	149.736	211.027	40.9%

Table 2 Customer Sited Interconnect

Customer Sited Interconnect

	2007		Proposed 2009		% Variation	
	Instalation	Quarterly Rental Charge	Instalation	Quarterly Rental Charge	Instalation	Quarterly Rental Charge
Per System including the initial 2 x 2 Mbit circuits (minimum number) & Equipment	£34,176.01	£1,659.92	£37,029.39	£170.82	8.35%	-89.71%
Ducting & cabling per metre	£68.44		£80.86		18.15%	
Additional 2Mbit links	£2,044.59	£829.96	£145.08		-92.90%	
New Fibre Termination - per route			£617.76			
Existing Fibre - Lighting - per route			£338.52			
New fibre per m			£1.30			
New duct per m			£80.86			
Existing fibre per m				£0.02		
Existing duct per m				£0.58		

Table 3 In-Span Interconnect**In-Span Interconnect**

	2007		Proposed 2009		% Variation	
	Instalation	Quarterly Rental Charge	Instalation	Quarterly Rental Charge	Instalation	Quarterly Rental Charge
Per System including the initial 2 x 2 Mbit circuits (minimum number) & Equipment	£28,500.41	£1,659.92	£28,590.69	£170.82	0.32%	-89.71%
Ducting & cabling per metre	£68.44		£80.86		18.15%	
Additional 2Mbit links	£2,044.59	£829.96	£145.08		-92.90%	
New Fibre Termination - per route			£617.76			
Existing Fibre - Lighting - per route			£338.52			
Joint box			£3,147.13			
New fibre per m			£1.30			
New duct per m			£80.86			
Existing fibre per m				£0.02		
Existing duct per m				£0.58		

Impact on C&WG revenue

As part of its submission, C&WG performed a comparative analysis between its proposed interconnection rates and the current rates. This calculated the change in C&WG revenue from interconnection services for the month November 2008, when applying the proposed rates as opposed to the existing rates for RO services. This was based on the assumption that demand remained constant at the actual level observed in that month.

Based on this analysis, C&WG estimated that its interconnection revenue in that month would have increased by £96, or just 1.05%. This suggests that providing that the pattern of usage of these interconnection services remains sufficiently consistent (and the same services continue to be used), the new proposed charges would have a small overall effect on C&WG's interconnection revenues.

Impact on OLOs

C&WG's submission did not include a section on the impact on specific OLOs of the proposed rates. However, interconnection can form a major part of an OLO's cost base. As a result, changes in RO rates can potentially have a significant impact on an OLO's business model. At the DG's request, C&WG performed some additional analysis to assess the potential impact of its proposed rate changes on OLOs. According to C&WG, based on current usage patterns, the impact on one OLO is likely to be positive and the impact on the other OLO is very marginally negative. For the former OLO, the proposed reduction in call origination charges outweighs the increase in call termination rates, whilst the latter OLO currently only purchases termination services.

5. The 2009 Review of the RO and interconnection rates

The OUR appointed Frontier Economics to assist with the review of C&WG's proposals for the RO and interconnection rates. This review, the major findings of which are presented below, encompassed the following aspects:

- An assessment of C&WG's compliance with the requirements set out in the Telecommunications (Bailiwick of Guernsey) Law, 2001;
- Assessment of C&WG compliance with OUR's directions;
- Detailed cost assessment; and
- Detailed review of specific cost categories and drivers.

5.1 *Compliance with requirements under the Telecoms Law*

Interconnection charges levied by C&WG should be consistent with the principles set out in the Telecommunications (Bailiwick of Guernsey) Law, 2001. They should be:

- transparent;
- cost-oriented;
- promote efficiency and sustainable competition; and
- maximise consumer benefit.

In reviewing the proposed interconnection charges we have assessed whether they comply with the requirements set out in the law. More specifically, the OUR has reviewed each of the elements which underlie the charges, focusing predominantly on the underlying cost data which, in most cases, is based on the most recent audited regulatory accounts.

Interconnection charges for services other than interconnection links

The majority of the interconnection charges⁶ are calculated on a "top-down" basis using actual 2007/2008 cost data. This firstly involves estimating the average per minute cost of each relevant network component used to provide each interconnection service. Taking into account the relative use of each network component, the overall cost of providing one minute of each interconnection service is then determined. Adjustments are then made for peak or off-peak usage as necessary.

To assess the reasonableness of these "top-down" charges, we have reviewed each element of the calculation as well as the accuracy of the calculations themselves. This included tracing total costs and minutes back to the audited regulatory accounts for 2007/8. The DG has also assessed the approach taken by C&WG in calculating the usage factors and the time of day

⁶ Excluding interconnection links

gradients and assessed their reasonableness and looked at trends over time to gain further understanding of the factors driving the proposed changes in the interconnection rates. The main focus has been on those interconnection services which generated revenue for C&W in 2007/8 (i.e. On-island origination, On-island termination & On-island transit).

Interconnection link charges

The proposed RO submission includes rates associated with “customer sited interconnection” (CSI) and “in-span interconnection” (ISI) links. These are both installation services and unlike the other interconnection charges, are calculated on a “bottom up” basis. This means that the prevailing relevant labour rates and equipment prices are used to estimate the overall cost of installing the interconnection link, rather than using actual backward-looking cost data.

The approach taken to reviewing these charges was therefore slightly different. The OUR looked to understand how the information required to estimate these charges was obtained, which included the appropriate labour and equipment rates, as well as estimates of the amount of each input required to provide the relevant installation service. The OUR also compared the structure and the levels of these charges to the previous RO to assess the reasonableness of the proposed charges.

Information and data used

To perform a detailed review, we also required additional information and data from C&W Guernsey. The main sources used were:

- Recent RO submission (December 2008);
- Previous published RO (February 2006);
- Cost-based regulatory accounting statements (2004/5, 2005/6, 2006/7, 2007/8); and
- Other information provided by C&W Guernsey.

Review of the data

To review all the data submitted by C&W, we divided the review in the following parts:

- the review of costs;
- the review of routing factors;
- the review of time of day gradients;
- confirmation of the accuracy of the calculations; and
- the review of the bottom-up installation charges.

5.2 Compliance with OUR directions

The OUR has issued a number of directions in relation to C&WG's RO charges, as set out in OUR 05/09 and OUR 05/11 in 2005. The DG requested Frontier Economics to assess C&WG's compliance with these directions. Table 4 summarises the OUR's directions to C&WG contained in OUR 05/09 and C&WG's compliance with these directions. Table 5 summarises the OUR's directions to C&WG as set out in OUR 05/11 and C&WG's compliance with them.

Table 4 C&WG's compliance with the OUR's directions in OUR 05/09

C&WG to retain its current averaged call origination and call termination charging structure rather than introducing single and double tandem charges for origination and termination.	C&WG has complied with this requirement in its latest RO submission.
C&WG to ensure that it charges its own retail arm the same interconnection and access charges for RO services as are approved by the DG for inclusion in its RO.	This is shown through C&WG's regulatory accounts. For services provided to its retail business that are not part of the RO, C&WG should ensure that charges for these services are calculated in a non-discriminatory manner.
C&WG to retain the current time of day definitions for calculation of interconnection and access charges in the future (with peak period charges applying between 08.00 and 18.00, Monday to Friday, and off peak tariffs applying at all other times).	C&WG has retained its definitions of peak and off-peak tariffs.
C&WG to continue offering the Off-Island Transit Call service as currently specified in the RO (i.e. as an averaged rate regardless of destination, rather than including in the RO separate (cost-based) charges for transiting calls off-island to Jersey, the UK and France).	C&WG has complied with this requirement in its latest RO submission.
C&WG to retain the current service description for RO service 3.04 (off-island transit calls). However C&WG can add the word 'Outgoing' into the title of the service if it wishes to do so.	C&WG has complied with this requirement in its latest RO submission.
C&WG is not to introduce a new service ("incoming off-island transit") to its reference offer, as the OUR considers that such a service is already covered in existing transit and termination services in the RO.	C&WG has complied with this requirement in its latest RO submission.

C&WG to retain both versions of RO service 3.02 (on-island call origination) in the RO (i.e., versions of the service including and excluding access to C&WG's operator services).	C&WG has complied with this requirement in its latest RO submission (i.e. it offers an origination service with and without access to operator services).
C&WG to submit future interconnection and access tariffs based on current costs.	C&WG has complied with this requirement in its latest RO submission.
<p>C&WG's PPP costs should only include:</p> <ul style="list-style-type: none"> • the development and management of interconnect products; • the cost of managing the relationship with operators which purchase interconnect services; • the administrative costs of dealing with orders for interconnect services; and • the billing of interconnect services. 	C&WG appears to have complied with this requirement.
C&WG to publish details of the elements that make up its PPP charge at the same time as it submits its proposed new rates.	C&WG has provided details of its PPP costs to Frontier, but this was not included as part of its initial RO submission. C&WG's website does contain an overview of its approach to determining PPP costs (from 2005)
C&WG must demonstrate that the costs associated with the provision of the PPP services reflect those that would be incurred by an efficient operator.	C&WG has not provided this information of part of its RO submission. In response to Frontier's review, it provided a statement reviewing the development of its PPP costs over time and setting out factors that should be taken into account in any benchmarking exercise
C&WG is required to recover its PPP costs across all traffic that is conveyed across or transits the C&WG network.	C&WG appears to have complied with this requirement.
C&WG should exclude from its interconnection and access charges any component which relates to an access deficit charge	C&WG has complied with this requirement and not included an ADC in its proposed RO charges.
In line with international practice, C&WG should ensure that its calculation of a tariff gradient to apply to interconnection products uses the widest possible sample of traffic.	C&WG has only included UK and Jersey national geographic calls in its time of day gradient calculation.
C&WG should apply the same gradients to wholesale minutes bought by C&WG retail from C&WG wholesale as the gradient used for wholesale minutes to OLOs.	In its regulatory accounts, C&WG's transfer charges paid by its retail business are calculated in the same manner as its interconnection charges

(Source: OUR 05/09 / Frontier analysis)

Table 5 C&WG's compliance with the OUR's directions in OUR 05/11

<p>C&WG to provide the OUR with a detailed breakdown of the cost components of each interconnection and access service, for example through simple flow diagrams.</p>	<p>C&WG has provided the OUR with a set of Visio diagrams depicting the network assets used in each RO service. Its RO submission also included a high level network diagram</p>
<p>C&WG to provide the OUR with details of any routing or gradient factors used in calculating the RO charges and details of how these factors have been calculated, together with an explanation of why they should be considered appropriate and in compliance with C&WG's obligations.</p>	<p>C&WG has provided the OUR with all the routing and tariff gradient factors used to determine its interconnection charges, together with the underlying calculations and an explanation of how these factors have been calculated.</p>
<p>C&WG to provide evidence that its proposed calculation of interconnection charges is in line with best practice.</p>	<p>C&WG has stated that it has been difficult to ascertain the best practice methodology for the calculation of interconnection services, particularly for the joining services. As such, it welcomes clarification on the best practice approach.</p>
<p>C&WG to demonstrate that the costs it incurs in the provision of RO services reflect those that would be incurred by an efficient operator.</p>	<p>C&WG has justified the costs it has included in the interconnection charges and has provided a comparison of its proposed charges with those of Jersey Telecom.</p>
<p>C&WG must demonstrate that its costs associated with PPP elements have been efficiently incurred.</p>	<p>C&WG has not provided this information as part of its RO submission. As part of Frontier's review, it provided a statement reviewing the development of its PPP costs over time and setting out factors that should be taken into account in any benchmarking exercise.</p>
<p>C&WG must demonstrate that its PPP costs are recovered across all traffic that is conveyed across or transits its network.</p>	<p>C&WG appears to have complied with this requirement.</p>
<p>C&WG must publish details of the elements that make up the PPP element of its RO charges.</p>	<p>C&WG has provided to Frontier details of its PPP costs. This was not included as part of its initial RO submission.</p>

(Source: OUR 05/09 / Frontier analysis)

Given the above, the DG believes that C&WG has complied with the majority of directions. In some cases information provision within the RO proposals could have been more extensive although C&WG did supply the information when requested.

5.3 Detailed cost assessment

The OUR and Frontier Economics have carried out a detailed assessment of the costs underlying the proposed RO and interconnection rates.

The following network components are used in providing C&WG's interconnection services⁷:

- Concentrator;
- Transmission link;
- Transmission length;
- Outside Bailiwick transmission;
- Switch;
- Customer service centre; and
- Product management, Policy & Planning (PPP)

In each case, the costs of the network components included in the RO charges are “fully loaded”. That is, they include the direct costs of the component itself (such as maintenance costs and asset depreciation), as well as an allocation of indirect and support service costs and business sustaining costs. In reviewing the proposed interconnection charges it is therefore essential to understand how these costs have been allocated to network components in order to ensure that the allocation is appropriate and reasonably reflects the costs incurred in providing interconnection services. The review has therefore encompassed two aspects:

- Reconciling the network component costs to C&WG's most recent audited regulatory accounts; and
- Assessing the reasonableness of the costs allocated to each network component.

Reconciliation to regulatory accounts

The costs associated with each of these network components have been reconciled with the regulatory accounts for 2007/8. However, in one case, namely “Customer service centre” costs, this was not possible.

It is our understanding that “Customer service centre” costs are allocated across various network elements and to certain individual retail and wholesale services in producing the regulatory accounts. The reason for this is that the customer support centre provides internal support to the company as well as supporting consumers. It was therefore not possible, based on the data that C&WG have been able to provide in the time available, to trace the customer service centre costs shown in the proposed RO submission to the 2007/8 regulatory accounts.

⁷ Note that for simplicity “network components” has been used to describe both actual components of the fixed network such as a switch or concentrator as well as certain other services, namely “product management, policy & planning” and the customer service centre the costs of which are partially allocated to interconnection services.

Review of cost breakdowns

C&WG has provided a breakdown of the individual costs allocated to each network component listed above, excluding amounts of £100 or less. These breakdowns included operating costs, depreciation charges, CCA adjustments and capital costs. This enabled us to review the allocation of costs in more detail and decide whether they were appropriate. In particular, this review focused on ensuring:

- That the proposed interconnection charges did not include any retail costs;
- That the proposed interconnection charges did not include any costs associated with the use of C&WG's network for the provision of services by C&W in Jersey and the Isle of Man; and
- That the proposed interconnection charges did not include a disproportionate recovery of overhead costs.

Review of allocation of P&L costs

The main objective of this review was to ensure that no retail costs had been incorporated into the cost base underlying the interconnection *wholesale* services. This is because it would not be appropriate for C&WG to recover costs associated with the provision of its retail services from other OLOs.

The OUR has also assessed how network components and services which are shared between operations in Guernsey, Jersey and the Isle of Man have been allocated. The objective of this was to ensure that costs which did relate to the provision of services within Jersey and the Isle of Man were not being recovered through the regulated charges. C&WG has explained that these were separately identified and grouped together. A review of the cost allocation summary confirms that a proportion of the transmission length, transmission link, switch and PPP costs (all of which form part of the cost base underlying the interconnection services) are allocated to "C&W Jersey mobile network". Assuming that this allocation process is appropriate this should ensure that only the relevant costs are recovered.

Given the above, no costs associated with retail activities, C&WG's operations in Jersey or the Isle of Man seem to have been allocated to the cost base underlying the interconnection charges.

Allocation of overheads

As set out above, the total fully allocated cost of each network component includes:

- directly allocated costs;
- indirectly allocated costs (which are related to more than one network component); and
- overheads that more broadly support that network component.

The total cost of interconnection services will therefore be partially dependent on the amount of overhead costs that are allocated to these network components. This includes “business sustaining” overhead costs and “support service” overhead costs. In assessing the reasonableness of the proposed charges it is therefore important to ensure that these costs have been allocated appropriately. In addition the DG wanted to determine whether any retail costs were being incorporated into these overhead cost categories and hence partially allocated to the cost base underlying the interconnection charges. Table 6 sets out the DG’s findings on this area.

Table 6 Business sustaining and support service overhead proportions

Network component	Proportion of support service overheads in total costs	Proportion of business sustaining costs in total costs
Concentrator	17.32%	5.24%
Switch	8.82%	5.37%
Traffic link	10.48%	5.25%
Traffic length	9.65%	5.24%
Outside Bailiwick Sub Cable	1.63%	5.23%
PPP	3.12%	5.25%
Whole business	18.42%	5.40%

(Source: C&WG / Frontier analysis)

Although business sustaining costs have been allocated in a proportionate manner across each of the relevant network components, support service overheads appear to have been allocated in a more variable manner. C&WG explained that staff costs is the driver used to allocate many of the support service overhead costs and those network components which require greater management by staff have therefore been allocated a larger proportion of overheads. For example, Outside Bailiwick submarine cables require very little staff resource to maintain them, whilst at the other end of the scale, concentrators are quite labour intensive. This explains why of the relevant network components, support service overheads represent the largest proportion of the concentrator costs and the smallest proportion of the outside Bailiwick submarine cable costs.

In conclusion, from the data provided and the cost allocation methodology employed by C&WG, it appears that overhead costs have generally been allocated to network components in a reasonable manner. However in some instances, a relative lack of transparency in how cost items are allocated to services limited the extent to which the cost allocations could be independently verified. Therefore, as C&WG restructures its cost allocation model, a greater degree of transparency - enabling costs to be traced from their source right through to the relevant wholesale or retail services - would be desirable.

Treatment of PPP costs

One of the categories of costs which are partially allocated to interconnection services are those associated with Product management, Policy & Planning (“PPP”). In OUR 05/11, the DG required that C&WG should only include within this cost category:

- the costs of developing and managing interconnection products;
- the cost of managing C&WG’s relationship with operators which purchase interconnect services;
- the administrative costs of dealing with orders for interconnect services; and
- the costs of billing interconnect services.

C&WG explained that it has used Ofcom’s review of BT’s PPP charge (issued 30th July 2004) to determine which cost types should be included in this category. The OUR’s analysis has shown that the material cost items within this cost group all fall into one of the four categories shown above⁸.

These PPP costs must be recovered across all traffic that is conveyed across or transits the C&WG network (as per OUR 05/09). C&WG has provided a list of all of the call products against which the PPP charge had been allocated. This included the interconnection services as well as various retail services which use C&WG’s network. C&WG stated that the total cost is apportioned on the basis of minutes of use by these products which appears to be in line with the OUR’s requirements.

Finally, C&WG is required to demonstrate that the costs associated with the provision of the PPP services reflect those that would be incurred by an efficient operator. Although this was not formally provided as part of its submission to the OUR, when asked, C&WG stated that since 2003/4, although PPP related call minutes have fallen by 26.5%, it has managed to reduce associated PPP costs by a similar proportion, leaving the unit cost unchanged.

In conclusion, the PPP costs appear to have been identified appropriately and allocated in a reasonable manner. However, it is more difficult to ascertain whether these costs reflect the PPP costs of an efficient operator due to the lack of sufficient benchmarking data.

⁸ Or are an allocated support service overhead.

Review of capital costs

Capital costs form a significant part of the costs associated with the relevant network elements which underlie the interconnection charges. As fixed assets make up a large part of the capital employed, a high level review of the fixed assets which were allocated to the relevant network components for the purpose of calculating capital costs has been undertaken. The focus was on ensuring that no retail assets were included in the capital employed underlying the interconnection charges and no inappropriate allocation of retail assets were found as part of this review.

It is also important to ensure that interconnection charges do not reflect costs associated with the provision of (non-voice) broadband services, except where assets are shared in the provision of voice and non-voice services. C&WG has confirmed which of its fixed assets relate to the “next generation network” that is currently used for the provision of broadband services. We were therefore able to verify that these assets had not been incorporated into the asset base associated with any of the relevant network components.

C&WG has also been able to confirm that network components and services which are shared between fixed and mobile services are allocated appropriately. C&WG explained that there is only one shared network component, the voicemail system. This cost is shared between the fixed and mobile businesses, on the basis of subscribers’ minutes of use, which seems a reasonable basis of allocation.

Current cost revaluation

The fixed assets allocated to the relevant network components are valued at current cost for regulatory purposes. This ensures that the correct market signals are provided to the market participants as the charges will reflect the capital costs which would be incurred by a new entrant. As fixed assets have to be re-valued to current cost from historic cost, we reviewed the CCA (current cost asset) revaluation calculation. In particular, we traced all of the fixed assets which, according to the cost breakdown reports, were allocated to the relevant network components, to the CCA revaluation calculation and confirmed that they had been restated at current cost, based on C&WG’s regulatory accounting policy. The policy on asset revaluation is to revalue all asset classes that make up more than 1.5% of the total NBV (the only exception being where the asset class has a relatively low life) such that at least 80% of the total NBV is restated at current cost. Consequently, any asset which has been written off or is close to being fully written off will not be revalued.

In light of the anomalies in C&WG’s approach to asset revaluation uncovered during the retail price control, the OUR has checked the calculation of net replacement value (i.e. the current cost version of net book value), the supplementary depreciation charge, and the holding gain or loss. The issues previously encountered were as follows:

- Asset disposals were mistakenly accounted for as holding losses.

- The closing accumulated depreciation balances were not “rolled-forward” to become the opening balances for the following year.
- Holding gains were considered to be a cost and so added to the “CCA adjustment” rather than being treated as a reduction in costs.

C&WG appears to have appropriately calculated the net replacement value of the relevant fixed assets, the related supplementary depreciation charges, and the holding gains or losses for 2007/8 for regulatory purposes.

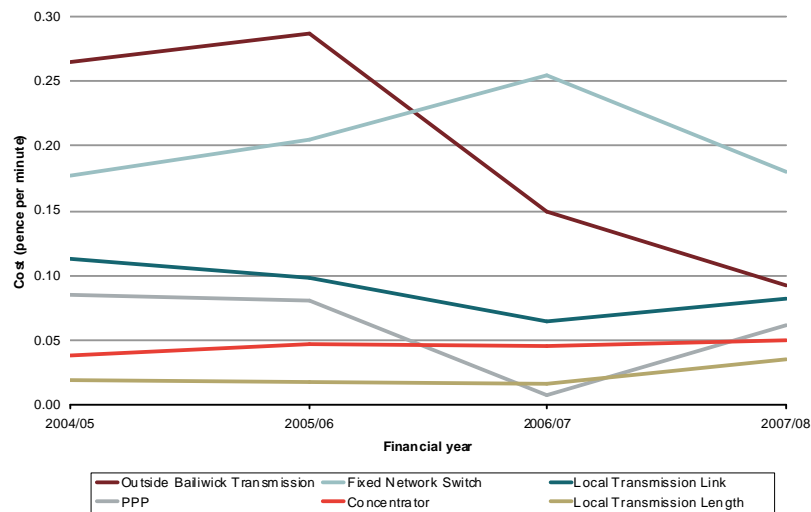
Regulatory cost of capital

The pre-tax nominal WACC used by C&WG to calculate capital costs is the WACC applied as part of the 2008 “retail price decision”⁹ which stated that C&WG’s retail weighted average cost of capital should be 11.6% for regulatory purposes.

Trends in unit costs over time

Using C&WG’s previous regulatory accounts, the DG has reviewed the movements in the relevant unit costs which drive the interconnection charges over time, focusing on year-on-year changes in the period since 2004/5. See Figure 1 below.

Figure 1. Unit cost by network component (2004/5 – 2007/8)



(Source: C&WG regulatory statements (2004/5 – 2007/8))

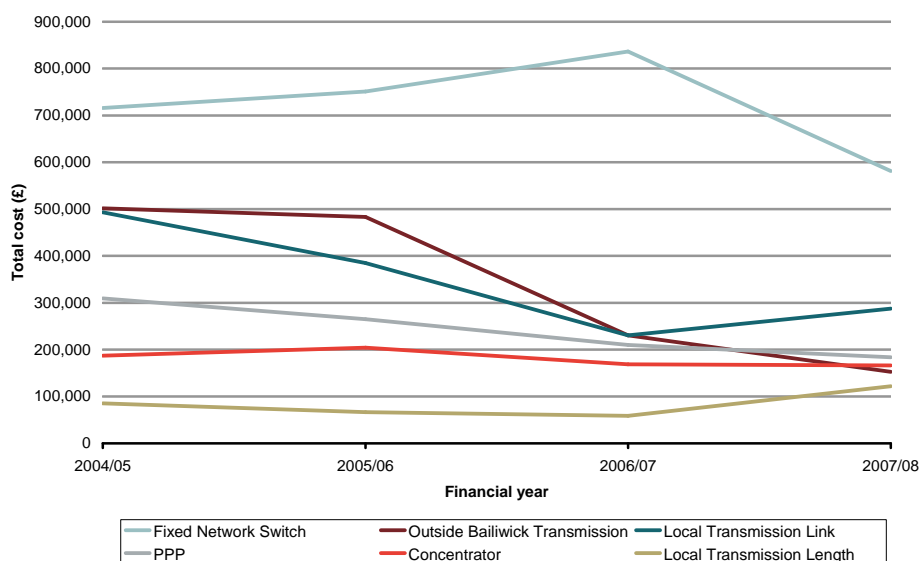
⁹ “Price control for Cable & Wireless Guernsey – Decision Notice”, OUR 08/07, February 2008

Unit costs

Unit costs for all of the network components except the Switch and Outside Bailiwick transmission increased slightly during the last year. It is noted that between 2004/5 and 2007/8, the unit costs associated with Concentrator, Switch, and Local transmission length have all increased by varying degrees, while the unit costs associated with Local transmission link, Outside Bailiwick transmission, and PPP have all declined.

Unit costs are driven by total costs and the volume of traffic carried over the relevant network components. To understand what was driving the movements in unit costs, the trends in total costs and total minutes associated with each of these network components has been analysed. Figure 2 shows total costs over the same period.

Figure 2. Total costs by network component (2004/5 – 2007/8)



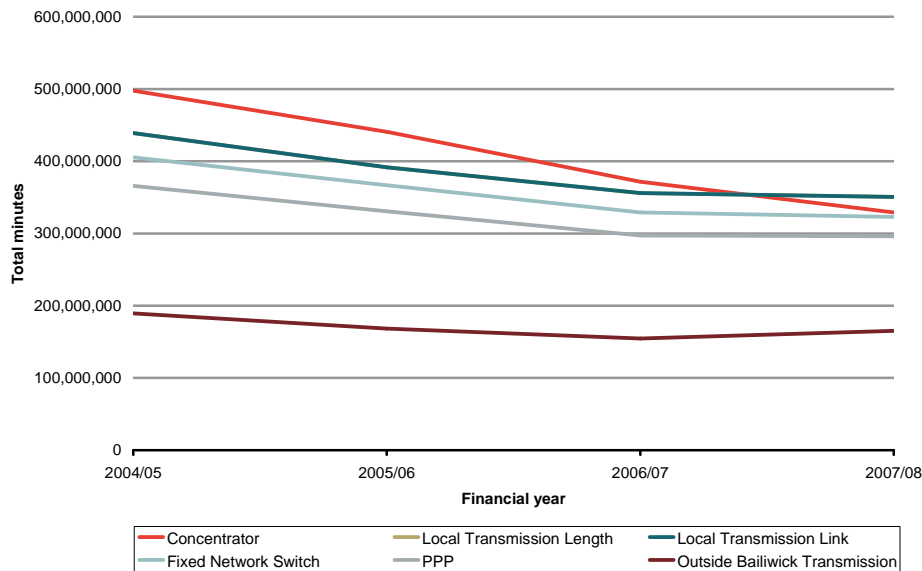
(Source: C&WG regulatory statements (2004/5 – 2007/8))

Figure 2 shows similar patterns to the unit costs chart (Figure 1). With the exception of Local transmission length, all costs have declined between 2004/05 and 2007/8 which is to be expected, given technological improvements. During the 2007/08 period, certain costs have increased, most notably those associated with the Local transmission length and the Local transmission link.

Local transmission length costs have doubled since 2006/7. According to C&WG, this was driven by a decline in holding gains associated with the current cost revaluation of the underground network, which is partially allocated to this network element¹⁰.

The costs associated with Local transmission link have increased by approximately 25% in the last year. C&WG explained that SDH radio equipment is used to link the Bailiwick islands. The positive holding gain associated with this asset class generated in 2006/7 became a holding loss in 2007/8, increasing the total costs associated with this network component. Figure 3 shows total minutes over the same period.

Figure 3. Total network component minutes by network component (2004/5 – 2007/8)¹¹



(Source: C&WG regulatory statements (2004/5, 2005/6, 2007/8) / Data supplied directly by C&WG for 2006/7)

The minutes of use associated with all of the network components display similar trends over the period. Between 2004/5 and 2007/8, the minutes of use have all declined (by varying amounts).

¹⁰ In line with the financial capital maintenance concept, in the regulatory accounts holding gains are taken to the profit and loss account and therefore to some extent offset costs. Therefore if the annual holding gains decline, costs will increase.

¹¹ Note that the total minutes data shown in the 2006/7 regulatory accounts is incorrect. C&WG separately provided the correct data. This has no effect on the calculation of the regulatory interconnection charges.

C&WG confirmed that the change in total minutes reflects reductions in actual traffic, rather than changes in routing factors. They also explained that the dramatic fall in minutes associated with the concentrator is due to a downward trend in fixed originated calls, especially dial-up internet calls.

Therefore, although both total costs and minutes of use have declined over the last three years, for some network components, the rate of decline in minutes has been slower than the fall in total costs and therefore across the period the cost per minute has actually slightly increased. Due to the fact that many of the costs faced by C&WG are fixed and therefore do not vary with changes in the scale of service provision, this seems reasonable.

Cost efficiency

As set out in OUR 05/11, C&WG is required to demonstrate that the costs it incurs in the provision of its RO services reflect those that would be incurred by an efficient operator. C&WG has not formally provided such evidence as part of its submission. However C&WG has stated that they have taken a number of steps during the last few years to reduce costs to a minimum, whilst still being able to provide the required levels of service and resilience. Despite this, it believes that its ability to replicate the cost efficiency of operators in other jurisdictions is limited. Firstly, an island-based operator of its size incurs costs that a larger operator on a continent would not incur to the same extent. For example, in order to have secure off-island interconnection with operators in other countries, additional submarine cables are required. Secondly, C&WG does not experience the volumes of traffic that other operators do, reducing its ability to spread the recovery of its fixed costs, nor is all network equipment scalable to C&WG's scale of operations.

5.4 Detailed review of specific cost categories and drivers

5.4.1 Routing factors

A routing factor (or “usage factor”) converts the unit cost incurred in 2007/8 in using a network component into the cost associated with providing one minute of a specific interconnection service¹². Therefore, there is a unique routing factor for each network component – interconnection service combination. As a routing factor increases, all other things remaining equal, the associated unit cost will increase and hence the associated service charge per minute will also increase, and vice versa. Consequently, these factors are critical in

¹² Routing factors are also used to estimate component minutes, from which network element unit costs are derived. Here, as routing factors increase, component minutes also increase, thus reducing network element unit costs, and *ceteris paribus*, service unit costs.

determining interconnection charges. This section looks both at the approach taken in determining these factors and movements in the routing factors applied over time.

Approach

First there is a need to reconcile the routing factors presented in the proposed RO submission (which were used to calculate the proposed interconnection charges) with those used in producing the 2007/8 regulatory accounts. C&WG explained that its approach to determining routing factors involves taking a weighted average of the routing factors associated with different types of calls. For example, traffic from both OLOs and C&WG's own mobile business are taken into account. The routing factors for each type of call are determined using one of the following approaches.

- By calculating a weighted average of the minutes of use of a network element based on actual call data. This is necessary where potentially different levels of usage may occur, dependent on the characteristics of the call. For example, some local calls may use one switch whilst others may use two, depending on which concentrators the called and calling parties are connected to;
- By using information about the actual layout of the network. This is sufficient where all calls of the same type are known to use the network in the same way and is the most frequently used approach. For example, if a fixed network subscriber calls the UK it is known that they will use one concentrator, one switch and the submarine cable. It is therefore not necessary to calculate the routing factor;
- By using a proxy. This is required where detailed information about network usage is not available. For example, the routing factor for an incoming call is assumed to be the same as that for an equivalent outgoing call.

Given that a routing factor has to convert the unit cost associated with a network element into the cost per minute of providing an interconnection service and given the limitations on the data available to C&WG, this approach seems reasonable. However, the DG believes that going forward it would be appropriate for C&WG to increase the number of routing factors derived from calculations rather than proxies.

Movements over time

Table 7 compares the routing factors presented in the 2006/7 regulatory accounts with those in the 2007/8 regulatory accounts. Routing factors associated with on-island termination have tended to increase and those associated with on-island origination have tended to decrease.

Table 7 Routing factors (2006/7 & 2007/8)

Interconnection service	Concentrator (Switch element)			Fixed Network Switch			Local Transmission (link)			Local Transmission (length)		
	2007/08	2006/07	Diff.	2007/08	2006/07	Diff.	2007/08	2006/07	Diff.	2007/08	2006/07	Diff.
C&W On-Island Termination	0.999	1.000	-0.001	1.084	1.065	0.019	0.513	0.504	0.009	0.513	0.504	0.009
C&W On-Island Origination	1.000	1.000	0.000	1.250	1.322	-0.072	0.631	0.708	-0.077	0.631	0.708	-0.077
C&W On-Island Transit	0.000	0.000	0	1.000	1.000	0	0.000	0.000	0	0.000	0.000	0
Emergency Services	1.000	1.000	0	2.000	2.000	0	2.000	2.000	0	2.000	2.000	0
Alarm Calls	2.000	2.000	0	2.000	2.000	0	2.540	2.540	0	2.540	2.540	0

(Source: C&WG regulatory accounts (2006/7 & 2007/8))

It is the DG's understanding that routing factors relating to on-island termination have increased as a result of an increase in the amount of traffic which one of the OLOs is terminating on C&WG's network. C&WG's own mobile business interconnects through both Central and Castel exchanges, however we understand that calls from this OLO's network only interconnect at the Central exchange and as a result make more use of C&WG's network than those terminating from its own mobile business. As a higher proportion of terminating traffic originated from this OLO in 2007/8 than in previous years, the blended routing factor for each component has increased.

According to C&WG, the general decrease in routing factors relating to on-island origination has arisen because one OLO has increased its share of the business market. These customers are mainly located around C&WG's Central Exchange and therefore the provision of call origination services for those customers makes relatively less use of the network. Consequently, the related routing factors have declined.

5.4.2 Review of time of day gradients

A time of day gradient converts the standard cost per minute into a peak or off-peak price per minute. Therefore different tariffs are charged according to whether it is a peak or off-peak period. At times of relatively high demand for the network, operators will be charged the higher peak wholesale price, which will flow through to their retail prices and therefore flatten demand. Conversely, at times of relatively low demand for the network, operators will be charged the lower off-peak wholesale price, which will flow through to their retail prices and stimulate demand. Therefore, this pricing structure should encourage smoother network usage patterns.

Approach

The approach taken by C&WG to calculate the time of day gradients follows the methodology devised by BT in the UK. The gradient is determined using the retail prices of those services which are dependent on the wholesale service under consideration. Using the weighted average retail price per minute at peak and off-peak times, a peak gradient (the ratio between the peak and average retail price) and an off-peak gradient (the ratio between the off-peak and average retail price) are determined. In addition, any call types (such as premium rate services and fixed to mobile calls) where the retail price charged is dominated by termination charges from another network and therefore BT cannot directly influence the retail demand, are excluded.

However, in reviewing C&WG's calculations, the DG notes a number of differences with the approach described by BT, namely:

- Fewer retail services were included in C&WG's calculation, i.e. national geographic and non-geographic calls were included, but local and non-geographic calls were excluded. The reason for excluding these calls seems to be that C&WG is unable to directly influence the retail prices of non-geographic calls;
- The calculation had been incorrectly interpreted, although the impact on the results was fairly minor. Table 8 sets out the corrected time of day gradients (note that these do not take into account the first difference noted above);
- Although retail prices for fixed Jersey and UK national calls are differentiated across three charging periods, the associated interconnection charges are only differentiated across two charging periods. Therefore, in calculating the peak and off-peak gradients, the volumes and revenues associated with off-peak and Sunday retail traffic are bundled together.

Exclusion of local and non-geographical calls

Although C&WG is unable to directly influence the retail prices of non-geographic calls and hence it might be appropriate to exclude them, the DG does not believe that the fact that local calls are charged at a flat rate is a reasonable basis for excluding these calls from the calculation of the tariff gradient. In addition, the exclusion of these calls means that the peak gradient will be higher and the off-peak gradient lower than would otherwise be the case. Consequently, the peak interconnection charges will tend to be higher which will make it harder for OLOs to compete, particularly in business markets. The DG therefore believes these calls should therefore included in the calculation of the tariff gradient. Table 8 presents both the proposed and corrected time of day gradients.

Table 8 Time of day gradients

Proposed TOD gradients		Corrected TOD gradients	
Peak	Off-Peak	Peak	Off-Peak
1.13	0.83	1.15	0.85

(Source: RO submission December 2008 / Frontier analysis)

Movements over time

The time of day gradients used to calculate the charges proposed in the RO submission were also compared to those presented in the 2007/8 regulatory accounts. They were found to be slightly different¹³, however C&WG explained that this was because the calculation of new tariff gradients is only performed when the RO submission is produced. At this point the regulatory accounts have already been published and although the time of day gradients are reported there, they are not needed to calculate any of the other data presented.

Going forward, it might be more appropriate not to present the time of day gradients in the regulatory accounts and instead to refer to the RO, in order to avoid confusion. This was the approach taken in the 2006/7 regulatory accounts. The DG would welcome views on this issue.

5.4.3 Review of “bottom-up” installation charges

C&WG’s proposed charges for CSI and ISI installation services have been determined using a “bottom-up” estimate of the costs incurred in provisioning these links. These estimates are based on information provided by C&WG’s network managers on the equipment required to provide these links and the time that would typically be required to provision a link. The cost of the equipment and labour inputs was obtained directly from C&WG’s logistics department or from the core network and access network managers.

However, C&WG has not provided detailed information supporting the proposed charges or the inputs it has used to calculate these charges. For example, it has been unable to provide timesheet records for staff provisioning these links. In addition, as part of the review of these calculations it was noted that the quarterly rental charges associated with duct and fibre appear to have been calculated on a monthly basis. C&WG confirmed that this was an error. This should therefore be corrected.

¹³ For example, the on-island origination service peak price in the RO was determined based on a peak gradient of 1.13 and the off-peak price on an off-peak gradient of 0.83. In the regulatory statements, the equivalent gradients were reported to be 1.12 and 0.70 respectively.

Given that these charges are not calculated from C&WG's regulatory accounting data, it is important that these costs are not recovered twice: once from the "bottom-up" installation charges, and once from the costs actually incurred in providing these services being allocated to other regulated products in C&WG's regulatory accounts.

To avoid this potential double counting C&WG identifies separately each circuit in its network, so that equipment costs associated with providing an interconnection link are separately identified. These costs are then not allocated to any part of the core network costs which forms part of the cost base underlying the regulatory interconnection charges. Rather, these costs are allocated to specific interconnection link products in C&WG's costing system.

The structure and level of the proposed charges for the interconnect link services have both had changed considerably, compared to the current RO charges. Table 9 compares the charges for customer sited interconnect links and Table 10 compares the charges for in-span sited interconnect links.

Table 9 Customer-sited interconnect charges

Part	Installation cost (2006)	Quarterly rental cost (2006)	Installation cost (2009)	Quarterly rental cost (2009)
Per System including initial 2 Mbit circuits	34,176.01	1,659.92	37,029.39	170.82
2Mbit unit	2,044.59	829.96		
Additional 2Mbit links			145.08	
New Fibre Termination - per route			617.76	
Existing Fibre - Lighting per route			338.52	
New fibre per m			1.30	
New duct per m			80.86	
New fibre and duct per m	68.44		82.16	
Existing fibre per m				0.02
Existing duct per m				0.58

(Source: RO submission December 2008 / RO February 2006)

Table 10 In-span interconnect charges

Part	Installation charge (2006)	Quarterly rental cost (2006)	Installation cost (2009)	Quarterly rental cost (2009)
Per System including initial 2 Mbit circuits	28,500.41	1,659.92	28,590.69	170.82
2 Mbit unit	2,044.59	829.96		
Additional 2Mbit links			145.08	
New Fibre Termination - per route			617.76	
Existing Fibre - Lighting per route			338.52	
Joint box			3,147.13	
New fibre per m			1.30	
New duct per m			80.86	
New fibre and duct per m	68.44		82.16	
Existing fibre per m				0.02
Existing duct per m				0.58

(Source: RO submission December 2008 / RO February 2006)

C&WG explained that the previous structure of installation charges was considered to be out of date. However, whilst the proposed quarterly rental charge per system is around one-tenth

of the current charge, C&WG commented that these charges would not necessarily be “entirely accurate” at this stage.

In the DG’s view, the information provided in relation to these installation charges is not transparent or sufficiently detailed. However, he notes the relative immateriality of these charges within the RO and the fact that the cost model is structured such that double-counting of these costs should be avoided. Rather than continuing with the current approach, it may be more appropriate for C&WG to charge for the interconnection link services on a time and materials basis. This would remove the need to construct such charges and would reflect the bespoke nature of these services. However, it will still be necessary for any charges to be transparent and cost oriented, with a detailed breakdown of cost information provided to the party seeking interconnection.

5.5 Costs of an efficient operator

C&WG’s interconnection charges should reflect the costs that an efficient operator would incur in providing the same services. The OUR has carried out a high level comparison of C&WG’s proposed interconnection charges with those prevailing in other jurisdictions, both through comparing the absolute level of charges in different jurisdictions and through comparing the rate of change in the level of charges across jurisdictions.

5.5.1 Comparison of absolute charges

A range of factors can affect the relative level of costs and hence interconnection charges in a particular jurisdiction. In benchmarking the absolute level of C&WG’s tariffs it is therefore important to include data, wherever possible, from jurisdictions with reasonably similar characteristics to Guernsey. Key factors affecting the costs of fixed line telecommunication networks and services (which differ between jurisdictions) include:

- population density;
- total population;
- input (labour and capital) costs; and
- the jurisdiction’s topography.

For example, all other things the same, average unit costs are likely to be lower in areas of higher population density with ‘easier’ terrain. In contrast, unit costs are likely to increase with labour costs, particularly for those parts of the network where significant labour input is required.¹⁴ Finally, given the potential economies of scale in fixed telecommunications, average unit costs may also be relatively higher in jurisdictions with smaller absolute populations.

¹⁴ Unit capital costs may vary less between jurisdictions, given the international nature of telecoms equipment markets.

The DG has focused on the interconnection charges levied by fixed line incumbents in predominantly small or island jurisdictions¹⁵, namely countries/jurisdictions with:

- A population under 0.5m;
- Land area of less than 2,600sq km; and
- GDP per capita (PPP) above \$24,000.¹⁶

Countries / jurisdictions meeting these criteria which make information on the current interconnection rates of the incumbent fixed line operator publicly available include¹⁷:

- Jersey (Jersey Telecom)
- Malta (Go)
- Cayman Islands (C&W)
- Faroe Islands (Faroese Telecom)
- Luxembourg (P&T Luxembourg)
- Ireland (eircom)
- Hull (Kingston Communications)

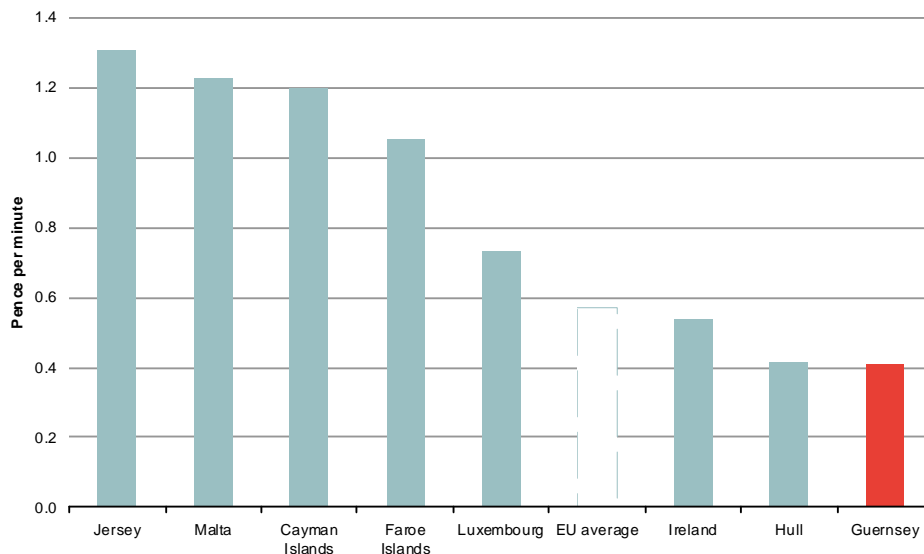
This review focused on the call termination service, as comparable information on call termination is more readily available than information on other services. Figure 4 shows the peak termination charge per minute for Guernsey and the seven comparator countries selected including the average rate for the EU to provide some context. The rates have been converted into sterling using Year-End 2008 exchange rates.

¹⁵ Apart from Ireland which has a population of 4.2m and a land area of 69,000sq km

¹⁶ Labour costs are likely to be correlated with GDP per capita.

¹⁷ Note that we considered including Hong Kong in our sample, but the structure of its termination rates was complicated and it was therefore difficult to produce a single comparable termination rate.

Figure 4 Peak termination charges 2008



(Source: Various regulatory decisions (see Appendix 1))

Figure 4 shows that the peak termination charge in Guernsey is relatively low, when compared to other similar countries and is on a par with that charged by Kingston Communications in Hull.

5.5.2 Comparison of rate of change in charges

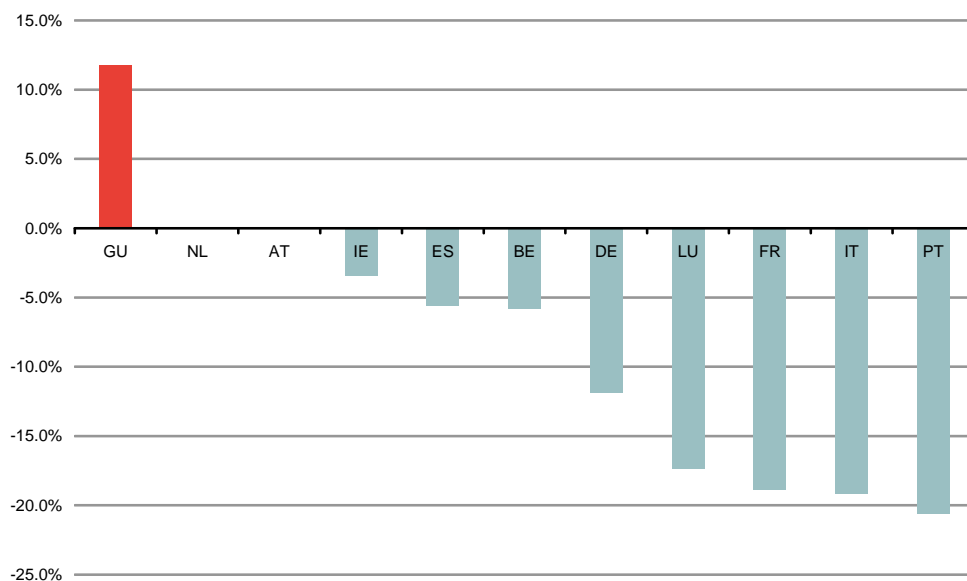
Although the absolute level of interconnection charges in Guernsey should be comparable to those in similar jurisdictions, the rate of change of these charges in jurisdictions which do not necessarily exhibit the same characteristics should also be comparable with the rate of change in Guernsey. This result comes from “stochastic frontier analysis” which predicts that over time all operators in an industry will “catch up” to the productivity frontier. This frontier depicts the current limit of productivity based on actual operator performance. The DG has therefore also assessed how interconnection (termination) rates have changed over time in other jurisdictions.

For this analysis we have used a wider sample of European countries but excluded the newer member states, given that the latter are at an earlier stage of the regulatory process and therefore changes in their regulated charges could be due to attempts to move towards cost-based rates, rather than changes in underlying costs. The Western European operators in this

sample are likely to face relatively similar drivers of changes in cost, and incumbent operators will also typically be obliged to set interconnection charges on the basis of costs¹⁸.

The rate of change in peak period local termination rates for a sample of eleven EU Member States over the period 2005-08 (i.e., the period since C&WG’s rates were last reviewed) is shown in figure 5.

Figure 5 Change in peak termination charges 2005 - 2008



(Source: 14th Progress report on the single European electronic communications market, 2008)

Figure 5 seems to suggest that over the last few years the rates charged by many other EU member states have fallen or remained constant, whereas in Guernsey they have actually increased by over 10%. This comparison may be too simplistic given the short time period selected for this analysis. However, there are not enough countries where regulation of such charges has been in place for long enough to make comparison over a longer time period possible. In addition, not all the rates in other jurisdictions may be fully cost-based and therefore movements may not necessarily reflect changes in cost efficiencies. Finally, although the termination charge has increased in Guernsey contrary to the experience in other Western European countries, this is at least partially driven by the increase in the associated routing factors noted previously¹⁹. It could be argued that on the basis of the comparison of absolute charges, providing our sample is reasonably appropriate, Guernsey’s on-island termination charge compares favourably and therefore does not appear unreasonable.

¹⁸ Note that we also excluded the UK from our sample as its regulated interconnection charges are set on an “RPI – x” basis. This makes it less comparable with countries where interconnection charges are set on a “cost +” basis.

¹⁹ If the routing factors had not changed, the peak termination rate would have fallen by 1.5%.

6. Three further checks on the appropriateness of the proposed rates

In this chapter we present three possible sense checks on the proposed rates. Firstly, we considered to review whether the current rates are still appropriate based on calculating C&WG return on capital employed (“ROCE”). Secondly, we have assessed whether the proposed interconnection rates exceed the current retail prices for associated telephony services. Thirdly, we have looked at the impact of the proposed rates on the services which have actually been used last year.

6.1 ROCE Analysis

One way of assessing the appropriate rates going forward is to establish whether the current rates enabled C&WG to cover its costs. This type of analysis relies on calculating the ROCE generated by interconnection services in the year 2007/8 compared with C&WG’s regulated retail cost of capital (or “WACC”) of 11.6%. It is important to note that this analysis could indicate how the prices for these services as a whole should move, however, it does not indicate how the individual interconnection services themselves should be priced.

The regulatory accounts provide separate results for each of the retail products offered by C&WG, there is no comparable analysis for all the wholesale products offered. Although we were able to determine the ROCE of the core network services, this included a number of other services as well. We were therefore unable to draw any direct conclusions from this on the rate of return generated by regulated interconnection services.

6.2 Comparison to retail prices

The DG has also assessed how the proposed charges compare with retail prices. The aim of this is to ensure that the interconnection charges have not been set above the relevant retail prices for call services currently charged by C&WG. If the proposed charge was in excess of the retail price then this would suggest that OLOs who purchased these wholesale services would be unable to compete with C&WG in the associated retail market²⁰.

²⁰ Note that a full assessment of potential margins also requires an analysis of retail costs. This is outside the scope of our report.

We have undertaken this analysis for those interconnection services which generated revenue for C&WG in 2007/8. We have compared the proposed interconnection charge to the current associated retail price (emergency service calls are excluded from this analysis as there is no equivalent retail price). As shown in Table 11, there is a positive differential between:

- the retail price of a local call and the combined wholesale on-island origination and termination charges;
- the retail price of local information services and the price of the equivalent interconnection service, assuming that average call duration is 5 minutes; and
- the retail price of the Guernsey weather forecast service and the equivalent interconnection service, assuming that average call duration is 5 minutes.

Therefore, these interconnection services have all been priced below the associated retail service.

Table 11 Interconnection and retail price comparison

Interconnection service		Retail service		Price difference (p/min) ²¹
Service	Peak Price (p/min) ²¹	Service	Price (p/min) ²¹	
On-island origination	0.406			
On-island termination	0.455			
On-island origination & termination	0.861	Local landline call	1.54 ²²	0.839
Local info services	0.321 1.605 / 5mins	Local info services	10.0 / call	8.395 / call
Guernsey weather forecast	5.321 6.605 / 5mins	Guernsey weather forecast	10.0 / call	3.395 / call

(Source: RO submission December 2008 / Sure website)

²¹ Unless otherwise stated

²² This is an approximation only, based on the average revenue per minute for a local call to enable comparison with the per minute cost of origination and termination.

6.3 *Impact on services used last year*

Table 1 in Chapter 4 shows the differences between the current and proposed rates. It is clear that the proposal to change each of the charges varies significantly. At one extreme there is a very significant increase in the off-peak per minute price of the “time” service and at the other a 39% fall in the peak per minute price of off-island transit.

It is important to note that many of the services which could see significant increases in price as a result of the proposals were not actually used last year. The only interconnection services which were actually used last year were

- On-island origination;
- On-island termination;
- On-island transit;
- Local information services;
- Weather forecast for the Guernsey Bailiwick; and
- Emergency Services.

The proposed changes to these rates are more moderate.

7 Revisions to the RO proposal

The OUR, with support from Frontier Economics, has examined C&WG's submission in detail. This has revealed some minor errors in C&WG's calculations which need to be corrected before new RO and interconnection rates can be adopted. However, there are also some specific aspects of the approach to setting rates which in our view warrant review and should be amended.

7.1 Amendments to C&WG approach

In order to implement a new RO, the DG is currently of the view that the following revisions need to be made:

- *Local calls should be included in the calculation of the tariff gradient* - In the RO proposal, local calls have been excluded from the calculation of time of day gradients. As a result, peak prices will increase which will make it more difficult for OLOs to compete, especially in business markets. Also, the calculation itself needs to be amended to ensure that it follows the BT approach on which it is based;
- *Correcting the error in implementing BT's approach to calculating TOD gradients;*
- *Correcting the calculation error in relation to duct & fibre rental charges* – i.e. these charges were mistakenly calculated on a monthly rather than a quarterly basis; and
- *The charging structure should be aligned with retail prices* - Retail prices for fixed Jersey and UK national calls are differentiated across three charging periods (peak, off-peak and Sunday), however, the associated interconnection charges (i.e., call origination and call termination) are only differentiated across two charging periods. In our view, the TOD gradients for the interconnection charges associated with fixed Jersey & UK calls should therefore be recalculated for three periods.

7.2 Revised proposal

Given the above, the DG considers it most appropriate for C&WG to present a revised proposal for interconnection and access rates.

8. Issues in calculating interconnection and access rates going forward

Although the interconnection charges set out in the proposed RO submission are broadly in line with the framework set out by the OUR, the DG believes that there are a number of issues which need to be addressed going forward. Together, these would serve to increase the transparency and cost orientation of C&WG's RO charges and enable the market and the OUR to monitor more easily the degree to which existing charges continue to reflect efficiently incurred costs.

8.1 Issues to be addressed going forward

The DG considers that it would be appropriate for C&WG to:

- change the approach to charging for installation (i.e. the ISI and CSI link services) so that it is based entirely on time and materials rather than requiring C&WG to estimate specific charges;
- calculate duct and fibre rental charges which form part of the CSI and ISI link charges on a quarterly rather than a monthly basis;
- increase the number of routing factors derived from actual call or network data given that currently some routing factors are based on proxies rather than calculations based on actual call data or information about the network structure;
- amend the format of the regulatory accounts so that the profitability of individual wholesale services or at least groups of wholesale services (such as interconnection services) are reported separately;
- provide a better reconciliation between the costs used in its RO submission and the regulatory accounts, where they are not directly identifiable (for example customer support costs);
- improve the level of transparency surrounding cost allocation when restructuring its cost allocation model. It should be possible to trace costs from source to the relevant wholesale and retail services; and
- refer to the RO time of day gradients in the regulatory accounts.

8.2 Questions for respondents

Question 1: The DG has proposed certain changes to the manner in which RO charges are calculated. Do you agree with his proposals for a revised approach to calculating the RO and interconnection rates? If not, please state which aspects you do not agree with and an alternative approach.

Question 2: As part of the cost assessment, we have focused on On-island origination, On-island termination & On-island transit charges. We would however welcome your views on the reasonableness of any other charges.

Question 3: We have identified a number of changes which in our view should be made to the actual rates. Do you agree with these proposed revisions? If not, please state why not.

Question 4: Do you consider it more appropriate for the wholesale charging structure to be aligned with the retail charging structure (e.g. increasing the periods from 2 to 3) or the other way round and why?

Question 5: We have identified a number of issues which we believe should be addressed going forward which the DG believes will increase the transparency of how rates are calculated. Do you agree with the DG's recommendations? If not, please state why not.

Question 6: Which charging approach do you consider most appropriate for interconnection link services: the current approach or an approach on a time and materials basis? Please explain why.

Question 7: Are there in your view any other issues which we have not discussed in this document but which should be considered before determining new RO and interconnection rates?

9. Next Steps

In this document the DG is consulting on the proposed RO and revisions proposed by this Office to the C&WG proposed rates. The DG considers it appropriate for C&WG to present a revised proposal which addresses the issues outlined in the previous chapter. Subject to when the DG receives the revised proposal the DG intends to issue a draft decision in September 2009 and to make a final decision in November 2009.

Interested parties are requested to provide responses to this consultation paper by **7th August 2009**.

ENDS

Appendix 1 – Data Sources for interconnection benchmarking

Region	Title	Date	Available
Cayman Islands	Blue Sky Wireless v 1.0 Tariff Schedule - Schedule 6	03-Jun-05	http://www.icta.ky/docs/Interconnect_Agreements/Blue%20Sky/2005_12_05%2008%20Tariff%20Schedule.pdf
EU average	16th Report on the Implementation of the Telecommunications Regulatory Package - 2008	26-Mar-09	http://ec.europa.eu/information_society/policy/ecom/library/communications_reports/annualreports/previousyears/index_en.htm
Faroe Islands		2007	Telecom Surveillance Authority of the Faroe Islands
Hull	Kingston Interconnect Price List, Network Services, Conveyance	28-Nov-07	http://www.kcom.com/aboutus/regulatoryinformation/docs/Section_1_Part_1_Issue_010_Conveyance.pdf
Ireland	eircom Reference Interconnect Offer Price List, Issue 2.4	03-Apr-09	http://www.eircomwholesale.ie/dynamic/pdf/eircomRIOPriceList%202.34Marked.pdf
Jersey source	Reference Interconnect Offer, Schedule 6: Tariff Schedule, Version 1.5	Feb-09	http://www.jerseytelecoms.com/upload/documents/in_business/reference_interconnect_offer/JT RIO Tariff Schedule v1-5 Feb 09.pdf
Luxembourg	14th Report on the Implementation of the Telecommunications Regulatory Package - 2008	24-Mar-09	http://ec.europa.eu/information_society/policy/ecom/library/communications_reports/annualreports/previousyears/index_en.htm
Malta	15th Report on the Implementation of the Telecommunications Regulatory Package - 2008	25-Mar-09	http://ec.europa.eu/information_society/policy/ecom/library/communications_reports/annualreports/previousyears/index_en.htm