

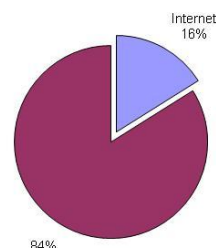
### 5.3 Internet and broadband availability

#### Sector overview

The Internet access industry consists of an estimated 500 entities.

- Incumbent TSPs provide Internet access mainly by dial-up, DSL, fibre optic, satellite, and fixed wireless facilities;
- Cable companies provide Internet access using cable modem, fibre optic, and fixed wireless facilities;
- Utility telcos, municipalities, and other TSPs provide Internet services by dial-up, DSL, fibre optic, satellite, or fixed wireless facilities; and
- Resellers essentially rely on facilities-based TSPs to provide them with facilities on a wholesale basis. Resellers provide mainly dial-up Internet access service, as well as high-speed Internet service generally using leased DSL facilities, and to a lesser extent, cable modem, and fibre optic facilities.

Telecommunications revenues  
\$41.0 billion  
2009



#### *Internet and broadband availability at a glance*

	2008	2009	Growth
Revenues (\$ billions)	6.2	6.6	6.3%
Internet access and transport			
Residential	3.9	4.3	9.9%
Business	1.1	1.1	1.2%
Wholesale	0.2	0.3	21.5%
Other	1.0	1.0	-5.5%
Residential subscribers (millions)	9.8	10.1	2.6%
Residential high-speed access revenues per subscriber per month	\$34.06	\$36.06	5.9%
Internet access market share (revenue)			
Top 5 major ISPs (including affiliates)	76%	76%	
Cable operators	48%	50%	
ILECs (excluding out-of-territory)	40%	38%	
Broadband availability (excluding satellite)			
National	95%	95%	
Urban	100%	100%	
Rural	82%	84%	
Penetration : All speeds	74%	75%	
High-speed	69%	72%	
Broadband (1.5 Mbps and higher)	52%	62%	
Broadband (5 Mbps and higher)	41%	44%	
Average Gigabytes downloaded per month per user	9.1	12.0	
Average Gigabytes uploaded per month per user	3.2	3.4	
Monthly average residential high-speed service churn rate	-	1.51%	
Monthly average business high-speed service churn rate	-	1.56%	

Source: CRTC data collection

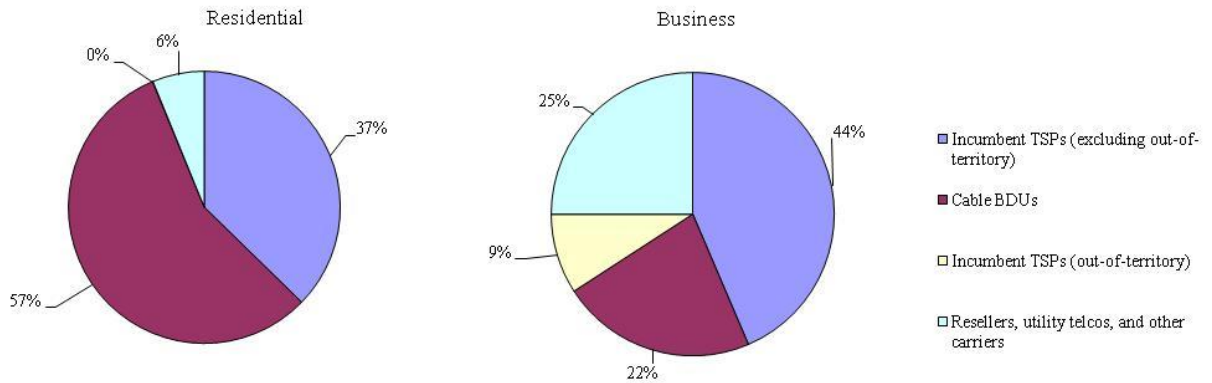
**Internet – Statistical information**
**Table 5.3.1 Internet revenues (\$ millions)**

		2005	2006	2007	2008	2009	Growth 2008-2009	CAGR 2005-2009
Residential	Incumbent TSPs (excluding out-of-territory)							
	Dial-up	192	159	141	116	92	-21.3%	-16.9%
	High-speed	1,014	1,160	1,331 #	1,406	1,506	7.1%	10.4%
	Subtotal	1,206	1,319	1,471	1,522	1,598	5.0%	7.3%
	Cable BDUs							
	Dial-up	13	8	5	2	1	-31.9%	-42.6%
	High-speed	1,380	1,649	1,935	2,129	2,419	13.6%	15.1%
	Subtotal	1,393	1,657	1,940	2,131	2,420	13.6%	14.8%
	Incumbent TSPs (excluding out-of-territory) and cable BDUs subtotal							
	Dial-up	205	167	145	118	93	-21.5%	-17.9%
	High-speed	2,394	2,809	3,266	3,535	3,925	11.0%	13.2%
	Subtotal	2,599	2,976	3,411	3,654	4,018	10.0%	11.5%
	Other TSPs							
	Dial-up	157	112	83	71	48	-32.6%	-25.7%
High-speed	83	103	128 #	175	219	25.5%	27.6%	
Subtotal	239	215	211	245	267	8.7%	2.8%	
Total								
Dial-up	362	279	228	189	141	-25.7%	-21.0%	
High-speed	2,477	2,912	3,394	3,710	4,144	11.7%	13.7%	
Residential total	2,838	3,191	3,622	3,899	4,285	9.9%	10.8%	
Business	Incumbent TSPs (excluding out-of-territory)	396	406	434	457	444	-2.8%	2.9%
	Cable BDUs	127	134	169	201	227	13.2%	15.6%
	Incumbent TSPs (excluding out-of-territory) and cable BDUs subtotal	523	540	604	657	671	2.1%	6.4%
	Other TSPs							
	Incumbent TSPs (out-of-territory)	125	98	112	98	93	-5.0%	-7.1%
	Resellers, utility telcos, and other carriers	214	236	223	241	255	5.7%	4.5%
	Other TSPs subtotal	339	335	335	339	348	2.6%	0.7%
	Business access total	862	874	938	997	1,019	2.3%	4.3%
	Business transport total	41	50	73	76	67	-12.8%	12.8%
	Business total	903	924	1,011	1,073	1,086	1.2%	4.7%
Wholesale Access	Higher capacity access and transport	95	77	54	54	48	-11.0%	-15.9%
	Lower capacity access	111	125	147	161	213	32.3%	17.8%
Wholesale total	206	202	201	215	261	21.5%	6.1%	
Other	Applications, equipment, and other Internet-related services	583	720	835	1,015	959	-5.5%	13.2%
Grand total	4,530	5,037	5,669	6,202	6,591	6.3%	9.8%	

- Notes:
- Wholesale Internet access and transport services are generally sold to ISPs. These services are used by the ISPs to provide Internet access service to their retail customers. Sales to non-ISP entities, such as VoIP service providers, are also included in the wholesale revenues presented in Table 5.3.1 as “higher capacity access and transport” revenues.
  - “Lower capacity access” includes services such as Bell Canada’s Gateway Access Service (GAS), TCC’s virtual point of presence (VPOP) DSL, and cable BDU-provided third-party Internet access (TPIA) service, as well as satellite capacity, and dial-up bundled with Internet access sold to ISPs.
  - In previous years, modem rental fees for residential service were included with Internet access service revenue. However, the fees are no longer included as of 2008. In 2008, the fees were approximately \$121 million.

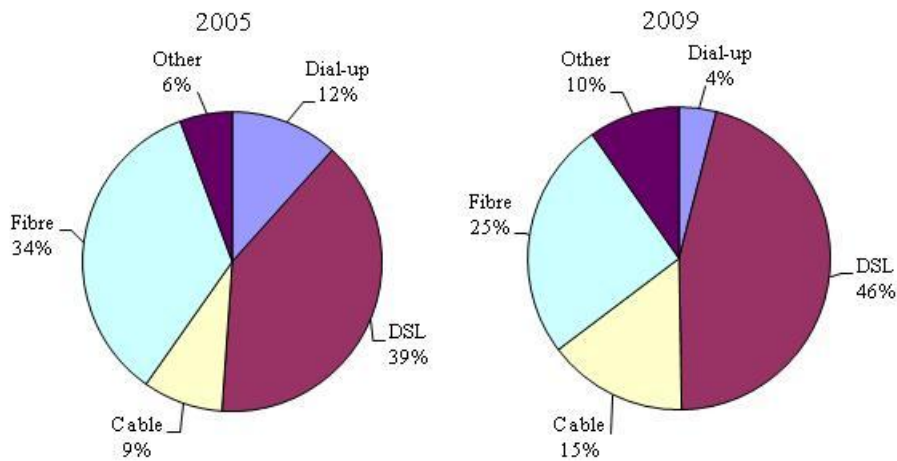
Source: CRTC data collection

**Figure 5.3.1 Internet access revenue share, by type of entity**



Source: CRTC data collection

**Figure 5.3.2 Business Internet access revenues, by access technology (2005 v. 2009)**



Source: CRTC data collection

Note: “Other” includes the remaining technologies such as, but not limited to, integrated services digital network (ISDN), fixed wireless, and satellite.

**Table 5.3.2 Residential Internet subscribers, by type of TSP**

	2005		2006		2007		2008		2009		Growth 2008-2009	CAGR 2005-2009
	Subscribers /1000	Share*	Subscribers /1000	Share*	Subscribers /1000	Share*	Subscribers /1000	Share*	Subscribers /1000	Share*		
<b>Incumbent TSPs (excluding out-of-territory)</b>												
Dial-up	765	48.8%	642	51.8%	566	60.6%	433	59.1%	286	58.8%	-33.9%	-21.8%
High-speed	2,676	41.6%	3,095	41.5%	3,405	40.7%	3,584	39.5%	3,673	38.4%	2.5%	8.2%
Subtotal	3,441	43.0%	3,736	42.9%	3,971	42.7%	4,017	40.9%	3,959	39.3%	-1.4%	3.6%
<b>Cable BDUs</b>												
Dial-up	53	3.4%	38	3.1%	18	1.9%	18	2.4%	14	2.8%	-24.4%	-28.9%
High-speed	3,467	53.9%	4,041	54.2%	4,573	54.7%	4,990	55.0%	5,358	56.0%	7.4%	11.6%
Subtotal	3,520	44.0%	4,079	46.9%	4,590	49.5%	5,008	51.1%	5,372	53.4%	7.3%	11.2%
<b>Incumbent TSPs (excluding out-of-territory) and cable BDUs subtotal</b>												
Dial-up	818	52.2%	680	54.8%	584	62.5%	451	61.6%	299	61.6%	-33.6%	-22.2%
High-speed	6,143	95.6%	7,136	95.6%	7,978	95.5%	8,574	94.5%	9,031	94.3%	5.3%	10.2%
Subtotal	6,961	87.0%	7,815	89.8%	8,561	92.2%	9,024	92.0%	9,331	92.7%	3.4%	7.6%
<b>Other TSPs</b>												
Dial-up	750	47.8%	560	45.2%	350	37.5%	281	38.4%	187	38.4%	-33.6%	-29.4%
High-speed	286	4.4%	327	4.4%	379	4.5%	503	5.5%	545	5.7%	8.2%	17.5%
Subtotal	1,036	13.0%	886	10.2%	729	7.8%	785	8.0%	731	7.3%	-6.8%	-8.3%
<b>Total</b>												
Dial-up	1,568	19.6%	1,239	14.2%	934	10.0%	732	7.5%	486	4.8%	-33.6%	-25.4%
High-speed	6,429	80.4%	7,461	85.8%	8,356	90.0%	9,077	92.5%	9,576	95.2%	5.5%	10.5%
Grand total	7,997		8,700		9,290		9,809		10,062		2.6%	6.0%

Note: (\*) Percentages refer to the access mode's proportion of all residential Internet subscriptions by type, except for the total rows, which represent the proportion of total industry residential subscriptions.

Source: CRTC data collection

**Table 5.3.3 Residential Internet plans and pricing (part 1 of 2)**

	2006	2007	2008	2009
<b>Downstream speed</b>	<b>One-month revenue (%)</b>			
Lite and wideband up to 256 Kbps	6.6	6.8	2.9	0.4%
Wideband 300 to 1400 Kbps	11.9	12.2	15.1	8.8%
<b>Broadband</b>				
1.5 to 4 Mbps	14.7	14	17.3	21.3%
5 to 9 Mbps	60.3	58	53.6	45.6%
10 to 15 Mbps	6.3	8.7	10.8	22.8%
16 to 100 Mbps	0.2	0.2	0.3	1.0%
<b>Total sample</b>	<b>242.1</b>	<b>268.9</b>	<b>306.4</b>	<b>314.8</b>
<b>Downstream speed</b>	<b>Subscribers (%)</b>			
Lite and wideband up to 256 Kbps	10.1	10	4.3	0.9%
Wideband 300 to 1400 Kbps	14.7	15.3	19.8	12.4%
<b>Broadband</b>				
1.5 to 4 Mbps	15.1	15.3	17	25.0%
5 to 9 Mbps	54.8	52.5	50.1	41.7%
10 to 15 Mbps	5.2	6.8	8.6	19.4%
16 to 100 Mbps	0.1	0.1	0.2	0.6%
<b>Total sample</b>	<b>6,880.30</b>	<b>7,576.60</b>	<b>8,184.40</b>	<b>8,346.9</b>
<b>Downstream speed</b>	<b>Average revenue per subscriber</b>			
Lite and wideband up to 256 Kbps	\$22.91	\$24.37	\$24.86	\$17.75
Wideband 300 to 1400 Kbps	\$28.30	\$28.29	\$28.57	\$26.84
<b>Broadband</b>				
1.5 to 4 Mbps	\$34.24	\$32.53	\$38.22	\$32.46
5 to 9 Mbps	\$38.74	\$39.26	\$40.00	\$41.36
10 to 15 Mbps	\$43.17	\$45.23	\$47.06	\$44.43
16 to 100 Mbps	\$81.30	\$51.17	\$63.06	\$65.08
<b>Total sample</b>	<b>\$35.18</b>	<b>\$35.50</b>	<b>\$37.44</b>	<b>\$37.86</b>
<b>Downstream speed</b>	<b>Weighted-average upload speed (Kbps)</b>			
Lite and wideband up to 256 Kbps	94	118	131	128
Wideband 300 to 1400 Kbps	306	294	286	267
<b>Broadband</b>				
1.5 to 4 Mbps	537	537	809	656
5 to 9 Mbps	619	677	744	755
10 to 15 Mbps	742	815	862	751
16 to 100 Mbps	1,006	1,000	1,120	1,085
<b>Total sample</b>	<b>514</b>	<b>552</b>	<b>649</b>	<b>665</b>
<b>Weighted-average download speed</b>	<b>3,826</b>	<b>4,227</b>	<b>4,928</b>	<b>5,937</b>

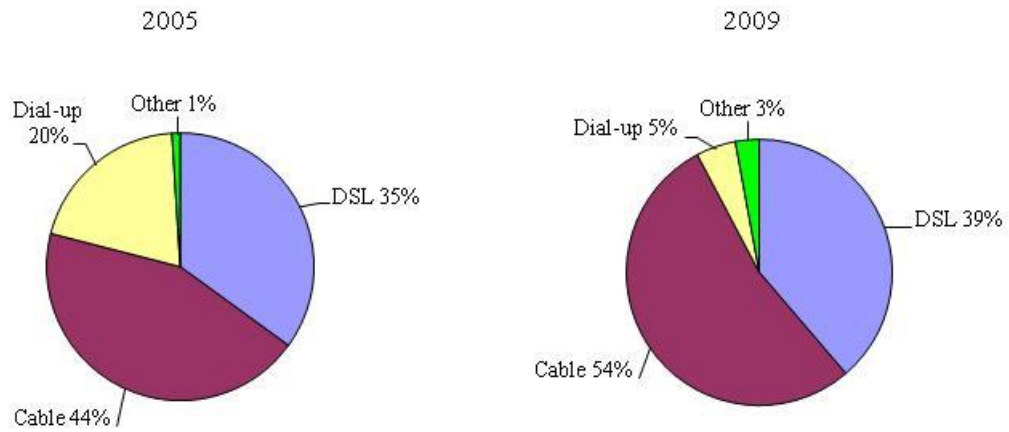
**Table 5.3.3 Residential Internet plans and pricing (part 2 of 2)**

	2006	2007	2008	2009
Downstream speed	Weighted-average upload/download limit in gigabytes (GB)			
Lite and wideband up to 256 Kbps	-	-	8.50	11.75
Wideband 300 to 1400 Kbps	-	-	8.75	3.04
Broadband				
1.5 to 4 Mbps	-	-	43.25	32.20
5 to 9 Mbps	-	-	54.18	42.80
10 to 15 Mbps	-	-	80.81	69.53
16 to 100 Mbps	-	-	101.91	104.14
Total sample	-	-	42.34	40.32

Source: CRTC data collection

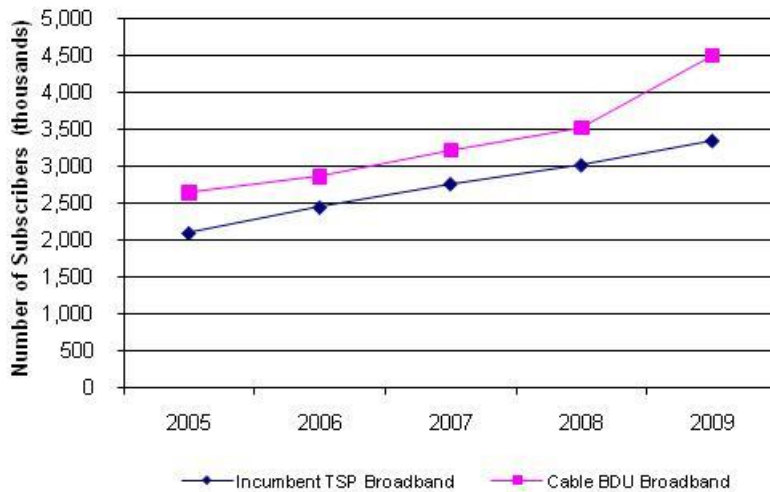
- Note:
1. Weighted average download limits are calculated only for those plans that have limits.
  2. 2008 and 2009 data excludes terminal rental revenues.

**Figure 5.3.3 Residential Internet access technology mix (2005 v. 2009)**



Source: CRTC data collection

**Figure 5.3.4 Broadband (greater than 1.5 Mbps) subscriptions**



Source: CRTC data collection

**Broadband availability - Statistical information**

**Table 5.3.4 Key telecommunications availability indicators**

Platform	Availability				
	2005	2006	2007	2008	2009
Wireless	97%	97%	98%	98%	99%
Mobile 3G or equivalent	na	na	78%	91%	96%
DSL	na	na	na	84%	85%
Cable modem	na	na	na	80%	80%
IPTV <sup>1</sup>	n/a	8%	10%	10%	10%
Digital satellite	National	National	National	National	National

Source: CRTC data collection

Note: 1. As of 31 August

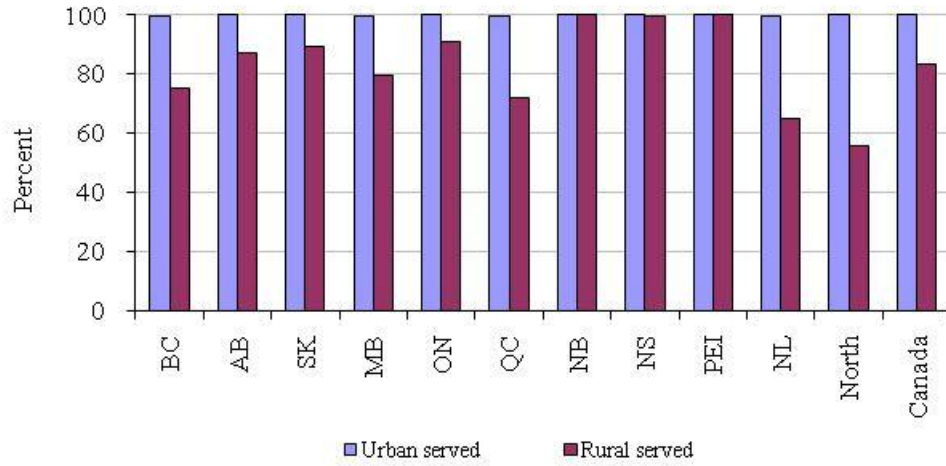
2. n/a: data not available

**Figure 5.3.5 Broadband availability (percentage of households) (2009)**



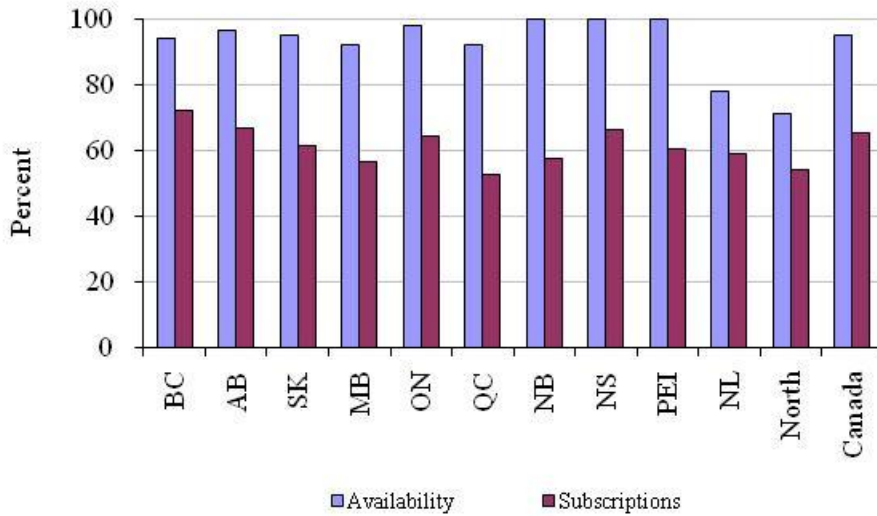
Source: Industry Canada and CRTC data collection

**Figure 5.3.6 Broadband availability – Urban v. rural (percentage of households) (2009)**



Source: Industry Canada and CRTC data collection

**Figure 5.3.7 Broadband availability v. broadband subscriptions (2009)**



Source: Industry Canada and CRTC data collection

**Table 5.3.5 Number of households that can have broadband access (thousands)**

Province	2008		2009
British Columbia	1,659	#	1,691
Alberta	1,339	#	1,368
Saskatchewan	389		394
Manitoba	433	#	443
Ontario	4,738	#	4,812
Quebec	3,028	#	3,062
New Brunswick	257		304
Nova Scotia	387		388
Prince Edward Island	54	#	55
Newfoundland and Labrador	155		155
North	26	#	26
<b>Canada</b>	<b>12,465</b>	<b>#</b>	<b>12,700</b>

Source: CRTC data collection

**Table 5.3.6 Broadband availability, by technology (percentage of households)**

Technology	2008		2009
DSL	84%		85%
Cable modem	80%		80%
Fixed wireless	82%	#	83%
<b>Canada</b>	<b>95%</b>	<b>#</b>	<b>95%</b>

Source: CRTC data collection