

Table 2.7. Local loop unbundling

	What (if any) are the unbundling requirements for <i>PSTN operators</i> ?	What (if any) are the unbundling requirements for <i>cable operators</i> ?	What (if any) are the unbundling requirements for <i>FTTH operators</i> ?
<b>Australia</b>	<p>The ACCC is now required to make access determinations for declared services which set out the terms and conditions of access to those services.</p> <p>The ACCC issued Final Access Determinations for fixed line services in 2011, covering price and non-price terms.</p> <p><b>Unbundled local loop:</b></p> <p>One-off connection charge – Band 1: AUD 53.98, Band 2: AUD 56.88, Band 3: AUD 61.80</p> <p>Monthly rental:</p> <p>– full loop: AUD 16.21 (Bands 1-3) and AUD 48.19 (Band 4 – rural and regional)</p> <p>– sub loop: N/A</p> <p><b>Shared line/bitstream:</b></p> <p>One-off connection charge – AUD 46.16</p> <p>Monthly rental: N/A</p> <p>– full loop: AUD 1.80</p> <p>– sub loop: N/A</p> <p><b>Wholesale line:</b></p> <p>One-off connection charge: N/A</p> <p>Monthly rental:</p> <p>– full loop: AUD 22.84</p> <p>– sub loop: N/A</p>	<p>The ACCC imposes no unbundling requirements on Hybrid Fibre-Coaxial operators as this service has not been declared under Part XIC of the Competition and Consumer Act 2010.</p>	<p><b>Networks operated by NBN Co.</b></p> <p>NBN Co. is required to provide services on a wholesale-only basis under the NBN Companies Act.</p> <p>NBN Co. provides a layer 2 bitstream access service to its customers on an open access and wholesale-only basis. This service is supplied through NBN Co.'s customer access network, which is located between the end-user premises and its points of interconnection. Points of interconnection are determined in consultation with the independent regulator, the ACCC. NBN Co.'s products and prices are detailed in the Price List of its standard form of access agreement at: <a href="http://www.nbnco.com.au/assets/documents/sfaa-wba-product-catalogue-20120928.pdf">www.nbnco.com.au/assets/documents/sfaa-wba-product-catalogue-20120928.pdf</a> (pp. 238-67).</p> <p>NBN Co has lodged a special access undertaking for consideration by the ACCC. The undertaking contains the prices of all products NBN Co. offered at the time of lodging the SAU, as well as principles to restrain future price increases.</p> <p><b>Non-NBN Co networks</b></p> <p>New or upgraded networks that can provide superfast carriage services (fixed-line services capable of download speeds of more than 25 Mbits/second) to residential and small business customers are subject to new Parts 7 and 8 of the Telecommunications Act. The provisions require that a layer 2 bitstream service is offered on such networks on an open access, non-discriminatory and wholesale-only basis. The service has been defined by the ACCC. The ACCC's declaration of the layer 2 bitstream service, including the definition of the service and the terms and conditions on which the service must be offered is at: <a href="http://www.accc.gov.au/content/index.phtml/itemId/1034770">www.accc.gov.au/content/index.phtml/itemId/1034770</a></p>

<b>Austria</b>	<p><b>Unbundled local loop:</b></p> <p>One-off connection charge for new line with works on subscriber premises: EUR 109</p> <p>One-off connection charge for new line with works on subscriber premises (12 months minimum contract duration): EUR 69.40</p> <p>One-off connection charge for new line without works on subscriber premises: EUR 31.50</p> <p>Monthly rental/sub loop street cabinet – network termination point: EUR 4.55</p> <p>Monthly rental/sub loop in-house distr. Frame – network termination point: EUR 0.0</p> <p><b>Shared line:</b></p> <p>One-off connection charge for new line: EUR 31.50</p> <p>Monthly rental/shared line: EUR 2.94</p> <p><b>Wholesale line/Voice-over broadband:</b></p> <p>An obligation to offer a VoB option (with bitstream access) and a VoB standalone product (“VoB only”) has been imposed (Voice over broadband resale). Both include symmetric bandwidths of 192/256/384/512 kbit/s including a volume of 2.4/5/7.5/10 GB. The first 3 VoB options come as a naked DSL 2 048/384 kbit/s or a 512 kbit/s SDSL product, the last as a naked DSL up to 8 192/768 kbit/s or a 768 SDSL product.</p> <p>One-off charges for system implementation:</p> <ul style="list-style-type: none"> <li>– administrative implementation charge: EUR 6 500 (national coverage), EUR 1 300 (regional coverage)</li> <li>– technical implementation charge: EUR 962 (national coverage), EUR 218 (regional coverage),</li> <li>– ethernet backhaul: EUR 1 453 per (regional) handover point (7 in total)</li> </ul> <p>One-off connection charge for new line: EUR 109</p> <p>Monthly rental for the option is EUR 2.45/15/30/39, monthly rental for VoB only is EUR 11.31/24.99/42.07/53.16 (national handover); high usage is EUR 11 /GB.</p>	No requirements	<p>Up to now, FTTH has not been part of the relevant markets for physical access and wholesale broadband access. Corresponding to the European Commission's NGA Recommendation, it is now engaged in ongoing proceedings to include FTTH as part of those markets. Due to low fibre penetration and GPON realisation, it is not likely that fibre unbundling will be imposed as a regulatory remedy for fixed network operators with SMP. However, the NRA imposed a virtual unbundling product in the latest market analysis to maintain the competitive balance in the course of the NGA rollout of the fixed network incumbent. It is likely that the virtual unbundling obligation will also apply to FTTH in the future (currently, virtual unbundling of FTTH lines is offered voluntarily by the incumbent).</p>
----------------	---	-----------------	---

<b>Belgium</b>	<p><b>Unbundled local loop:</b>  One-off connection charge: EUR 91.93  Monthly rental:  – full loop: EUR 7.57  – sub loop: EUR 5.66</p> <p><b>Shared line:</b>  One-off connection charge: EUR 74.15  Monthly rental:  – full loop: EUR 0.87  – sub loop: EUR 0.85</p> <p><b>WBA VDSL2:</b>  One-off connection charge: EUR 120.18  Without voice: EUR 13.85, with voice: EUR 9.04  The sole change is that Shared Loop Unbundling obligation has been removed to allow vectoring.</p>	<p>There is an obligation on the cable operators to resell their broadband connection in combination with digital TV since the BIPT decision of 1 July 2011.</p> <p>This decision is being implemented at the moment. A final decision on tariffs has not yet been made.</p>	<p>No requirements. FTTH is not commercially available in Belgium. However a trial is underway in three cities driven by copper's incumbent Belgacom.</p>
<b>Canada</b>	<p><b>Unbundled local loops (Bell Canada):</b>  One-off service charge:  – For business: CAD 61 per order and CAD 9.40 per loop  – For residence: 44.15 CAD per order and CAD 9.21 per loop  Monthly rate: the Canadian population is typically located in rate Bands A and B, and the rates in this section apply in Bell Canada's serving territory.  Band A: CAD 5.69, Band B: CAD 11.52, Band C: CAD 13.80, Band D: CAD 15.95, Band E: CAD 26.31, Band F: CAD 21.86</p> <p><b>Line sharing (Bell Canada):</b>  Monthly rate: CAD 1.68, One-off service charge: CAD 71.66</p> <p><b>Bitstream (Gateway Access Service, Bell Canada):</b>  One-off service charge per user:  – 0.5 Mbps to 6 Mbps: CAD 50.00 / 7 Mbps to 25 Mbps: CAD 90.65  Monthly access rate per user:  – 0.5 Mbps to 5 Mbps: CAD 14.11 / 6 Mbps to 25 Mbps: varies from CAD 24.70 to CAD 25.00  One-off capacity charge for increments of 100 Mbps: CAD 285  Monthly capacity rate for increments of 100 Mbps: CAD 2 213  One-off interface charge: CAD 600  Monthly interface charge: CAD 675 for 100 Mbps, CAD 1 750 for 1 000 Mbps  Note: Appeals have been filed contesting the above rate levels.</p>	<p><b>Bitstream (Rogers Communications)</b>  The rates in this section apply in Rogers's serving territory. A CRTC decision on Rogers' bitstream rates is expected mid-February 2013.</p> <p>One-off service charge per user: CAD 63.53  Monthly access rate per user: CAD 11.97 for 0.5 Mbps, CAD 12.31 for 3 Mbps, CAD 14.25 for 10 Mbps, CAD 19.06 for 15 Mbps, CAD 21.00 for 25 Mbps and CAD 22.69 for 50 Mbps.</p> <p>One-off capacity charge for increments of 100 Mbps: CAD 571.20  Monthly capacity rate for increments of 100 Mbps: CAD 1 251</p> <p>One-off point of interconnection charges:  – Initial report (engineering, operations, administration): CAD 1 206.40  – POI entrance connection (outside facilities to router port): CAD 6 527.00  – POI entrance connection (existing inside facilities to router port): CAD 2 800.00  Note: Appeals have been filed contesting the above rate levels.</p>	<p>No requirements</p>

<b>Chile</b>	No requirements. LLU is very rarely used in Chile.	No requirements	No requirements
<b>Czech Republic</b>	<p><b>Unbundled local loop:</b> One-off connection charge: CZK 1 287 Monthly rental: – full loop: CZK 197 – sub loop: CZK 186</p> <p><b>Shared line/bitstream:</b> One-off connection charge: CZK 967 Monthly rental: – full loop: CZK 39 – sub loop: CZK 39</p> <p><b>Wholesale line:</b> One-off connection charge: CZK 80 Monthly rental: – full loop: CZK 178 + CZK 5 for each call or CZK 318 (prices for wholesale line rental, WLR) – sub loop: N/A.</p>	No requirements	No requirements (and no FTTH unbundling as well).
<b>Denmark</b>	<p><b>Unbundled local loop:</b> One-off connection charge: full loop: without technician DKK 348/with technician DKK 781. Monthly rental: – full loop: DKK 66.33 – sub loop: DKK 58.25</p> <p><b>Shared line (answered for shared line only):</b> One-off connection charge without technician DKK 279/with technician DKK 781. Monthly rental: – full loop: DKK 31.17 – sub loop: DKK 29.17</p> <p><b>Wholesale line:</b> One-off connection charge: DKK 520 Monthly rental: – full loop: DKK 77.05 – sub loop: not offered</p>	<p><b>Shared line/bitstream:</b> One-off connection charge: bitstream only: without technician DKK 424/with technician DKK 805. TDC is the only regulated cable operator. Third-party access to bitstream is only accessible to end-users that have a TV subscription with TDC. Costs are shared between TV and bitstream. Monthly rental: DKK 34 per subscriber DKK 776.06 per Mbit/s upload per CMTS DKK 241.34 per Mbit/s download per CMTS</p> <p><b>Wholesale line:</b> not regulated</p>	<p><b>Full unbundling:</b> One-off connection charge: not regulated Monthly rental: not regulated</p> <p><b>Shared line/bitstream:</b> One-off connection charge: bitstream only: without technician DKK 424/with technician DKK 805. Line, DONG area: DKK 163.7/month 63.7 Line, rest of the country: DKK 215/month Capacity lag 2: DKK 0.44/Mbit/s/month Capacity lag 3: DKK 0.56/Mbit/s/month</p>

<b>Estonia</b>	<p>In accordance with the SMP decisions local loops (copper) are subject to the following obligations:</p> <ul style="list-style-type: none"> <li>– Obligation of access</li> <li>– Obligation of non-discrimination</li> <li>– Obligation of transparency</li> <li>– Price control and cost accounting obligation.</li> </ul> <p>Monthly rental: EUR 5.48 (without VAT) One-off connection charge: EUR 57.39 (without VAT)</p>	No requirements	<p>No requirements</p> <p>Since 2010, the Estonian Competition Authority (ECA) has not introduced any significant changes in next-generation network unbundling policy, but in the third round of communications services market analyses the ECA intends to apply the principles of the European Commission recommendations on NGAs.</p>
<b>Finland</b>	<p><b>Unbundled local loop:</b></p> <p>Unbundled local loops charges are based on weighted average of 28 SMP-operators (on 25 May 2012):</p> <p>One-off connection charge: EUR 100.90</p> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– full loop: EUR 11.58</li> <li>– shared line: EUR 580</li> </ul> <p><a href="http://www.ficora.fi/attachments/enqlantiav/682mupEXk/tilaajayhteyksien_hinnat_enkku.pdf">www.ficora.fi/attachments/enqlantiav/682mupEXk/tilaajayhteyksien_hinnat_enkku.pdf</a></p>	N/A	<p>Unbundled local loops charges are based on simple average of 24 SMP-operators which are offering fibre local loops (on 25 May 2012):</p> <p>One-off connection charge: EUR 565.00</p> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– full loop: EUR 288.00</li> </ul> <p><a href="http://www.ficora.fi/attachments/enqlantiav/682mupEXk/tilaajayhteyksien_hinnat_enkku.pdf">www.ficora.fi/attachments/enqlantiav/682mupEXk/tilaajayhteyksien_hinnat_enkku.pdf</a>.</p>
<b>France</b>	<p>The unbundling policy of ARCEP has been and will remain a major source of broadband take up in France. The intervention of local authorities also had a positive effect on competition as regards fixed broadband.</p> <p><b>Rates for unbundled access:</b></p> <p>Monthly rate for total access: EUR 8.8/month Monthly rate for shared access: EUR 1.57/month</p> <p><b>Charges for bitstream access:</b></p> <p>Access component: EUR 4.21/month (with phone service) or EUR 12.55/month (without phone service)</p> <p>Collection component:</p> <ul style="list-style-type: none"> <li>– IP: EUR 4.44/access/month + EUR 12/Mbit/s (real speed)</li> <li>– ATM: EUR 70/Mbit/s (guaranteed speed)</li> <li>– Ethernet: EUR 4.17/access/month + EUR 6/Mbit/s (real speed)</li> </ul> <p><b>Wholesale leased lines (wholesale line):</b></p> <p>Obligation to provide wholesale offers for traditional terminal partial connections (leased ETSI) on copper (2 Mbit/s), whose prices are cost-oriented, and on fibre (34 and 155 Mbit/s), whose prices must respect the principle of non- eviction. There is also a wholesale offer for Ethernet collection over optical fibre, whose prices must respect the principle of non- eviction.</p> <p>There is an obligation to provide a wholesale offer of abutting connection with cost-oriented prices.</p>	No requirements	<p>There is no obligation at this point on France Telecom in terms of unbundling of NGA networks by asymmetrical regulation. Obligations for access to FTTH networks stem from symmetric regulation.</p> <p>The only requirement in the offer of France Telecom as part of the market analysis (asymmetric regulation) concerns access to civil engineering (ducts and air support) to deploy optical fibre in the local loop.</p>

<p><b>France (cont.)</b></p>	<p>Average tariffs of wholesale offers:</p> <ul style="list-style-type: none"> <li>– Terminal partial connection 2 M: EUR 121/month</li> <li>– Collecting fibre ethernet 10 Mbit/s (area A local guaranteed speed): EUR 629/month</li> <li>– Abutting connection 2 M: EUR 57/month</li> <li>– Abutting connection 155 M: EUR 2 468/month</li> </ul>																									
<p><b>Germany</b></p>	<table border="1"> <thead> <tr> <th colspan="2">Price charged for copper LLU (EUR)</th> <th>2010</th> <th>2011</th> <th>2012</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Full unbundled local loop</td> <td>Monthly rental</td> <td>10.20</td> <td>10.08</td> <td>10.08</td> </tr> <tr> <td>Connection</td> <td>30.83</td> <td>30.83</td> <td>31.01</td> </tr> <tr> <td rowspan="2">Shared access</td> <td>Monthly rental</td> <td>1.84</td> <td>1.84</td> <td>1.68</td> </tr> <tr> <td>Connection</td> <td>38.20</td> <td>38.20</td> <td>38.20</td> </tr> </tbody> </table>	Price charged for copper LLU (EUR)		2010	2011	2012	Full unbundled local loop	Monthly rental	10.20	10.08	10.08	Connection	30.83	30.83	31.01	Shared access	Monthly rental	1.84	1.84	1.68	Connection	38.20	38.20	38.20	<p>This field is not regulated as there is no cable provider with SMP at wholesale markets 4 and 5. End-user broadband access markets are not regulated as the current competitive situation does not require regulation.</p>	<p>Deutsche Telekom is obliged to grant access to its FTTH network in the same way as with its copper network. Prices are, however, not subject to rate approval, but subject to ex-post control (control of abusive pricing decisions).</p>
Price charged for copper LLU (EUR)		2010	2011	2012																						
Full unbundled local loop	Monthly rental	10.20	10.08	10.08																						
	Connection	30.83	30.83	31.01																						
Shared access	Monthly rental	1.84	1.84	1.68																						
	Connection	38.20	38.20	38.20																						
<p><b>Greece</b></p>	<p>In the context of the 3rd round of market analysis, the EETT issued decisions for the regulation of market 4 (wholesale (physical) network infrastructure access (including shared or fully unbundled access) at a fixed location); and market 5 (wholesale broadband access) in September 2011. According to these decisions, the incumbent's VDSL network has been included in the markets. Therefore, all remedies for markets 4 and 5 are also applied in the case of the incumbent's NGA network.</p> <p>Price control has been imposed for:</p> <ul style="list-style-type: none"> <li>– Unbundling local loop cost (full, shared and sub loop) and bitstream access cost orientation obligation (top-down LRAIC+).</li> <li>– Wholesale line rental (WLR) price control according to retail minus</li> </ul>				<p>N/A</p>	<p>See the answer on the left.</p>																				
<p><b>Hungary</b></p>	<p>Access obligations for twisted copper access networks:</p> <ul style="list-style-type: none"> <li>– Full and partial unbundling of local loops and subloops</li> <li>– Local bitstream access at the MDF</li> <li>– National bitstream access at one dedicated point.</li> <li>– Wholesale line rental obligation is not imposed.</li> </ul> <p>Obligations apply for the three incumbent operators.</p> <p>The prices given are those of the largest incumbent Magyar Telekom. Note that optional or conditional one-off charges are not indicated.</p> <p>Unbundled local loop</p> <ul style="list-style-type: none"> <li>-Monthly rental</li> <li>-full loop: HUF 1 792 / sub loop: HUF 1 180</li> </ul> <p>Shared Line/bitstream:</p> <ul style="list-style-type: none"> <li>-Monthly rental</li> <li>-full loop: Local bitstream: HUF 1 105</li> <li style="padding-left: 20px;">Naked local bitstream: HUF 2 455</li> <li style="padding-left: 20px;">Shared line: HUF 561</li> <li>-sub loop: Shared line: HUF 561</li> </ul>	<p>Access obligations for broadband cable networks:</p> <ul style="list-style-type: none"> <li>– Local bitstream access at the CMTS.</li> <li>– National bitstream access at one dedicated point.</li> <li>– Wholesale line rental obligation is not imposed.</li> </ul> <p>Obligations apply for the three incumbent operators.</p> <p>The prices given are those of the largest incumbent Magyar Telekom. Note that optional or conditional one-off charges are not indicated.</p> <p>Shared Line/bitstream:</p> <ul style="list-style-type: none"> <li>-Monthly rental Local bitstream: HUF 2970</li> </ul>	<p>Access obligations for FTTH networks:</p> <ul style="list-style-type: none"> <li>– Full unbundling of FTTH-PON terminating segments.</li> <li>– Full unbundling of local loops of point-to-point FTTH networks.</li> <li>– Partial FTTH unbundling is imposed but is subject to technical feasibility. Mandated operators have not offered partial unbundling yet.</li> <li>– Local bitstream access at the OLT.</li> <li>– National bitstream access at one dedicated point.</li> <li>– Wholesale line rental obligation is not imposed.</li> </ul> <p>Obligations apply for the three incumbent operators.</p> <p>The prices given are those of the largest incumbent Magyar Telekom. Note that optional or conditional one-off charges are not indicated.</p> <p>Full unbundling</p> <ul style="list-style-type: none"> <li>-One off connection charge : HUF 5 807+technical handover fee: HUF 4 781/working hour</li> <li>-Monthly rental HUF 1 252</li> </ul>																							

<b>Iceland</b>	No requirements	There are no cable operators in Iceland.	No requirements
<b>Ireland</b>	<p>Only Eircom has been designated as having Significant Market Power in the Wholesale Physical Network Infrastructure Access market which includes LLU.</p> <p>Connection charge full loop: EUR 29.30</p> <p>Monthly rental full loop: EUR 12.41</p> <p>Connection charge sub-loop: EUR 135.92</p> <p>Monthly rental sub loop: EUR 7.61</p> <p>Connection charge full loop shared line: EUR 50.60</p> <p>Monthly rental full loop shared line: EUR 0.77</p> <p>Connection charge sub loop shared line: EUR 139.78</p> <p>Monthly rental sub loop shared line: EUR 0.77</p>	None. Only Eircom has been designated with SMP with corresponding remedies applied to it.	Consulting is underway on remedies to be applied in the Next Generation Access WPNIA market on Eircom, including Next Generation Access FTTH.
<b>Israel</b>	No unbundling requirements currently exist. According to a ministerial policy document the Ministry is currently implementing a wholesale market in fixed communications.	No unbundling requirements currently exist. According to a ministerial policy document the Ministry is currently implementing a wholesale market in fixed communications.	No unbundling requirements currently exist. According to a ministerial policy document the Ministry is currently implementing a wholesale market in fixed communications.
<b>Italy</b>	<p>In December 2009, AGCOM (decision no. 731/09/CONS) imposed the full set of Access Directive remedies on Telecom Italia as SMP operator in the fixed access markets (the decision mainly concerned remedies on copper network).</p> <p>Telecom Italia has to provide the following wholesale access services on copper: fully unbundled access to the local loop; unbundled access to the local sub-loop; shared access service; bitstream access services at the local exchange, at the parent/distant node (Ethernet and ATM) and at the IP level; wholesale line rental service.</p> <p>Price control is based on a network cap for all wholesale services (X – coefficients for the application of network cap have been determined on the basis of a BU-LRIC cost model of an efficient operator).</p>	There are no cable operators in Italy.	<p>AGCOM adopted, in January 2012, a framework decision on NGA remedies to be imposed on Telecom Italia (decision no. 1/12/CONS). TI is obliged to provide a combination of passive and active access services, independently from the topology (P2P/P2MP) and the architecture (FTTC/FTTB/FTTH) of its new NGA network.</p> <p>The first reference offer for NGA services is currently undergoing public consultation.</p>
<b>Japan</b>	<p>NTT East and NTT West, who install Category I designated telecommunications facilities, are required to offer unbundled local loop at the following price.</p> <p>As of April 2012:</p> <p>Charge for dry copper: JPY 1.298 (NTT East) or JPY 1.354 (NTT West) per month for a line</p> <p>Charge for line sharing: JPY 88 (NTT East) or JPY 89 (NTT West) per month for a line</p> <p>One-off connection charge is not set in Japan.</p>	No cable operators have an obligation to offer unbundled lines.	<p>NTT East and NTT West, who install Category I designated telecommunications facilities, are required to offer unbundled optical fibre at the following price.</p> <p>As of April 2012: Charge for shared access (Main Terminal Line): JPY 3.013 (NTT East) or JPY 3.846 (NTT West) per month for a line</p> <p>Charge for shared access (Branch Terminal Line): JPY 310 (NTT East) or JPY 354 (NTT West) per month for a line / Charge for Single Star: JPY 3.403 (NTT East) or JPY 4.357 (NTT West) per month for a line</p> <p>One-off connection charge is not set in Japan.</p>

<b>Korea</b>	<p>The requirements on KT's Copper Loop are as follows.</p> <p><b>Unbundled local loop (LLU):</b>  One-off connection charge: KRW 0.0  Monthly rental:  – full loop: KRW 6 570  – sub loop: N/A</p> <p><b>Shared line/bitstream:</b>  One-off connection charge: N/A  Monthly rental:  – full loop: N/A  – sub loop: N/A  – shared line: KRW 3 285  – bitstream: retail price*0.9</p> <p><b>Wholesale line:</b>  One-off connection charge: N/A  Monthly rental:  – full loop: N/A  – sub loop: N/A</p>	No requirements	No requirements
<b>Luxembourg</b>	N/A	N/A	No requirements
<b>Mexico</b>	N/A	N/A	N/A
<b>Netherlands</b>	Full and shared unbundling	No requirements	Full unbundling only
<b>Norway</b>	<p><b>Full access, LLU:</b>  One-off connection charge: NOK 1 056  Monthly rental, full loop: NOK 95  Monthly rental, sub loop: NOK 95</p> <p><b>Shared access, LLU:</b>  One-off connection charge: NOK 556  Monthly rental:  – full loop: NOK 54  – sub loop: NOK 54</p> <p><b>Wholesale broadband access (bitstream access):</b>  One-off connection charge: NOK 1 380 (without telephony) or NOK 700 (line shared with telephony)  Monthly rental: depends on speed. For example, 480/128 costs NOK 215 (without telephony) or NOK 154 (line shared with telephony), while 19 200/864 costs NOK 281 (without telephony) or NOK 220 (line shared with telephony)</p>	No requirements	No requirements



<b>New Zealand</b>	<p>The access network of Chorus Limited has to make unbundled local loops and sub loops available to access seekers. Prices are as follows:</p> <p>Full loop monthly rental:</p> <ul style="list-style-type: none"> <li>– NZD 19.84 (urban exchange)</li> <li>– NZD 36.63 (non-urban exchange)</li> </ul> <p>Sub loop monthly rental (excluding cabinet co-location charges):</p> <ul style="list-style-type: none"> <li>– NZD 11.99 (urban charge)</li> <li>– NZD 22.14 (non-urban charge)</li> </ul> <p>These urban and non-urban prices will be replaced by geographically averaged prices in 2014.</p>	No requirements	<p>No requirements, but fibre providers that receive government funding under the Ultrafast Broadband initiatives must enter into open access undertakings that commit to providing non-discriminatory access.</p>
<b>Poland</b>	<p><b>Unbundled local loop:</b></p> <p>One-off connection charge: PLN 46.98</p> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– full loop: PLN 22.00</li> <li>– sub loop: PLN 16.77 PLN</li> </ul> <p><b>Shared line/bitstream:</b></p> <p>One-off connection charge: PLN 46.98</p> <p>Monthly rental</p> <ul style="list-style-type: none"> <li>– full loop: PLN 5.81</li> <li>– sub loop: PLN 5.81</li> </ul> <p><b>Wholesale line:</b></p> <p>One-off connection charge: PLN 46.98</p> <p>Monthly rental PLN 20.05</p>	<p>There are no unbundling obligations imposed on cable operators. The President of UKE, the national regulatory authority, established that, on the demand side, cable technology is substitutive to fibre and copper, but is present only in metropolitan areas. On the supply side substitution was not found mainly due to characteristics of cable network topology which would not enable economically feasible unbundling.</p>	<p>In accordance with the recent SMP decision, fibre local loops are subject to unbundling:</p> <ul style="list-style-type: none"> <li>– on the section from the end-user to a nearest optical splitter;</li> <li>– on the section from cabinet to a backbone node for FTTC and FTTB technologies;</li> <li>– on any other section connecting network termination point with an access point, in particular ODF, DSLAM or other equivalent facility.</li> </ul> <p>The charges for fibre loop unbundling have not been calculated to date.</p>
<b>Portugal</b>	<p><b>Unbundled local loop:</b></p> <p>One-off connection charge: EUR 38</p> <p>Monthly rental: full loop: EUR 8.99 / sub loop: EUR 8.99</p> <p><b>Shared line:</b></p> <p>One-off connection charge: EUR 38</p> <p>Monthly rental: full loop: EUR 2.51 / sub loop: EUR 2.51</p> <p><b>Wholesale line/bitstream:</b> One-off connection charge: EUR 38 (“normal” installation, without splitter and assistance)</p> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– ADSL local access: between EUR 6.71 (512 Kbps, contention 1:50) – EUR 60.46 (24 Mbps, contention 1:10).</li> <li>– Other components: See p. 51 of the reference offer (<a href="http://ptwholesale.telecom.pt/NR/rdonlyres/FF041DAD-358C-4346-9697-EDFF3344D862/1460088/ADSLPT.pdf">http://ptwholesale.telecom.pt/NR/rdonlyres/FF041DAD-358C-4346-9697-EDFF3344D862/1460088/ADSLPT.pdf</a>).</li> </ul>	No requirements	No requirements

Slovak Republic		14 August 2010	15 May 2011	No requirements	N/A
Monthly rental (EUR /month)					
Full ULL	full loop	7.80	4.20		
Shared ULL		2.50	2.50		
Full ULL	sub loop	5.65	3.00		
Shared ULL		1.89	1.89		
		14 August 2010	15 May 2011		
One-off charge		EUR	EUR		
Full ULL	full loop	42	42		
Shared ULL		44	44		
Full ULL	sub loop	42	42		
Shared ULL		44	44		
<b>Slovenia</b>	No separation between prices. These are the same for all and everyone has the same conditions.			N/A	N/A
<b>Spain</b>	Prices charged for LLU in 2012. <b>Full unbundled local loop:</b> Monthly rental: EUR 8.32 Connection: EUR 24.00 <b>Shared access:</b> Monthly rental: EUR 2.06 Connection: EUR 32.41 <b>Bitstream access:</b> Monthly rental depends on the speed, QoS committed and level of access, e.g.: – EUR 7.63 /month for 128 kbps/best effort/regional access – EUR 112.91/month for 7.2Mbps/50% CIR/national access – EUR 25.7/month for 30Mbps/best effort/national access Connection: – EUR 47.13 for bitstream over PSTN – EUR 38.72 for bitstream over naked DSL These prices can be consulted at: <a href="http://www.cmt.es/c/document_library/get_file?uuid=9a617342-1ee1-4e3f-b326-89d0bf8a6e3f&amp;groupId=10138">www.cmt.es/c/document_library/get_file?uuid=9a617342-1ee1-4e3f-b326-89d0bf8a6e3f&amp;groupId=10138</a> (see in particular pages 392 to 394 for bitstream services).			N/A	N/A

<b>Sweden</b>	<p>PTS does not set prices. PTS presents cost results which are used in PTS supervision over the SMP operators prices. Based on these cost estimates, the SMP operator will then be requested to determine charges in accordance with an LRIC pricing methodology. The cost results are presented below in Swedish currency. Retail minus is used for WLR.</p> <p><b>Unbundled local loop:</b></p> <p>One-off connection charge: SEK 440 or SEK 1 680 depending on the complexity of the installation.</p> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– full loop: SEK 88.3</li> <li>– sub loop: SEK 34</li> </ul> <p><b>Shared line/bitstream:</b></p> <p>One-off connection charge: SEK 440</p> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– full loop: SEK 34</li> <li>– sub loop: SEK 28</li> </ul>	N/A	N/A
<b>Switzerland</b>	<p><b>Unbundled local loop:</b></p> <p>One-off connection charge: CHF 45.00 (inactive lines), CHF 40.60 (active lines)</p> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– loop: CHF 15.80</li> <li>– subloop: CHF 13.10</li> </ul> <p><b>Shared lines/bitstream:</b></p> <p>One-off connection charge: CHF 87 (if local exchange is set up), CHF 40.40 otherwise.</p> <p>Monthly rental: CHF 10.00 (5 000/500 Kbps), CHF 12.50 (30 000/3 000 Kbps)</p> <p><b>Wholesale line rental (2 Mbps):</b></p> <p>Different fees apply if the line termination point is located within another access network, depending on distance. Price manual in German: <a href="http://www.swisscom.ch/en/wholesale/produkte/data-services/mlf.html">www.swisscom.ch/en/wholesale/produkte/data-services/mlf.html</a>. Example rates are as follows:</p> <p>One-off connection charge: CHF 860</p> <p>Monthly rental: CHF 155 (handover inside the local exchange), CHF 199 (outside).</p>	No requirements	No requirements

Turkey	<p><b>Unbundled local loop (full access):</b>  One-off connection charge: TRY 35.44  Monthly rental  – full loop: TRY 14.62  – sub loop: not set</p> <p><b>Unbundled local loop (shared access):</b>  One-off connection charge: TRY 38.55  Monthly rental:  – shared loop: TRY 5.49  – sub loop: not set  One-off connection charge for bitstream lines: TRY 21.80  Monthly rentals for bitstream services are determined per line depending on its speed (and capacity cap).</p> <p><b>Wholesale rental line:</b>  One-off connection charge (PSTN)*: TRY 5.64  One-off connection charge (ISDN2)*: TRY 11.28  One-off connection charge (ISDN30)*: TRY 1 629.32  * Valid for new activations. For current subscribers switching from Turk Telekom to an alternative fixed operator, the one-off connection charge is TRY 3.01  Monthly rental:  PSTN: TRY 9.48  ISDN2: TRY 18.96  ISDN30: TRY 284.4</p>	NA	<p>No requirements.</p> <p>Note: For the purpose of encouraging investments to this emerging infrastructure by operators, ICTA has decided to exclude fibre from market analysis for the next five years or until the percentage of fibre subscriptions reaches 25% of whole fixed broadband subscriptions (decision dated 3 October 2011 and numbered 2011/DK-10/511). The same decision also asks Turk Telekom to comply with its own commitment sent by Turk Telekom to ICTA in August 2010, by which Turk Telekom pledged to provide wholesale resale and bitstream services over its fibre network in a non-discriminatory manner and to notify ICTA of the tariffs for these services before they become operational.</p>
--------	--	----	---

<b>United Kingdom</b>	<p>The SMP designated communications provider BT is required to provide fully unbundled and shared unbundled access services. Charges set out below are for 2012/13 as set in the March 2012 charge control statement (<a href="http://stakeholders.ofcom.org.uk/consultations/wlr-cc-2011/statement-march2012/">http://stakeholders.ofcom.org.uk/consultations/wlr-cc-2011/statement-march2012/</a>)</p> <p><b>Unbundled local loop:</b></p> <p>One-off connection charge:</p> <ul style="list-style-type: none"> <li>– full-loop new provider: GBP 51.16 (c2% of connects)</li> <li>– full-loop transfer: GBP 33.54 (c98% of connects)</li> <li>– sub-loop new provider: GBP 127.61 (not charged controlled)</li> </ul> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– full-loop monthly rental: GBP 7.28</li> <li>– sub-loop monthly rental: GBP 7.83 (not charge controlled)</li> </ul> <p><b>Shared line:</b></p> <p>One-off connection charge:</p> <ul style="list-style-type: none"> <li>– shared loop new provider: GBP 33.54</li> <li>– sub-loop shared new provider: GBP 115.00 (not charge controlled)</li> </ul> <p>Monthly rental:</p> <ul style="list-style-type: none"> <li>– shared loop monthly rental: GBP 0.99</li> <li>– sub-loop shared monthly rental GBP 0.96 (not charge controlled)</li> </ul>	No requirements	<p>Virtual unbundled local access is required (see response to first question). There are multiple variants of this product. The charges quoted below are based on the lowest speeds for this product: customer download 40 Mbit/s and customer upload 2 Mbit/s</p> <p>Connection charge: GBP 80</p> <p>Monthly rental charge: GBP 15.29</p> <p>(FTTC unbundled access is also available – for the same 40/20 variant – connection charge GBP 80, monthly rental GBP 6.90 plus wholesale line rental or full LLU rental charge)</p>
<b>United States</b>	<p><b>Unbundled local loop:</b></p> <p>Rates for all unbundled network elements, including local loop, are determined by state utility commissions utilising the total element long run incremental (TELRIC) pricing methodology set by the FCC.</p> <p><b>Shared line/bitstream:</b> N/A</p> <p><b>Wholesale line:</b></p> <p>Avoided cost discount set by state utility commission</p>	N/A	<p>Fibre incumbent operators are required to provide the equivalent of a 64 kbps voice channel to competitors, at a rate determined by state utility commissions utilising the total element long run incremental (TELRIC) pricing methodology set by the FCC.</p>

Source: OECD