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TELKOM THEY ARE BOTH ADDED IN THIS FILE



Constantia fibre RFP – Section II Formal Submission

Question	Explanation
Proposed start date	<p><b>Existing Telkom Infrastructure:</b> Telkom currently has broadband capability to provide high speed fixed broadband of speeds of up to 10Mbps, up to 20mbps and up to 40mbps on the existing copper network to approximately 40% of the residents of the area.</p> <p>The balance of the area 60% will be provided with a Fibre-to-the Home Solution as part of this project.</p> <p><b>Proposed Fibre-to-the Home Solution</b> The selection of Telkom as the preferred Service Provider by the Contantia Fibre Initiative will initiate the project. The project will include various phases namely detail design and engineering, phased implementation to ensure least disruption, quality control, commissioning and customer activation.</p> <p><i>Should Telkom be selected as the preferred supplier by the Constantia Fibre Initiative, Telkom will upgrade the existing coper infrastructure (40% of the area) to a Fibre-to-the-Home solution.</i></p>
Period of roll out	18 months for fibre deployment to the area.
Proposed life date	<p>40% of the area is currently served with Telkom VDSL services, and the balance (60%) of the area has been earmarked for Fibre-to-the- Home provisioning.</p> <p><b>Existing Telkom Infrastructure</b> 40% of the area is currently served with high speed fixed broadband services of up to 10Mbps, up to 20Mbps and up to 40Mbps on the fixed copper network. Commercial services are currently available.</p> <p><b>Proposed Fibre-to-the Home Solution</b> The first customer (new fibre deployment area) can be commissioned within 3 to 4 months.</p>
Proposed life time	<p><b>Existing Telkom Infrastructure</b> 40% of the customer based is currently served with high speed broadband services.</p> <p><b>Proposed Fibre-to-the Home Solution</b></p> <ul style="list-style-type: none"> <li>- 100 units passed: 3 months</li> <li>- 1000 units passed: 6 months</li> <li>- 90% of Constantia being passed: 15 months</li> </ul>
Specification Cable	<b>Proposed Fibre-to-the Home Solution</b> Underground cables from local exchanges (Constantia, Bergvliet and Wynberg) to street cabinets and then to distribution nodes. From distribution nodes to residence the existing distribution method will be used.
Open Access	Telkom will provide an open access network and facilitate other Internet Service Providers across the network.
Pricing and Quality	<p><b>Existing Telkom Infrastructure (Copper)</b></p> <p>Existing broadband products available</p> <p>DSL access only,</p>

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OP No: OP

	<p>up to 2Mbps = R165 per month  up to 4Mbps = R299 per month  up to 10Mbps = R425 per month  up to 20Mbps = R499 per month  up to 40Mbps = R599 per month</p> <p>Broadband Bundles (DSL and Telkom Internet - Cap bundles with Soft cap)  up to 2Mbps &amp; 10GB = R219 per month  up to 4Mbps &amp; 20GB = R395 per month  up to 10Mbps &amp; 50GB = R584 per month  up to 20Mbps &amp; 50GB = R601 per month  up to 40Mbps &amp; 100GB = R839 per month</p> <p>Broadband and Telkom Internet Uncapped Bundles  Broadband Bundles (DSL and Telkom Internet)  up to 2Mbps Uncapped = R394 per month  up to 4Mbps Uncapped = R585 per month  up to 10Mbps Uncapped = R999 per month  up to 20Mbps Uncapped = R1598 per month  up to 40Mbps Uncapped = R2398 per month</p> <p>Voice line mandatory @ R166.50 for any broadband service. Voice calling plans available. Free broadband modem with Wi-Fi capability upon signing a 24 month contract.</p> <p><b>Proposed Fibre-to-the Home Solution</b>  Fibre Broadband Prices.  Up to Fibre 20 Mbps, 50 Gb = R999  Up to Fibre 40 Mbps, 100 Gb = R1299  Up to Fibre 100 Mbps, 200 Gb = R1799  Only available on 24 month contract and includes FREE installation and FREE Wi-Fi router</p> <p>Fibre Broadband Prices including Voice Service.  Up to Fibre 20 Mbps, 50 Gb + Voice Service = R1199  Up to Fibre 40 Mbps, 100 Gb + Voice Service = R1499  Up to Fibre 100 Mbps, 200 Gb + Voice Service = R1999  Only available on 24 month contract and includes FREE installation and FREE Wi-Fi router</p>
<p><b>Symmetric Product</b></p>	<p><b>Existing Telkom Infrastructure (Copper)</b>  Fixed DSL broadband is an asymmetrical product.</p> <p><b>Proposed Fibre-to-the Home Solution</b>  Asymmetrical service.</p>
<p><b>Price Stability</b></p>	<p>The existing community liaison mechanisms include;</p> <ul style="list-style-type: none"> <li>- notifications placed in Telkom bill regarding prices / tariff adjustments;</li> <li>- Post; and</li> <li>- E-mail</li> </ul> <p>New proposed communication methods will include:</p>

	<ul style="list-style-type: none"> <li>- Personalised e-mails,</li> <li>- SMS's,</li> <li>- MMS's</li> <li>- Voice recording on landline (if applicable)</li> </ul>
<b>Profitability</b>	<p><b>Existing Telkom Infrastructure (Copper)</b> Standard Telkom pricing policies apply.</p> <p><b>Proposed Fibre-to-the Home Solution</b> Standard Telkom pricing policies apply.</p>
<b>Funding</b>	<p><b>Existing Telkom Infrastructure (Copper)</b> Existing network no additional funding required.</p> <p><b>Proposed Fibre-to-the Home Solution</b> Telkom has made provision for the upgrade and replacement of legacy infrastructure as part of the Next Generation Network Project. The Constantia area has been earmarked for network infrastructure upgrade (Fibre-to-the-Home) and funding is available.</p>
<b>QoS</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Bronze SLA i.e. 98.5% availability on core network elements and distributed exchanges.</p>
<b>Redundancy</b>	<p>Telkom will offer Telkom Internet services as part of the proposition, but will facilitate other ISP's. All ISP's can be accommodated.</p> <p>The Open Access GPON network offers the following redundancy:</p> <ul style="list-style-type: none"> <li>- No redundancy between resident and local exchanges in Constantia, Bergvliet and Wynberg.</li> <li>- From Constantia exchange the service is carried on Telkom's regional network which has full redundancy in terms of routes and equipment.</li> </ul>
<b>Call Center</b>	<p><b>Telkom Call Centre:</b></p> <ul style="list-style-type: none"> <li>- Availability : 07h00am to 11h00pm</li> <li>- English the official language;</li> <li>- 400 agents activation and assurance;</li> <li>- Online capabilities include: <ul style="list-style-type: none"> <li>• Email;</li> <li>• Online chat;</li> <li>• Online fault logging and feedback;</li> </ul> </li> </ul>
<b>Upgrades</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Telkom will be deploying the latest GPON technology as part of the proposed solution. Telkom will keep abreast of any new trends and technology and stay current on the technologies. Disruptive technology upgrades will only be undertaken if substantial benefits can be derived by the customers.</p>
<b>Installation cost</b>	<p><b>Proposed Fibre-to-the Home Solution: Normal Suburb</b> Fibre Broadband prices include FREE installation and FREE Wi-Fi router options.</p> <p><b>Proposed Fibre-to-the Home Solution: Estates / Body Corporate / Home Owners Association, etc.</b> Telkom will engage directly with the specific communities and offer two (2) engagement / solution options, namely:</p> <ul style="list-style-type: none"> <li>- Premium (Gated Community) Customer Specific Solution – includes extensive choice of Value Added Services.</li> </ul>

	<ul style="list-style-type: none"> <li>- Standard Solution (Gated Community) - includes standard market level pricing as per residential suburbs, with a choice of a range of Value Added Services.</li> </ul>
<b>Customer premise equipment</b>	<p><b>Proposed Fibre-to-the Home Solution</b></p> <p>The Customer Premise Fibre Termination unit (ONT – optical network terminal) is included as part of the network deployment and complies with G.984 standard. CPE equipment is provided as part of the Broadband pricing (No additional installation fee).</p> <p><b>Telkom Internet Modem / Router</b></p> <p><b>Product Description</b></p> <p>HG532f ADSL Router for Fibre Services @ R549</p> <p>The HG532f router with 3G failover capability is Fibre to the Home (FTTH) ready. The modem complies with 802.11n Wi-Fi technology and transmission rate up to 300Mbps.</p> <p>The external antennas increase Wi-Fi signal penetration. The Built-in firewall function will effectively block malicious attacks and attempted violations of the network. It includes parental control features to provide a safe internet surfing experience for the whole family.</p> <p>Product Features and benefits</p> <p><b>Wireless</b></p> <ul style="list-style-type: none"> <li>- Wi-Fi 802.11n 2T2R MIMO technology</li> <li>- Transmission rate up to 300Mbps</li> <li>- Backward compatible with 802.11 b/g</li> <li>- Security: WEP, WPA, WPA2, AES and TKIP</li> <li>- Multiple SSID's</li> <li>- Wi-Fi Protected Setup</li> <li>- 2.4Ghz band</li> <li>- Two high performance external antennas</li> </ul> <p><b>Ports</b></p> <ul style="list-style-type: none"> <li>- One ADSL2+ uplink port</li> <li>- Four 10/100Mbps Ethernet LAN ports, compliant with IEEE 802.3 and IEEE 802.3u</li> <li>- One LAN port configurable as an Ethernet uplink port</li> <li>- One USB 2.0 port</li> </ul> <p><b>Antenna type:</b></p> <ul style="list-style-type: none"> <li>- Two high performance external antennas.</li> </ul> <p><b>Operating frequency band:</b></p> <ul style="list-style-type: none"> <li>- 2.4 - 2.4835GHz</li> <li>- Main functions</li> <li>- Built-in firewall</li> <li>- QoS traffic management</li> <li>- WDS</li> <li>- IP-MAC binding</li> <li>- Access control list (ACL)</li> <li>- NAT/NAPT</li> <li>- DHCP server and client</li> <li>- IPv6 supported</li> <li>- 3G failover</li> </ul> <p><b>Operating system requirement</b></p> <ul style="list-style-type: none"> <li>- Windows (98, Me, NT4, 2000, XP, Vista, 7 or above)</li> <li>- MAC OS-X (10.5, 10.6 10.7 or above)</li> <li>- Linux OS (2.4 or above)</li> </ul>

	<p><b>Browser requirement</b></p> <ul style="list-style-type: none"> <li>- Explorer 6.0 or above</li> <li>- Firefox 6.0 or above</li> <li>- Safari 3.0 or above</li> </ul> <p><b>Benefits</b></p> <ul style="list-style-type: none"> <li>- Ultra stable - Equipped with the latest ADSL chip solution</li> <li>- High speed - Complies with 802.11n Wi-Fi technology and transmission rate of up to 300Mbps</li> <li>- Great coverage - Powerful external antennas increase wireless signal penetration</li> <li>- Safeguard - The built-in firewall function will effectively block malicious attacks, including parental control</li> <li>- Eco-Friendly - Complies with European energy-saving standards.</li> <li>- USB2.0 - Supports storage and print sharing.</li> </ul> <p><b>Warranty</b></p> <ul style="list-style-type: none"> <li>- 1 year warrantee.</li> </ul> <p><b>Other Internet Service Providers will provide their preferred modems.</b></p>
<b>Minimum Uptake</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Telkom has already identified the Constantia area as a priority next generation area and <b>No</b> minimum threshold or take-up is required to initiate this project.</p>
<b>Collection</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Telkom has extensive fulfilment, assurance and billing processes and systems in place and will invoice each individual subscriber based on their preferred solution or bundle.</p>
<b>Network architecture</b>	<p><b>Proposed Fibre-to-the Home Solution</b> GPON –Gigabit Passive Optical Network</p>
<b>Service Delivery Platform</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Telkom has various integrated platforms and systems that manage end-user configuration, maintenance, etc. as well as activation of service providers.</p>
<b>Additional Services</b>	<p><b>Proposed Fibre-to-the Home Solution:</b></p> <ul style="list-style-type: none"> <li>- CCTV security camera signal distribution;</li> <li>- Telkom Multi access voice products;</li> <li>- TV signal distribution (Telkom certified Multichoice System Integrator)</li> <li>- Telkom Mobile – LTE (Telkom will deploy additional base stations to improve coverage within the area)</li> <li>- Community Portal</li> <li>- Smart Metering</li> <li>- Digital Advertising</li> </ul> <p>Refer to Section 3 for detail description.</p>
<b>DAS</b>	<p>Telkom provides support for all mobile and fixed line services.</p>
<b>CCTV</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Telkom will provide the capability to connect the 200 CCTV camera (IP based camera) to the fibre network. (Excludes power and conversion equipment for analogue camera).</p>
<b>Control Room</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Yes, Telkom has the capability to provide the proposed network infrastructure to the full Constantia area as well as neighbouring suburbs.</p>
<b>Wayleave</b>	<p><b>Proposed Fibre-to-the Home Solution</b> Telkom has an existing formal relationship with the City of Cape Town for obtaining of wayleaves, the terms of which covers re-instatement. Telkom also does "knock</p>

	<p>and drop" notifications to the affected households immediately prior to work commencing. Where Telkom has worked in collaboration with Community Groups e.g. Bishop's Court Home Owners' Association, communication has also been done via these community channels.</p>
<p><b>Dependencies and risk</b></p>	<p><b>Proposed Fibre-to-the Home Solution</b></p> <ul style="list-style-type: none"> <li>- Power to the CCTV camera excluded from the proposal;</li> <li>- IP based CCTV camera, convergence equipment for analogue cameras excluded.</li> <li>- Power redundancy to CPE equipment excluded;</li> <li>- The availability and acceptance of locations by residents to install mobile base stations to improve mobile network coverage.</li> </ul>

# Telkom Wholesale

## Constantia Fibre RFP

### Section II Formal Submission

Question	Explanation																													
<b>Proposed start date</b>	Already started in 2015 financial year with selected pockets in identified areas.																													
<b>Period of roll out</b>	Telkom proposes to build this FTTH network over two financial years starting in 2015 and completing in 2017.																													
<b>Proposed live date</b>	Telkom's planned roll out schedule and with a portion of Bishopscourt to be completed by 31 March 2015.																													
<b>Proposed live time</b>	Schedule can be provided.																													
<b>Specification Cable</b>	Various specifications for backbone infrastructure – The last distance fibre distribution network (between the splitter and the customers' premises) will be provided on existing overhead infrastructure (currently being used for the copper network) for about 70% of the Constantia area. The rest of the area has existing underground duct distribution which will be used. Telkom's fibre network for the backbone network (between GPON at exchange site and the splitters) will be provided underground.																													
<b>Open Access</b>	Yes, an Open access model will be applied.																													
<b>Pricing and Quality</b>	<table border="1"> <thead> <tr> <th data-bbox="516 1199 813 1367"></th> <th data-bbox="813 1199 967 1367">WFBA Up to 20Mbps</th> <th data-bbox="967 1199 1122 1367">WFBA Up to 40Mbps</th> <th data-bbox="1122 1199 1276 1367">WFBA Up to 100Mbps</th> <th data-bbox="1276 1199 1446 1367">Contract period</th> </tr> </thead> <tbody> <tr> <td data-bbox="516 1367 813 1503"><b>Wholesale Fibre Broadband Access Rental</b> (per month)</td> <td data-bbox="813 1367 967 1503">R467.00</td> <td data-bbox="967 1367 1122 1503">R540.00</td> <td data-bbox="1122 1367 1276 1503">R619.00</td> <td data-bbox="1276 1367 1446 1503">24 Months</td> </tr> <tr> <td data-bbox="516 1503 813 1598"><b>Fibre installation</b> (once off)</td> <td data-bbox="813 1503 967 1598">R1 500</td> <td data-bbox="967 1503 1122 1598">R1 500</td> <td data-bbox="1122 1503 1276 1598">R1 500</td> <td data-bbox="1276 1503 1446 1598">24 Months</td> </tr> <tr> <td data-bbox="516 1598 813 1776"><b>Upgrade or Downgrade</b> (per relevant Upgrade or Downgrade)</td> <td data-bbox="813 1598 967 1776">R100</td> <td data-bbox="967 1598 1122 1776">R100</td> <td data-bbox="1122 1598 1276 1776">R100</td> <td data-bbox="1276 1598 1446 1776">24 Months</td> </tr> <tr> <td data-bbox="516 1776 813 1900"><b>Unnecessary Call Out Fee</b></td> <td data-bbox="813 1776 967 1900">R227.25</td> <td data-bbox="967 1776 1122 1900">R227.25</td> <td data-bbox="1122 1776 1276 1900">R227.25</td> <td data-bbox="1276 1776 1446 1900">24 Months</td> </tr> </tbody> </table>						WFBA Up to 20Mbps	WFBA Up to 40Mbps	WFBA Up to 100Mbps	Contract period	<b>Wholesale Fibre Broadband Access Rental</b> (per month)	R467.00	R540.00	R619.00	24 Months	<b>Fibre installation</b> (once off)	R1 500	R1 500	R1 500	24 Months	<b>Upgrade or Downgrade</b> (per relevant Upgrade or Downgrade)	R100	R100	R100	24 Months	<b>Unnecessary Call Out Fee</b>	R227.25	R227.25	R227.25	24 Months
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**Notes:**

- Pricing indicated above excludes VAT.
- Pricing indicated above excludes the internet usage or any other value added services or voice options offered by the respective ISP's.
- Pricing indicated above includes the optical network terminal installed on the End-user's premises.

**SERVICE OPTIONS**

Service	Downstream Speed (kbps)		Upstream Speed (kbps)	
	Maximum	Minimum	Maximum	Minimum
WFBA Up to 20Mbps	20 480 kbps	0	2 048 kbps	0
WFBA Up to 40Mbps	40 960 kbps	0	3 072 kbps	0
WFBA Up to 100Mbps	102 400 kbps	0	10 240 kbps	0

**Notes:**

- The technical specifications set out in the table above are subject to change from time to time, upon written notice to this effect being sent to the Customer.
- GPON (Gigabit Passive Optical Network) services are configured with reference to maximum upstream and downstream speeds only and for this reason minimum speeds are indicated as zero in the above table.

**Symmetric Product**

Wholesale Fibre Broadband Access is an Asymmetrical product offering.

**Price Stability**

Telkom Wholesale will communicate any price changes 60-days in advance to all ISP's. Pricing will be aligned with other competitor offerings to ensure Constantia Fibre obtains the best possible pricing in the market.

**Profitability**

Telkom Wholesale will ensure competitive pricing with aligned margins in the industry.

**Funding**

Telkom Wholesale is currently busy with Fibre deployment in selected areas throughout the country of which the Constantia area has been included for deployment. Telkom Wholesale will be responsible for funding the required infrastructure. Installation fees will be for the end subscriber's account, as reflected in the pricing table above.

**QoS**

Telkom Wholesale provides the FTTH service on a best effort principal. The network components that form part of Telkom's core network will be pro-actively managed to ensure minimal downtime.



<b>Redundancy</b>	Telkom Wholesale will be offering the Fibre Broadband Access to all ISP's on a resell principle. ISP's need to ensure that the services provided by them have the required redundant features as part of their final offering.
<b>Call Centre</b>	The Call Centre functions will be provided by the relevant ISP relating to the components off their offering. Queries relating to the Wholesale Fibre Broadband Access components will be dealt with by Telkom Wholesale.
<b>Upgrades</b>	Technology upgrades will be deployed as and when required to ensure the most efficient technology is used as part of offering FTTH.
<b>Installation Cost</b>	Installation costs will be charged as per above pricing table (per resident household).
<b>Customer Premise Equipment</b>	CPE (modems, Wi-Fi extenders etc.) to be provided by the ISP reselling Telkom Wholesale's WFBA product. Telkom will install and assure up to ONT level.
<b>Minimum Uptake</b>	Telkom Wholesale will evaluate the feedback provided by the residents to the HOA and only then make a final decision to commence or not.
<b>Collection</b>	Monthly invoice to ISP's who recovers monthly costs from their end subscribers.
<b>Network architecture</b>	GPON
<b>Service Delivery Platform</b>	The technical service delivery platform will be provided on GPON technology.
<b>Additional Services</b>	Telkom Wholesale offers the Telkom Connect product to WFBA customers which allows for trenching of entry pipes into the customer's premises, device set-up of modems and Wi-Fi extenders as well as the provisioning of suitable fibre capable modems and Wi-Fi extenders.
<b>DAS</b>	No.
<b>CCTV</b>	Telkom Wholesale can evaluate this requirement and revert at a later stage.
<b>Control Room</b>	This requirement would have to be evaluated as no finer detail with regards to distance etc. has been provided.
<b>Coverage</b>	Yes for the full Constantia area subject to Telkom winning the bid. The remaining identified areas would have to be evaluated to determine if this requirement can be accommodated.
<b>Way leave</b>	The normal way leave process to be followed with City of Cape Town.
<b>Dependencies and risks</b>	A feasibility study of this project will determine all the associated risk.