

# **LOCAL TELECOMMUNICATION COMPETITION SURVEY**

## **YEAR 2011 REPORT**

Economic Research and  
Financial Analysis Division

Public Utility Commission of Oregon

December 2011

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## Executive Summary

The staff of the Public Utility Commission of Oregon (OPUC) sent its survey in January 2011 to the 267 certified local exchange carriers (LECs) in Oregon for the purpose of assessing the status of local telephone competition in Oregon. The survey asked all carriers, both incumbent local exchange carriers (ILECs) and competitive local exchange carriers (CLECs), to provide information regarding the local services they provided in 2010. Staff received survey responses from all 32 ILECs and 219 out of 235 CLECs, for a total response rate of 93.2 percent.

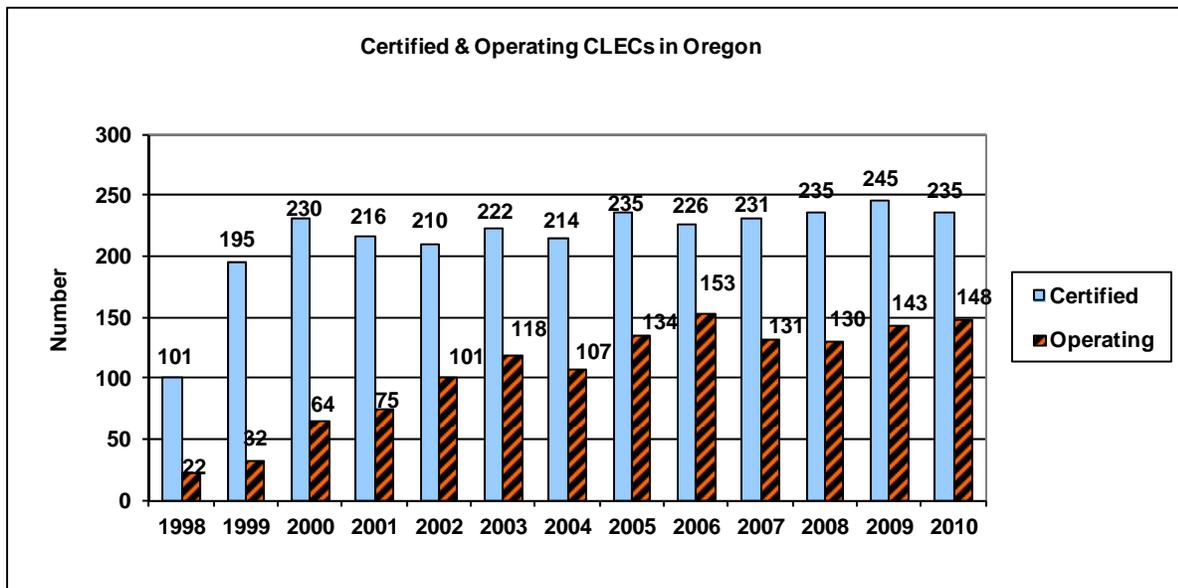
### HIGHLIGHTS

Total Oregon Local Exchange Service Revenue 2010.....	\$769.3 Million
ILEC Revenue - \$Millions / Share .....	\$587.5 / 76%
CLEC Revenue - \$Millions / Share.....	\$181.8 / 24%
Total Switched Lines at Year-end 2010 .....	1,514,949
ILEC Switched Lines / Market Share.....	1,123,531 / 74.2%
CLEC Switched Lines / Market Share .....	391,418 / 25.8%
Total Residential Switched Lines at Year-end 2010.....	736,542
ILEC Residential Switched Lines / Market Share .....	675,166 / 91.7%
CLEC Residential Switched Lines / Market Share .....	61,376 / 8.3%
Total Business Switched Lines at Year-end 2010 .....	634,613
ILEC Business Switched Lines / Market Share .....	324,881 / 51.2%
CLEC Business Switched Lines / Market Share .....	309,732 / 48.8%
Total Wholesale Switched Lines at Year-end 2010 .....	143,794
ILEC Wholesale Switched Lines / Market Share .....	123,484 / 85.9%
CLEC Wholesale Switched Lines / Market Share.....	20,310 / 14.1%
Change from Prior Year - Total Switched Lines / % Change.....	-159,532 / -9.5%
Change from Prior Year - ILEC Switched Lines / % Change.....	-141,928 / -11.2%
Change from Prior Year - CLEC Switched Lines / % Change .....	17,604 / -4.3%
UNE-P and UNE-P Equivalent, Lines / % Change from Prior Year ...	248,402 / 22%
CLECs Having Certificates .....	235
CLECs Doing Business / % of Total CLECs.....	148 / 63%

Total Number of Private Line Circuits .....	20,863
Lower Capacity Circuits / % of Total.....	12,734 / 61%
Higher Capacity Circuits / % of Total.....	8,129 / 39%
Total Number of Digital Subscriber Lines.....	407,440
CLEC Interconnected Voice over Internet Protocol (VoIP) Lines	52,185
All LEC Capital Expenditures - \$Millions / % of Revenue .....	\$180.6 / 23.5%
ILEC Capital Expenditures - \$Millions / % of Revenue.....	\$114.2 / 19.4%
CLEC Capital Expenditures - \$Millions / % of Revenue.....	\$66.4 / 36.5%

Growth in the number of operating competitive local exchange providers has leveled off over the last several years. Over the last thirteen years, the number of certified CLECs increased from 101 to 235 and the number of CLECs actually providing services in Oregon increased from 22 to 148.

### CLEC Certificate Trends 1998 through 2010



As of December 2010, 148 out of the 235 certified CLECs reported they were actually providing local exchange services (63%, up from 58.8% in 2009). Using a widely recognized measure of market share, the percentage of local switched telephone lines, CLEC market share was 25.8 percent in 2010 (up from 24.4% in 2009). According to

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the survey responses, competitive entry into Oregon's residential telecommunications market is still small. CLECs had an 8.3 percent (up from 7.2% in 2009) share of the Oregon residential market in 2010. Most competitive entry is in the business market.

CLECs supplied 48.8 percent of business customers' switched local exchange lines statewide in 2010, which was up from 48.2 percent in 2009.

Total Oregon LEC switched local exchange lines declined 9.5 percent in 2010, from 1.674 million in 2009 to 1.514 million in 2010. The following table summarizes the Survey response rates and service operation rates in Oregon.

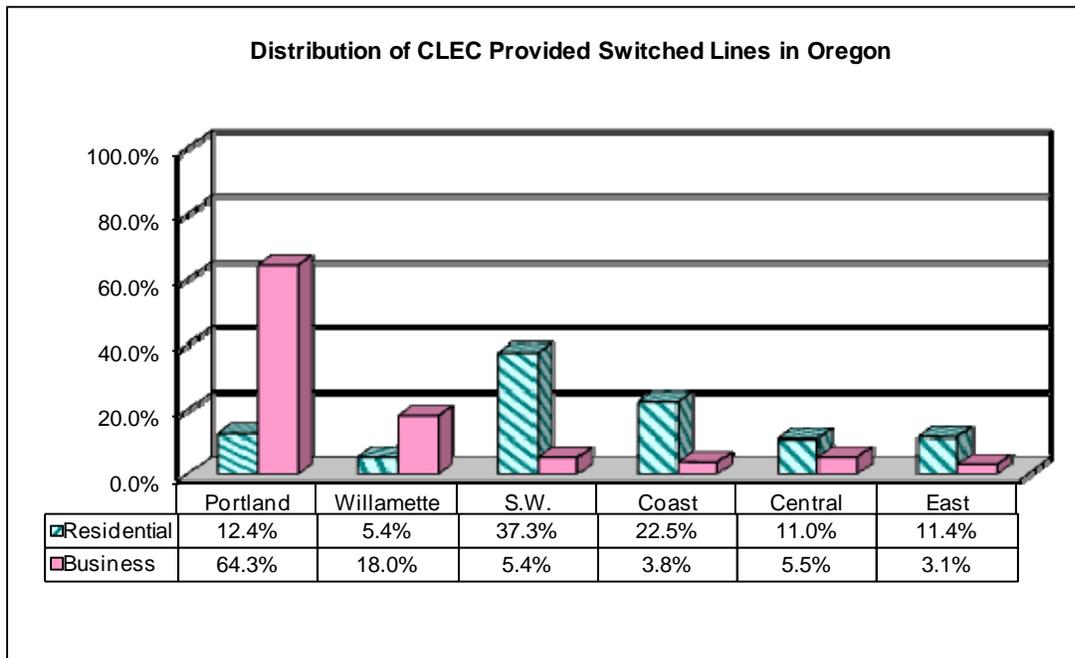
**Survey Response Rates and Service Operation Rates**

2010	Surveys Sent	Responses	Response Rate %
<b>Total LECs</b>	<b>267</b>	<b>251</b>	<b>94.0%</b>
<b>ILECs</b>	<b>32</b>	<b>32</b>	<b>100.0%</b>
<b>CLECs</b>	<b>235</b>	<b>219</b>	<b>93.2%</b>
	Surveys Sent	Service Provided	Operation Rate %
<b>Total LECs</b>	<b>267</b>	<b>180</b>	<b>67.4%</b>
<b>ILECs</b>	<b>32</b>	<b>32</b>	<b>100.0%</b>
<b>CLECs</b>	<b>235</b>	<b>148</b>	<b>63.0%</b>

Competitive entry into Oregon's telecommunications market varies by region. Seventy-nine percent of CLECs' lines are business lines. Over 60 percent of CLECs provided switched line service in Portland, followed by the Willamette Valley, the Coast, Central, Southwest, and East regions.

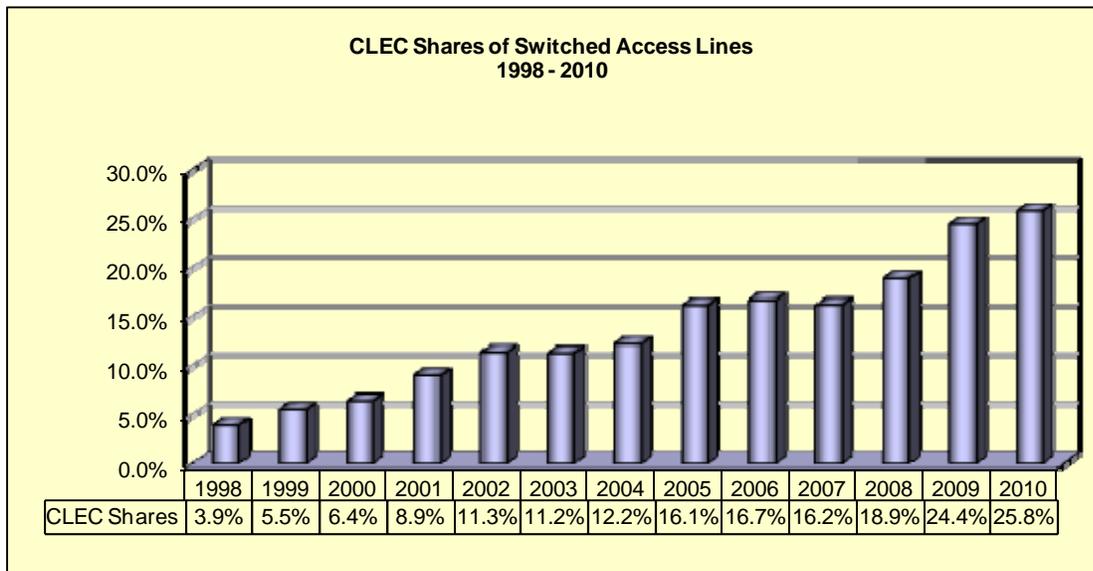
Of the 1.5 million switched access lines served by all local exchange carriers, almost 50 percent were residential lines. CLECs served 8.3 percent of Oregon's residential lines. Thirty-seven percent of all residential lines were in the Portland area, where CLECs served 2.8 percent in the Portland area.

**Distribution of CLECs' Switched Access Lines by Region**



Approximately 64.3 percent of CLECs' business lines and 12.4 percent of CLECs' residential lines were in the Portland Metropolitan area.

**CLECs' Share of Switched Access Lines: 1998 – 2010**



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Switched access lines served by CLECs at the end of 2010 represented 25.8 percent of total switched access lines in Oregon, compared with a national Non-ILEC Share of 34.4 percent as of the end of December 2010 (FCC Table 1 - End-User Switched Access Lines Reported). CLECs had 8.3 percent of the residential market in Oregon compared with 7.2 percent nationally in December 2010. In the business market, CLECs' share was 48.8 percent in Oregon compared to 31.5 percent nationally.<sup>1</sup>

The number of CLEC lines in Oregon decreased by 4.5 percent in 2010, from 409,022 (in 2009) to 390,649. By comparison, total ILEC lines decreased by 11.2 percent in 2010, from 1,265,459 (in 2009) to 1,123,531.

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<sup>1</sup> Federal Communications Commission (FCC) Local Telephone Competition: Status as of December 31, 2010, Industry Analysis and Technology Division, Wireline Competition Bureau, October 2011, [www.fcc.gov/wcb/stats](http://www.fcc.gov/wcb/stats). Table 7: Residential and Business Presubscribed Switched Access Lines.

## I. Purpose of the Survey

The purpose of the survey is to collect information from incumbent and competitive local exchange carriers to determine the status of competition for local exchange services in Oregon. This study is a key component of the 1999 Oregon legislation requiring the Public Utility Commission to report on telecommunications issues.

## II. Survey Participants and Responses

In January 2011, Commission staff sent a survey to all 267 carriers holding a certificate issued by the Commission to provide local services in Oregon. Of the 267 LECs, 32 are ILECs, and 235 are CLECs. The ILECs are the traditional local telephone service providers in the state. CLECs compete with the traditional local service providers. The survey asked each LEC to provide information regarding their operations in 2010.

All 32 ILECs responded to the survey. For CLECs, 219 of the 235 (93%) responded. The overall response rate for all LECs was 93.6 percent (Table 1). In 2010, 67 percent (versus 64% in 2009) of all certified carriers were actually providing services, with 100 percent of ILECs and 63 percent (versus 59% in 2009) of CLECs (148 out of 235) providing services. This analysis assumes non-responding CLECs did not provide local service in Oregon in 2010.

**Table 1. Survey Response Rates and Service Operation Rates**

2010	Surveys Sent	Responses	Response Rate %
<b>Total LECs</b>	<b>267</b>	<b>251</b>	<b>94.0%</b>
<b>ILECs</b>	<b>32</b>	<b>32</b>	<b>100.0%</b>
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	Surveys Sent	Service Provided	Operation Rate %
<b>Total LECs</b>	<b>267</b>	<b>180</b>	<b>67.4%</b>
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### III. Service Types

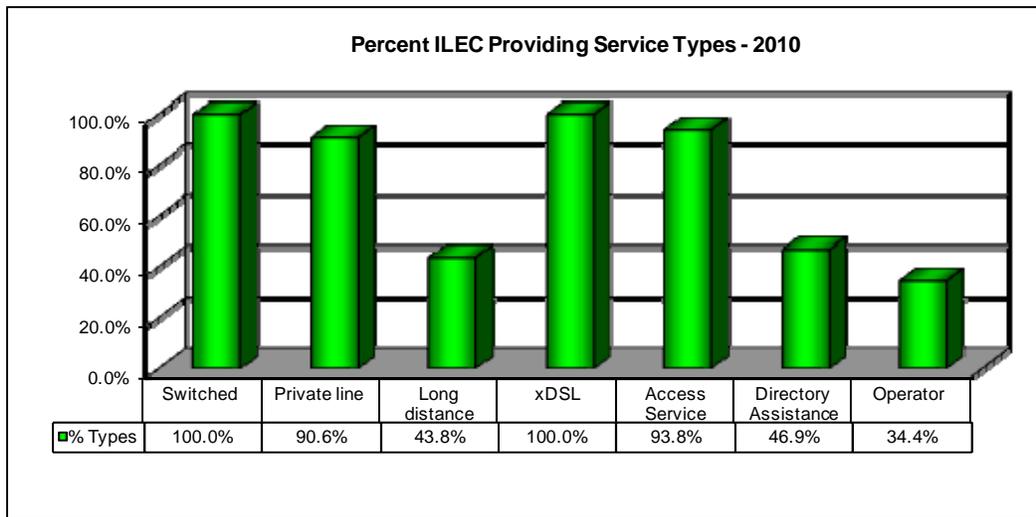
#### 1. ILEC Service Types

All 32 certified ILECs provided local exchange switched services to retail customers. Local switched services include dial tone, local (toll-free) calling, directory listings, and various features such as call waiting and caller ID. Local exchange private line (i.e., dedicated and point-to-point) services include DSL (Digital Subscriber Line) services. ILEC service types and the percentage of ILECs providing each type of service in 2010 are shown in Table 2 and in Figure 1.

**Table 2. ILEC Market Coverage by Service Category**

Service Types	# of ILECs Providing Service	% of ILECs Providing Service
Local Exchange Switched Service	32	100.0%
Local Exchange Private Line Service:	28	87.5%
Lower Capacity	28	87.5%
Higher Capacity	22	68.8%
Long Distance Service	14	43.8%
xDSL (Digital Subscriber Line)	32	100.0%
Access Service	30	93.8%
Directory Assistance	15	46.9%
Operator	11	34.4%
Telecom using Cable TV Facilities	0	0.0%
Telecom using VoIP	0	0.0%
Others	9	28.1%

**Figure 1. ILEC Service Types and Distributions**



All 32 ILECs provided switched access service and xDSL service, 90.6 percent of ILECs provided private line service, 43.8 percent provided long distance service, 93.8 percent provided access service, 46.9 percent provided directory assistance service, and 34.4 percent provided operator service in 2010.

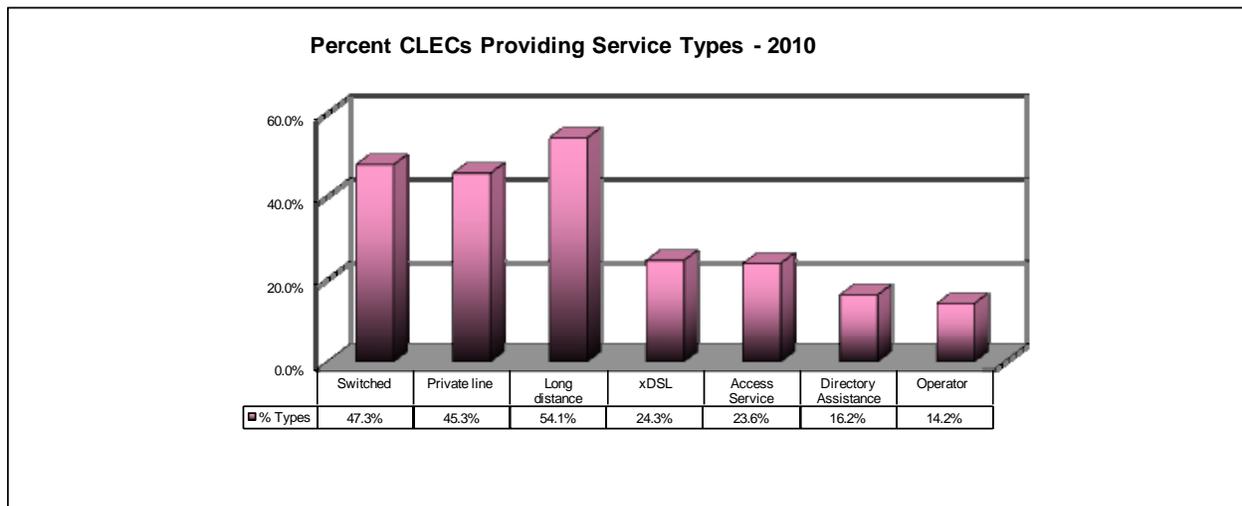
## 2. CLEC Service Types

As of December 2010, 148 (63%) of the 235 certified CLECs were providing some kind of telecommunications service in Oregon (up from 59% in 2009). This analysis assumes non-responding CLECs did not provide local service in Oregon in 2010. Of the 148 CLECs providing services, 69 provided local exchange service (versus 63 in 2009). Eighty CLECs provided long distance service (versus 82 in 2009) and 65 provided inter-exchange private line services. CLEC service types and service distributions are shown in Table 3 and Figure 2 below.

**Table 3. CLEC Market Coverage by Service Category**

CLEC Service Types	# of CLECs Providing Service	% of CLECs Providing This Service
<b>Operating CLECs</b>	<b>148</b>	
<b>Local Exchange Switched Service</b>	<b>70</b>	<b>47.3%</b>
<b>Local Exchange Private Line Service:</b>	<b>67</b>	<b>45.3%</b>
<b>Lower Capacity</b>	<b>22</b>	<b>14.9%</b>
<b>Higher Capacity</b>	<b>45</b>	<b>30.4%</b>
<b>Long Distance Service</b>	<b>80</b>	<b>54.1%</b>
<b>xDSL (Digital Subscriber Line)</b>	<b>36</b>	<b>24.3%</b>
<b>Access Service</b>	<b>35</b>	<b>23.6%</b>
<b>Directory Assistance</b>	<b>24</b>	<b>16.2%</b>
<b>Operator</b>	<b>21</b>	<b>14.2%</b>
<b>Telecom using Cable TV Facilities</b>	<b>4</b>	<b>2.7%</b>
<b>Telecom using VoIP</b>	<b>25</b>	<b>16.9%</b>
<b>Others</b>	<b>45</b>	<b>30.4%</b>

**Figure 2. CLEC Service Types and Distributions**



## IV. Switched Services – Market Size and Share Analysis

### 1. Market Size and Shares

In 2010, there were 148 CLECs competing in the local telecommunication services market. CLECs as a group had a market share ranging between 12 percent and 25.8 percent, depending on how market share is measured. In this report, market share is measured in three ways: by the number of customers served; by the number of lines provided; and by revenues.

**Table 4. 2010 Oregon Switched Service Market Shares**

2010	Customers	Lines	Revenue-\$millions
ILECS	762,933	1,123,531	441.9
CLECS	104,956	391,418	130.0
<b>Total</b>	<b>867,889</b>	<b>1,514,949</b>	<b>571.9</b>
%	Customers	Lines	Revenue
ILECS	87.9%	74.2%	77.3%
CLECS	12.1%	25.8%	22.7%
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

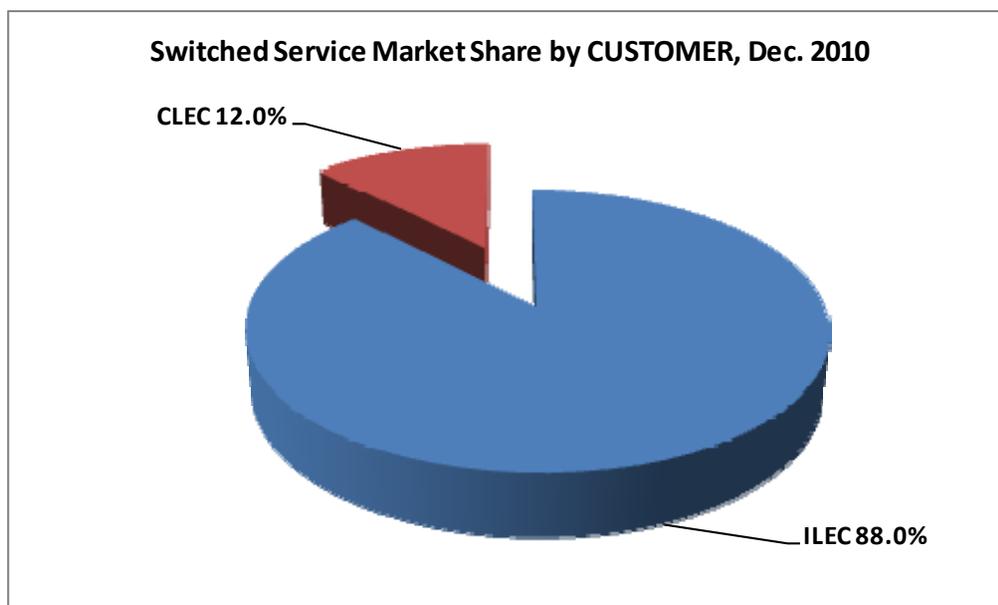
CLEC's share of retail customers<sup>2</sup> in 2010 was 12 percent. According to the survey responses, Oregon LECs provided local exchange switched services to 867,889 Oregon customers. ILECs served 762,933 (88%) of the total, while CLECs served 104,956 customers (12%). (See Table 4 and Figure 3).

The 32 ILECs providing local exchange switched service had 88 percent of customers, (89% in 2009), 74 percent of switched access lines (75.6% in 2009) and 82 percent of switched service revenues (80% in 2009) (see Table 4).

<sup>2</sup> DEFINITIONS are from INSTRUCTIONS FOR ANNUAL REPORTS (FORM C AND FORM L) at [http://www.puc.state.or.us/PUC/telecom/forms/2009/C\\_L09\\_Instructions.pdf](http://www.puc.state.or.us/PUC/telecom/forms/2009/C_L09_Instructions.pdf).

**Customer** – a person or entity that had applied for, been accepted, and was receiving service for a price during the period covered by this report. A customer can have multiple lines; for example, if you send only one bill to a business, governmental agency, or residence, count the bill a one customer.

**Figure 3. Market Shares for Switched Service**



CLEC's share of retail lines<sup>3</sup> in 2010 was 25.8 percent (Table 4). Oregon LECs supplied 1,514,180 (down 9.5% from a year earlier) local switched telephone lines to retail customers. Of that total, ILECs supplied 74.2 percent (1,123,531 or 11.2% less than the prior year) of all lines and CLECs the remaining 391,418 (25.8% of the total and a 4.3% decrease from the prior year). CLECs supplied an average of 3.7 lines per customer, 4.0 in 2009, while ILECs supplied an average of 1.5 lines per customer (and also 1.5 in 2009).

In 2010, retail revenues from total switched access services in Oregon were an estimated \$571.9 million (down from \$618 million in 2009). ILECs received \$441.9 million (down from \$495.7 million in 2009), or 77.3 percent of total switched access line revenue, and CLECs received the remaining \$130 million (up from \$122 million in 2009), or 22.7 percent of total switched access line revenues. CLEC's share of retail revenues<sup>4</sup> in 2010 was 22.7 percent versus 19.8 percent in 2009.

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<sup>3</sup> **Local exchange line** – a voice-level transmission path (64 kbps digital or less than 4 kHz analog) linking an end user (retail customer) location with the switching center providing dial tone.

<sup>4</sup> **Revenues** – the cash inflows or equivalents from your operations during the year. *Exclude* loan proceeds, shareholder contributions, and taxes that you billed to customers. *Include* regulated and non regulated charges; federal and state charges; federal and Oregon universal service end-user surcharges and distributions; charges for switched lines, local usage, extended area service, repair and maintenance services, directory listing services, and add-on features such as call waiting, voice messaging, and caller identification; and charges for private line circuits and add-on capabilities such as multiplexing, conditioning, and bridging.

CLECs achieved a higher share of lines per customer (with roughly comparable revenues per line) and therefore a significantly higher share of revenues than of customers. This was due to CLECs' focus on business customers. Seventy-six percent (76%) of CLECs' switched service revenues were from the business sector in 2010. Forty-one percent (41%) of ILECs' switched service revenues were from the business sector in 2010.

ILEC's average annual switched service revenue-per-line was \$393. CLEC's average annual switched service revenue-per-line was \$332 (see Table 5).

**Table 5. 2010 Average Switched Service Customers, Lines, and Revenues**

2010	CLECs	ILECs
<b>Lines Per Customer</b>	<b>3.7</b>	<b>1.5</b>
<b>Annual Revenue Per Line</b>	<b>\$332</b>	<b>\$393</b>
<b>Annual Revenue Per Customer</b>	<b>\$1,238</b>	<b>\$579</b>

The 32 ILECs providing local exchange switched service had 88 percent of customers, (89% in 2009), 74.2 percent of switched access lines (75.6% in 2009) and 77.3 percent of switched service revenues (80.3% in 2009) (see Table 4).

In 2010, the "big four" ILECs (CenturyTel, Qwest, United, and Frontier) had a 77.7 percent share of total customers (versus 80% in 2009), 67.5 percent of total switched lines (69% in 2009), and 71.3 percent of total switched service revenues (74% in 2009) (see table 6).

**Table 6. 2010 Market Shares of ILECs, CLECs, and Big 4 ILECs**

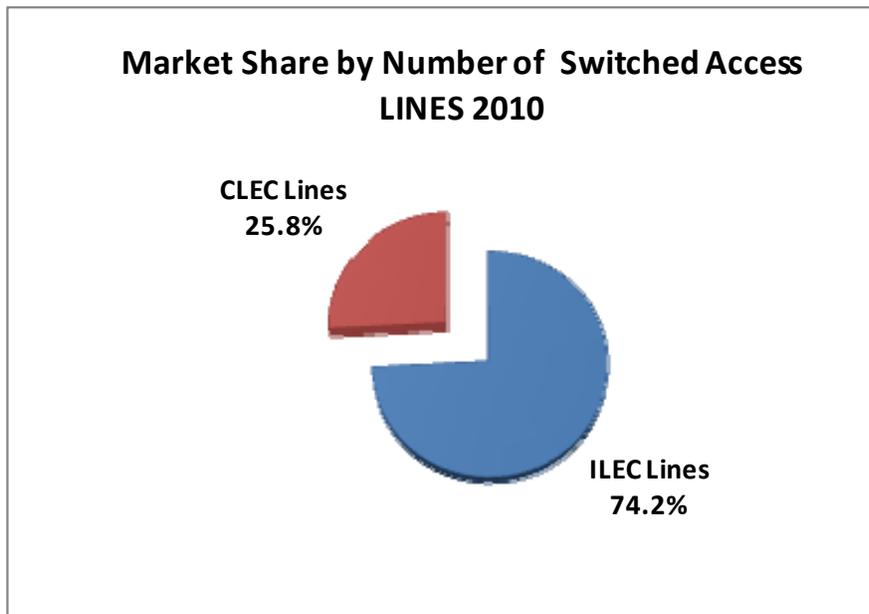
<b>CUSTOMERS</b>	<b>ILECs/Total</b>	<b>CLECs/Total</b>	<b>Big-4 ILECs/Total</b>
<b>Residential</b>	<b>91.8%</b>	<b>8.2%</b>	<b>81.6%</b>
<b>Business</b>	<b>66.8%</b>	<b>33.2%</b>	<b>56.2%</b>
<b>Wholesale</b>	<b>95.0%</b>	<b>5.0%</b>	<b>95.0%</b>
<b>Total Customers</b>	<b>87.9%</b>	<b>12.1%</b>	<b>77.7%</b>
<b>SWITCHED LINES</b>	<b>ILECs/Total</b>	<b>CLECs/Total</b>	<b>Big-4 ILECs/Total</b>
<b>Residential</b>	<b>91.7%</b>	<b>8.3%</b>	<b>81.3%</b>
<b>Business</b>	<b>51.2%</b>	<b>48.8%</b>	<b>47.4%</b>
<b>Wholesale</b>	<b>85.9%</b>	<b>14.1%</b>	<b>85.9%</b>
<b>Total Lines</b>	<b>74.2%</b>	<b>25.8%</b>	<b>67.5%</b>
<b>REVENUES</b>	<b>ILECs/Total</b>	<b>CLECs/Total</b>	<b>Big-4 ILECs/Total</b>
<b>Residential</b>	<b>88.6%</b>	<b>11.4%</b>	<b>79.1%</b>
<b>Business</b>	<b>64.6%</b>	<b>35.4%</b>	<b>61.1%</b>
<b>Wholesale</b>	<b>94.1%</b>	<b>5.9%</b>	<b>94.1%</b>
<b>Total Revenues</b>	<b>77.3%</b>	<b>22.7%</b>	<b>71.3%</b>

### **A. Business Market Share**

CLECs supplied service to 33.2 percent of business customers in 2010, compared to 12 percent of all types (residential, business and wholesale) of customers. CLECs supplied 48.8 percent (48.2% in 2009) of business switched access lines. This is substantially greater than the 25.8 percent CLEC share of Oregon total lines (see Figure 4). Similarly, CLECs had a 35.4 percent (33.3% in 2009) share of switched business service revenues, compared to 22.7 percent (and 19.7% in 2009) of total switched service revenues (see Table 6 and Figure 4).

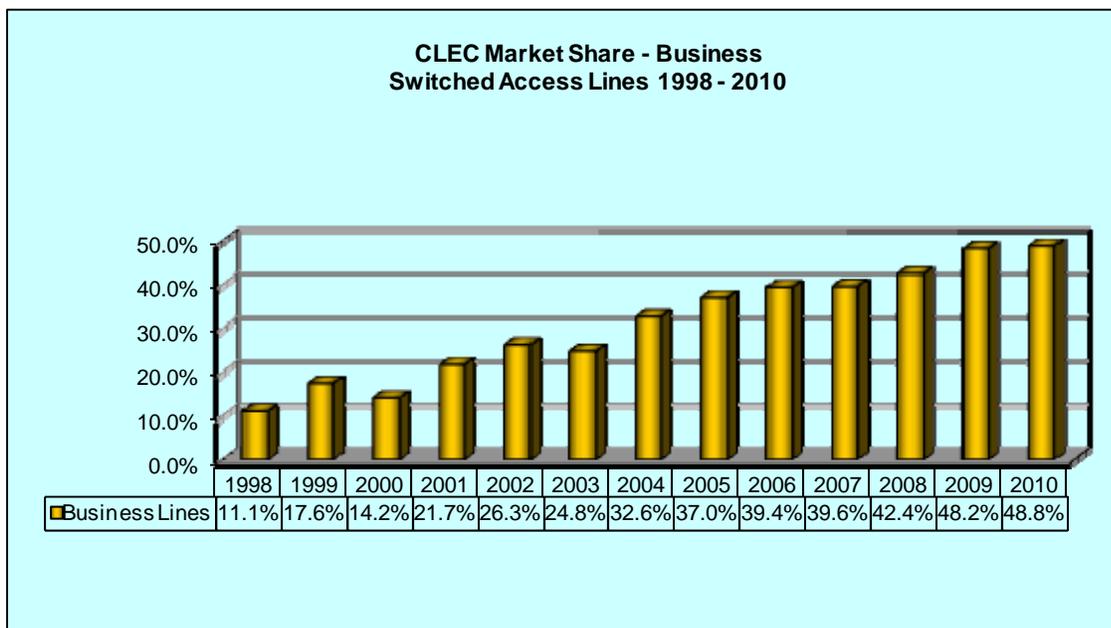
CLECs had 22.7 percent of Oregon's total switched access service revenues and ILECs had 77.3 percent. The 2010 CLEC business revenue per business line was \$318. ILEC's was \$553 per business line.

**Figure 4. The Market Shares as Measured by Total Lines Served**



CLEC’s market share of switched access lines for business has steadily increased over the past 12 years; growing from 11 percent in 1998 to 48.8 percent in 2010 (see Figure 5).

**Figure 5. CLEC Business Line Market Share Growth**



## B. Residential Market Share

**Table 7. 2010 Residential Switched Services Market Shares**

Residential	Residential Customers	Residential Lines	Residential Revenues \$millions
ILECs	668,099	675,166	228.2
CLECs	59,947	61,376	29.4
Total	728,046	736,542	257.6
ILECs/Total	91.8%	91.7%	88.6%
CLECs/Total	8.2%	8.3%	11.4%

CLECs' share of residential customers was 8.3 percent in 2010 (see Table 7). According to the survey, Oregon LECs provided local exchange switched services to 728,046 Oregon residential customers. ILECs served 668,099 residential customers or 91.8 percent of the total, while CLECs served 59,947 residential customers or 8.2 percent of the total.

CLECs' share of residential lines was 8.3 percent in 2010. Oregon LECs supplied a total of 736,542 local switched telephone lines to residential customers. ILECs supplied 91.7 percent or 675,166 residential lines, and CLECs provided 8.3 percent or 61,376 residential lines.

ILECs served 91.7 percent of the residential line market in 2010 (versus 92.8 percent in 2009). The "big four" ILECs (CenturyTel, Qwest, United, and Frontier) provided 81.3 percent of total residential lines, same as a year earlier. On average, typical residential local phone service is less profitable than typical business service because it costs more on a per line basis to provide service to an individual home than to typically more geographically concentrated businesses. CLEC had 8.3 percent residential lines, while ILEC had 91.7 percent residential lines. Most CLEC operations are focused on the more profitable business market.

Overall residential revenues from local exchange switched service in Oregon in 2010 were an estimated \$257.6 million as compared with \$278.2 million in 2009. Average residential revenue per line was \$479.28 for CLECs and \$337.94 for ILECs.

## **2. CLEC Provisioning of Switched Service**

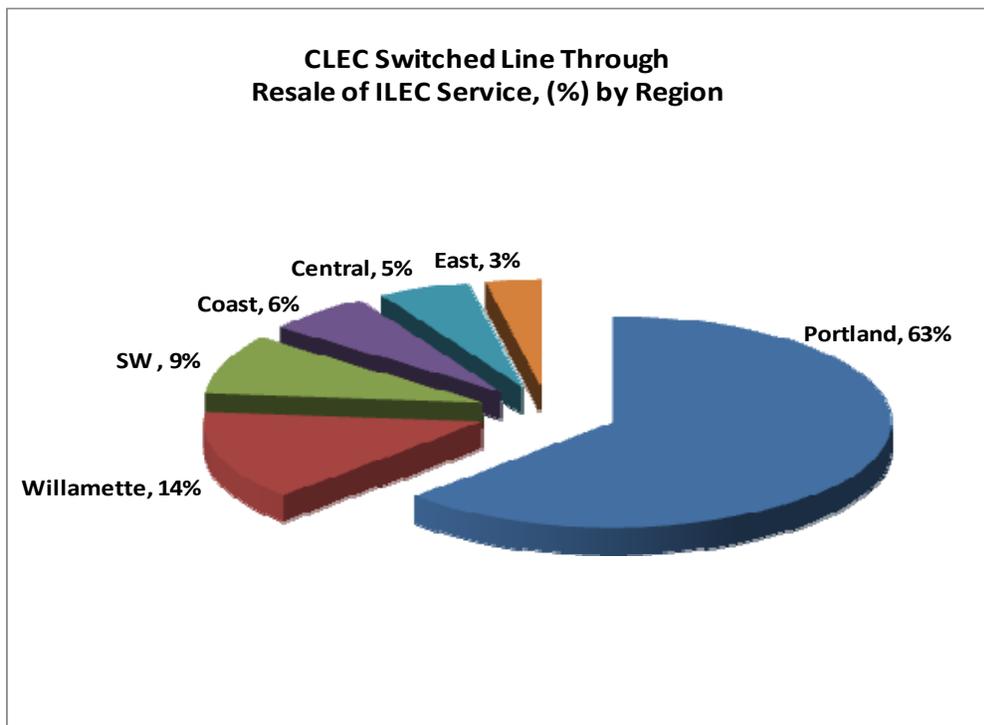
Thirty-nine of the 70 CLECs (56%) provided local switched service in December 2010 by reselling ILEC services. A CLEC reseller buys complete retail services from ILECs, and then resells those services under the CLECs' own name to customers.

### **A. Facility-Based CLEC**

Approximately 44 percent (31 of 70) of the CLECs providing local switched service are fully or partially facility-based providers. These fully or partially facility-based CLECs provided 326,503 switched access lines in 2010, which was 83.4 percent of CLEC's total lines. There were 31 CLEC facilities-based providers identified in the survey. However, not all of these lines were provisioned using facilities owned and operated by CLECs. A facilities-based CLEC typically owns and operates some telecommunications facilities and also resells services obtained from one or more ILECs.

For facility-based only, over 63 percent of resold ILEC service occurred in the Portland area, and 14 percent of resold CLEC service occurred in the Willamette Area (see Figure 6).

**Figure 6. Market Concentration – CLECs’ Resale of ILECs’ Lines in 2010**

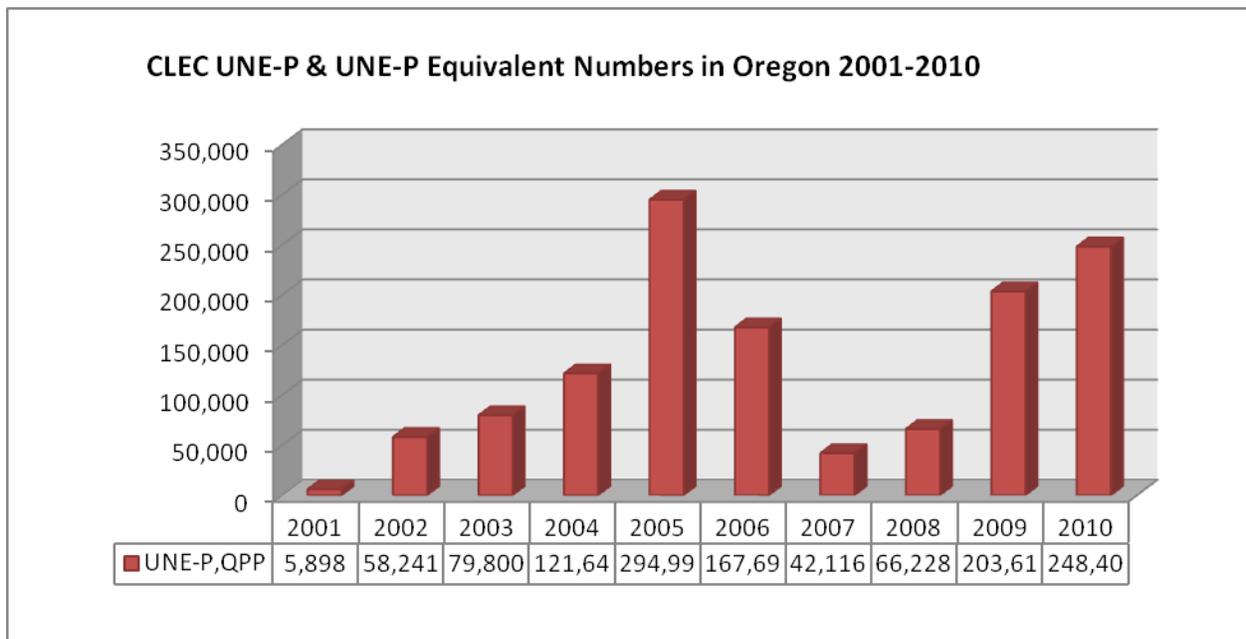


## **B. UNE-P CLEC**

Twenty-one CLECs reported providing switched access lines by purchasing Unbundled Network Elements Platform (UNE-P) or UNE-P replacement which is the company's

UNE-P equivalent. The UNE-P and UNE-P equivalent numbers were 248,402 (lines) in December 2010, versus 203,617 in December 2009, 66,228 in 2008 and 42,116 in 2007. Figure 7 below indicates that as Federal Communications Commission's (FCC) policy changed, total UNE-P plus QPP numbers changed correspondingly.

**Figure 7. CLEC UNE-P and UNE-P Equivalent Numbers in Oregon 2001-2010**



### 3. Market Trends in Switched Access Services

CLECs reported 391,418 (or 25.8 percent of all LECs) of 1,514,949 statewide local switched access lines in service at the end of 2010. This represents a 4.3 percent decrease in CLEC switched lines during 2010. In comparison, the number of lines served by ILECs decreased by 11.2 percent during the preceding year, from 1,265,459 to 1,123,531 lines (see Table 8 below).

**Table 8. Trends in Switched Access Lines, 1998 to 2010**

Date	ILEC Lines	CLEC Lines	Total	CLEC Share
Dec-98	2,116,322	85,146	2,201,468	3.9%
Dec-99	2,078,678	121,277	2,199,955	5.5%
Dec-00	2,257,594	153,578	2,411,172	6.4%
Dec-01	2,238,640	219,990	2,458,630	8.9%
Dec-02	2,115,892	270,494	2,386,386	11.3%
Dec-03	2,024,882	256,571	2,281,453	11.2%
Dec-04	1,959,459	271,344	2,230,803	12.2%
Dec-05	1,803,832	346,923	2,150,755	16.1%
Dec-06	1,652,900	330,407	1,983,307	16.7%
Dec-07	1,605,911	309,674	1,915,585	16.2%
Dec-08	1,436,946	334,274	1,771,220	18.9%
Dec-09	1,265,459	409,022	1,674,481	24.4%
Dec-10	1,123,531	391,418	1,514,949	25.8%

**Figure 8. ILECs' Switched Access Services Market Share: 1998 to 2010**

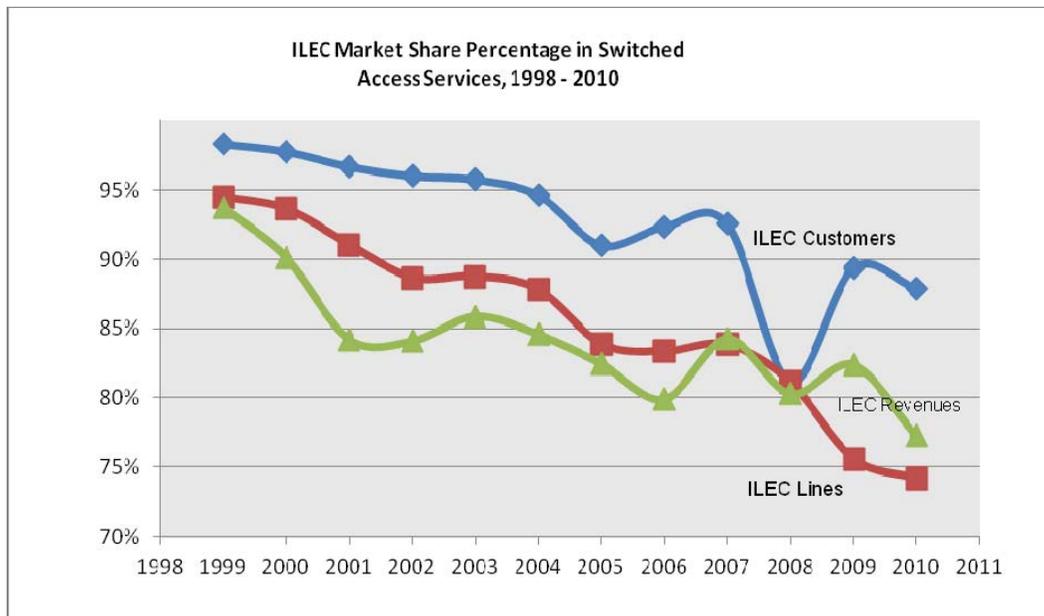


Figure 8 shows the downward trend for ILECs' share of switched access services.

ILEC residential revenue decreased 11.4 percent to \$228 million from \$257 million in 2009. ILEC business revenue decreased 9.5 percent to \$179.7 million from \$198.5 million.

**Figure 9. CLEC Switched Access Lines**

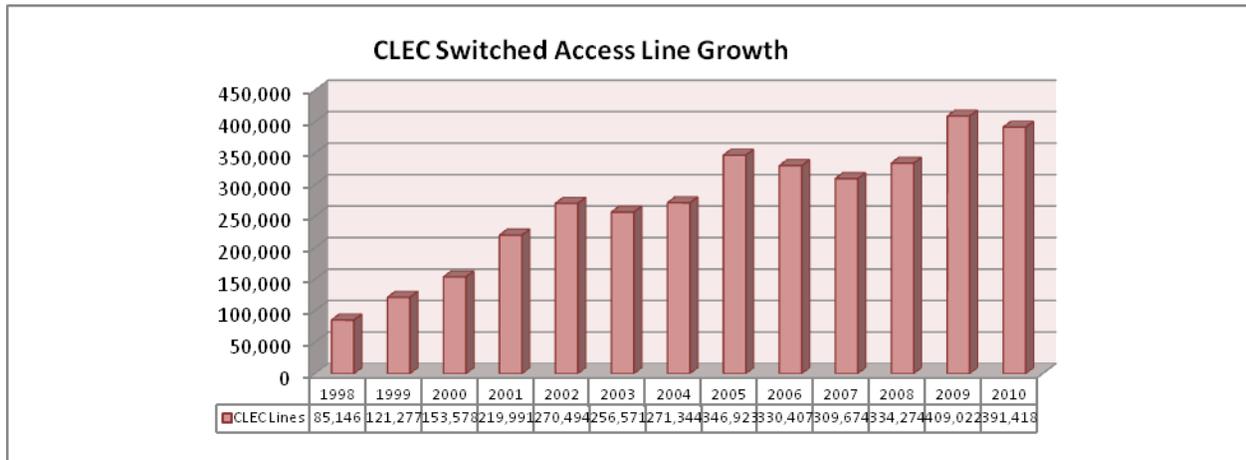
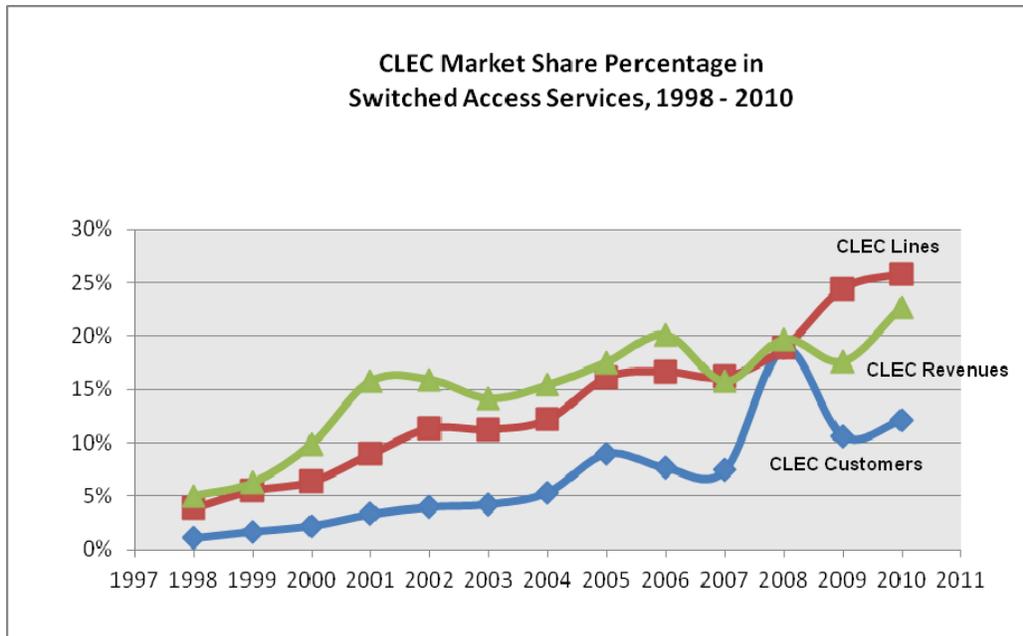


Table 8 and Figure 9 show that CLECs' switched access lines decreased in 2010. Annual growth in CLEC switched lines averaged 13.6 percent over the 1998-2010 periods, from 85,146 lines in 1998 to 391,418 lines in 2010, and total CLEC lines has increase by 3.6 times. During the same period, the number of ILEC switched access lines declined by an average of 5.1 percent per year, from 2.1 million lines in 1998 to 1.12 million lines in 2010. Total ILEC lines has decreased by 47 percent. The total number of switched access lines, ILECs and CLECs, has declined by 31 percent since 1998. This decline is presumably due to the increased use of cell phones, the replacement of second lines with DSL service, and the use of cable service for Internet access.

Figure 10 below shows CLECs' market share growth. CLECs' share of switched service revenue was 22.7 percent in 2010 compared to less than 5 percent market share in 1998. The CLEC share of switched lines increased to 25.8 percent in 2010, up from 3.9 percent in 1998. CLEC's share of customers was 12 percent in 2010 versus 1.0 percent in 1998.

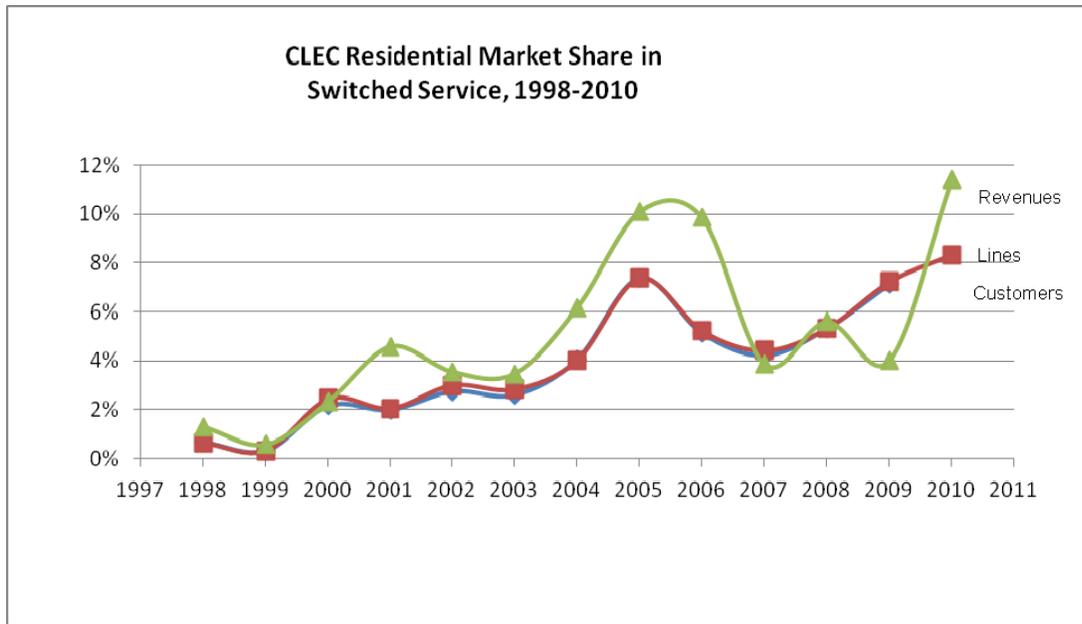
**Figure 10. CLEC's Market Shares in Switched Access Services: 1998 to 2010**



For residential market,

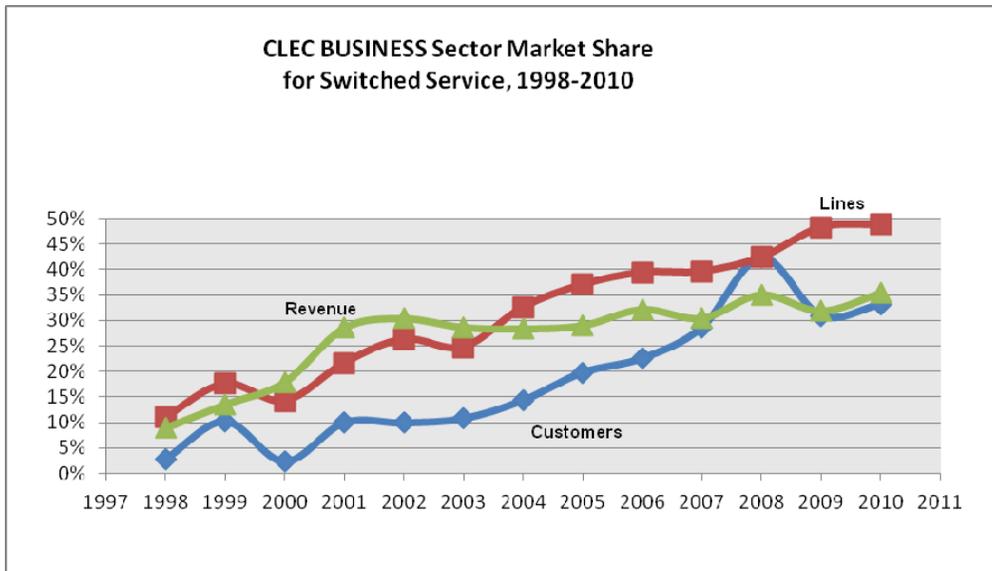
CLEC's share of residential switched service revenue was 11.4 percent of total ILEC and CLEC residential switched service revenue in 2010, compared to 1.3 percent in 1998. Over the same period, CLEC's market share for residential lines increased to 8.3 percent from 0.7 percent, and CLEC's market share for residential customers increased to 8.2 percent from 0.7 percent as well (see Figure 11).

**Figure 11. CLEC Residential Market Shares for Switched Access Services: 1998 to 2010**



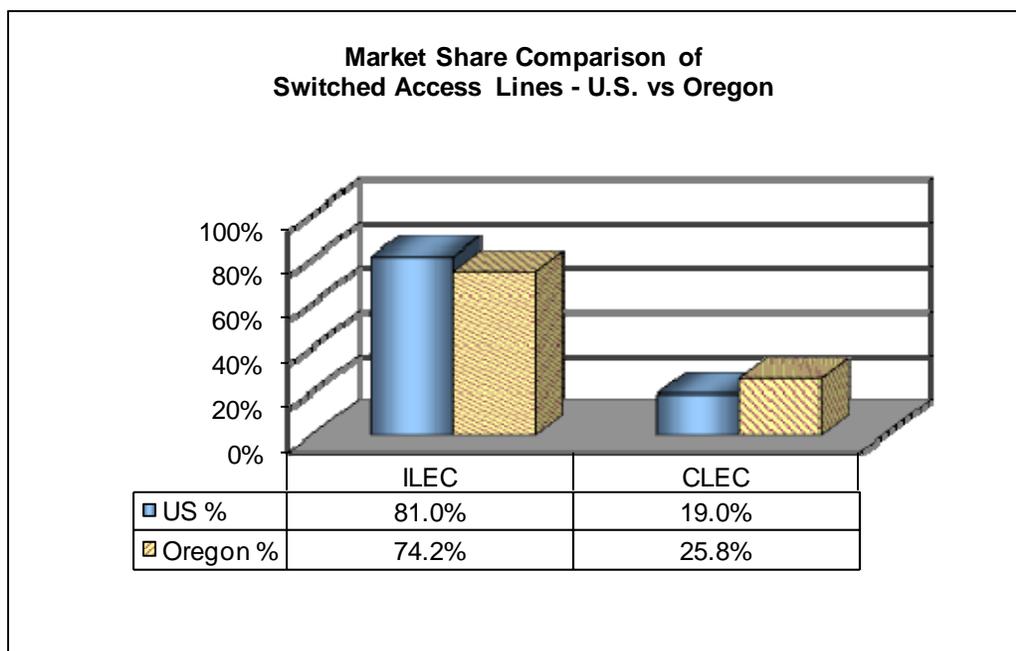
CLEC's share of total business switched service revenue increased to 35.4 percent in 2010, from 8.9 percent 12 years ago in 1998. In the same period, CLEC's share of business lines increased to 48.8 percent from 11.1 percent. CLEC's share of business customers increased to 33.2 percent from 2.8 percent over the same period (see Figure 12).

**Figure 12. CLEC Business Market Shares for Switched Access Service: 1998 to 2010**



According to FCC Local Telephone Competition, 10/2011 Release, as of 12/31/10 Tables (in Excel Format), U.S. end-use customers obtained local telephone service by utilizing approximately 94.7 million ILEC switched access lines (81% of total LEC lines) and 22.2 million CLEC switched access lines (19% of total). In comparison, Oregon ILECs provided 74.2 percent of total switched access lines and Oregon CLECs provided 25.8 percent, Oregon CLECs provided over 25 percent of lines or 6.8 percent above the national average in 2010. (see Figure 13).

**Figure 13. Market Share Comparison of Switched Access Lines – U.S. vs. Oregon**



## V. High Speed Access Services

### 1. Market Size and Share

#### A. Private Line Service

Local exchange private lines are dedicated circuits customers use to transmit information between two or more pre-selected locations within the geography served by a telephone exchange. Local private line services are available in a range of capacities or bandwidths. The survey distinguishes between lower capacity circuits (bandwidth less than 1.544 Megabits per second) and higher capacity circuits (bandwidth of 1.544 Mbps or greater).

Revenue from private line services was 8.1 percent of total 2010 service revenues, DSL was 17.6 percent and switched service was 74.3 percent of total 2010 revenues respectively.

Forty-eight CLECs reported they provide local exchange private line services. CLECs' private line market shares ranged from 27.4 percent for private line circuits to 57 percent for private line revenue (see Table 9). The percentage depends on how

market share is measured and whether the focus is on lower or higher capacity private line circuits. The survey measured CLECs' market share in three ways: customers, circuits, and revenues.

**Table 9. Local Exchange Private Line Services**

2010	All LECs	CLECs	ILECs	CLEC Share
Private Line Customers	5,727	1,040	4,687	18.2%
Total Private Line Circuits	20,863	5,715	15,148	27.4%
Lower Capacity	12,734	471	12,263	3.7%
Higher Capacity	8,129	5,244	2,885	64.5%
Annual Revenues (- \$000)	\$62,006	\$35,347	\$26,659	57.0%
Annual Revenue \$ per Circuit	\$2,972	\$6,185	\$1,760	

CLEC's share of local private line customers<sup>5</sup> was 18.2 percent, or 1,040 customers,<sup>6</sup> while ILECs provided service to 4,687 customers, or 81.8 percent of the total.

CLEC's market share of all private line circuits<sup>7</sup> was 27.4 percent. CLEC's market share of lower capacity circuits was 3.7 percent, while their market share for higher capacity circuits was 64.5 percent. Total private line circuits, including lower and higher capacity circuits, numbered 5,715 in 2010.

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<sup>5</sup> **Customer** – a person or entity that had applied for, been accepted, and was receiving service for a price during the period covered by this report. A customer can have multiple lines; for example, if you send only one bill to a business, governmental agency, or residence, the entity counts as one customer.

<sup>6</sup> Note that survey results may overstate CLEC's share of local private line customers, since local private line customers may buy private line services from more than one carrier at a time. As a result, a CLEC and an ILEC may report the same entity as a private line customer.

<sup>7</sup> **Circuit** – a termination you provide and bill to your customers for private line service. If you provide a circuit that connects two customer locations, and bill the customer for both ends of the circuit, this counts as two terminations. The capacity of a circuit should be determined by the capacity you deliver to the customer at the point of termination, even though the customer may further subdivide that capacity using its own multiplexing or other equipment.

**Table 10. Private Line Service Revenues: 2010**

2010	Total	ILECs	CLECs
Shares	100.0%	43.0%	57.0%
\$ Million/year	\$62.0	\$26.7	\$35.3

CLEC's share of total local private line service revenues<sup>8</sup> was 57 percent (see Table 10). Total revenues from local private line services in 2010 were an estimated \$62 million. Of the total estimated annual revenues, ILECs received \$26.7 million (43%) and CLECs \$35.5 million (57%). CLEC's share of revenues was greater than their share of customers, indicating that CLECs' customers spend more than the average customer.

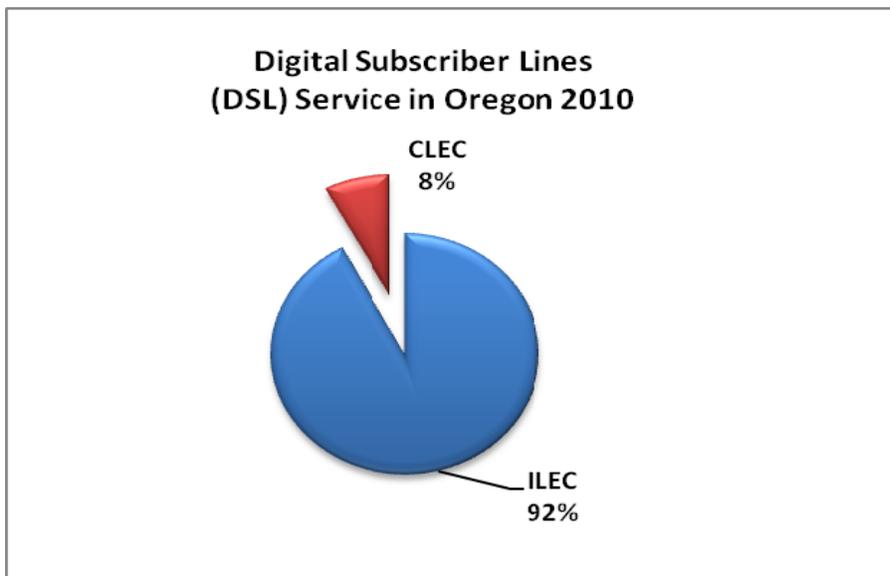
## B. DSL Service

Digital subscriber line (DSL) is a service which uses a technology that combines two-way voice and data transmissions at very high speeds over normal telephone lines. The total number of DSL in Oregon was 407,440 in 2010 and 365,735 in 2009. Ninety-two (92%) percent of DSL was provided by ILECs and 8 percent was provided by CLECs (see Figure 14).

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<sup>8</sup> **Revenues** – the cash inflows or equivalents from your operations during the year. *Excluded* are loan proceeds, shareholder contributions, and taxes that you billed to customers. *Included* are regulated and nonregulated charges; federal and state charges; federal and Oregon universal service end-user surcharges and distributions; charges for switched lines, local usage, extended area service, repair and maintenance services, directory listing services, and add-on features such as call waiting, voice messaging, and caller identification; and charges for private line circuits and add-on capabilities such as multiplexing, conditioning, and bridging.

**Figure 14. Oregon Digital Subscriber Lines (DSL)**



### **C. VoIP Service**

Interconnected Voice over Internet Protocol (VoIP) Service is a service that enables real-time, two-way voice communications; requires a broadband connection from the user's location; requires Internet-protocol compatible customer premises equipment; and permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network.

Oregon's total number of VoIP lines in 2010 was 52,185, all of which were provided by CLECs.

### **2. CLEC Provisioning of Private Line Circuits**

Twenty-nine (29) CLECs provided private line services by reselling ILEC services. Fifteen (15) CLECs provided private line service by reselling services of other CLECs. Most of this resale activity was to business customers in the Portland Metropolitan and Willamette Valley areas.

### **3. Market Trends in Local Private Line and DSL Services**

Technological change is the driving force in the telecommunications industry. Many different technologies and types of networks can provide voice telephone service, with

new ones seeming to arrive every year. Customers have replaced the relatively narrow bandwidth available using traditional modems and conventional telephone lines for data connectivity alternatives having much greater bandwidth, such as cable modems and cable facilities, digital subscriber lines (DSL), T-1 lines,<sup>9</sup> satellite data service, fixed or mobile wireless facilities, and services having transmission paths entirely over fiber optic cable.

The percentage of Oregon (residential and business) having high-speed digital access was 25.7 percent as measured by revenue. Oregon's 25.7 percent of revenue from high-speed access services consists of 8.1 percent private line service and 17.6 percent DSL services.

## VI. Market Segments by Region and Type of Service

The survey divided Oregon into six geographic regions. The regions are based on clusters of ILEC local exchange serving areas (see Figure 15). The six regions are: Portland Metropolitan,<sup>10</sup> Willamette Valley,<sup>11</sup> Southwest Interior,<sup>12</sup> Coast,<sup>13</sup> Central,<sup>14</sup> and East.<sup>15</sup>

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<sup>9</sup> T-1 (also known as Digital Service 1, or DS1) is a private line service having a theoretical bandwidth of 1.544 Megabits per second.

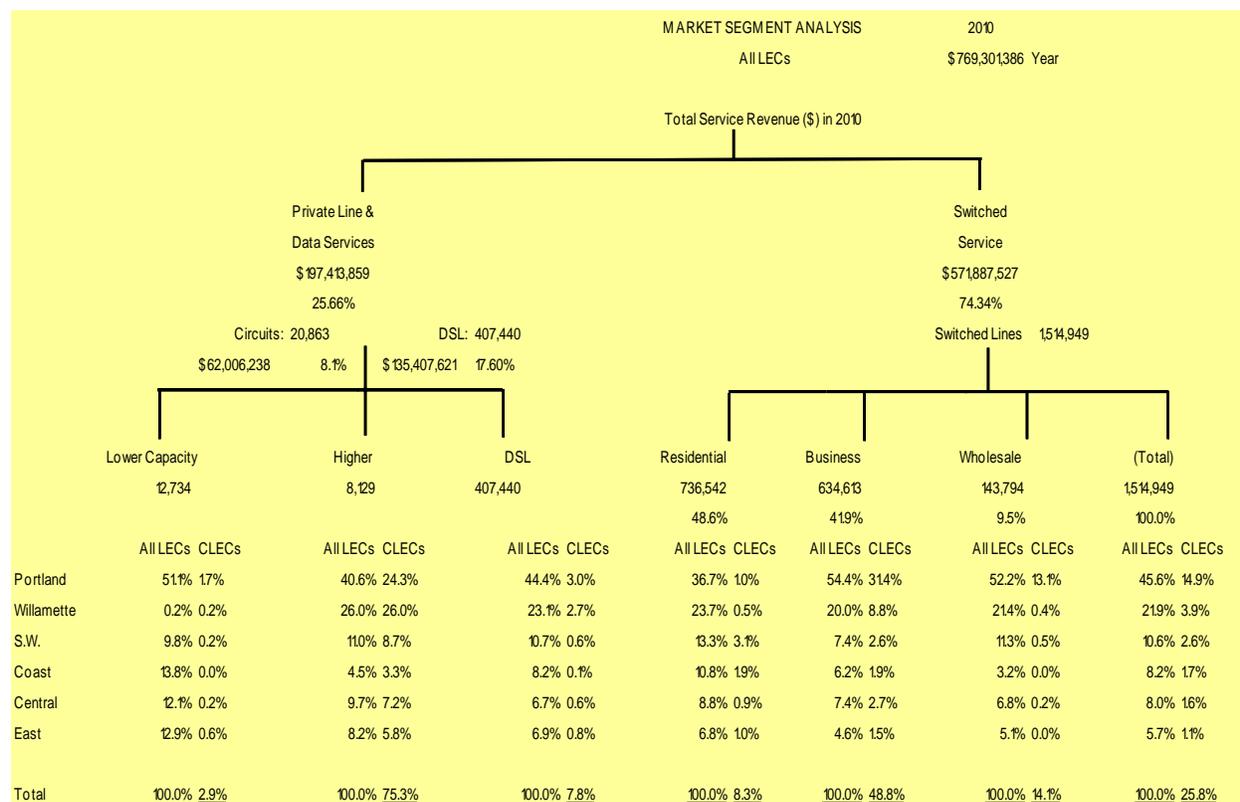
<sup>10</sup> The "**Portland Metropolitan**" region consists of the following exchanges: Aurora, Beavercreek, Beaverton, Burlington, Canby, Carlton, Charbonneau, Colton, Corbett, Estacada, Forest Grove, Gresham, Hillsboro, Hoodland, Lake Oswego, Molalla, Newberg, North Plains, Oak Grove-Milwaukie, Oregon City, Portland, Redland, Sandy, Scappoose, Scholls, Sherwood, Stafford, Sunnyside, Tigard, Vernonia, Woodburn-Hubbard, and Yamhill.

<sup>11</sup> The "**Willamette Valley**" region consists of the following exchanges: Albany, Alsea, Amity, Aumsville-Turner, Bellfountain, Blodgett, Blue River, Brownsville, Clatskanie, Corvallis, Cottage Grove, Creswell, Dallas, Dayton, Deadwood, Detroit, Drain, Eugene-Springfield, Falls City, Gervais, Government Camp, Grand Island, Grand Ronde, Halsey, Harlan, Harrisburg, Horton, Independence-Monmouth, Jefferson, Junction City, Lewisburg, Lebanon, Lobster Valley, Lowell, Lyons, Marcola, McMinnville, Mill City, Monitor, Monroe, Mt. Angel, Murphy-Provolt, Oakridge, Philomath, Rainier, Salem, Scio, Shedd, Sheridan, Silverton, St. Helens, St. Paul, Stayton, Summit, Sweet Home, Triangle Lake, Veneta, and Willamina.

<sup>12</sup> The "**Southwest Interior**" region consists of the following exchanges: Ashland, Azalea, Butte Falls, Camas Valley, Canyonville, Cave Junction, Central Point, Crater Lake, Days Creek, Diamond Lake, Elkton, Fish Lake, Glendale, Glide, Gold Hill, Grants Pass, Jacksonville, Medford, Myrtle Creek, North Umpqua, Oakland-Sutherlin, O'Brien, Phoenix-Talent, Prospect, Riddle, Rogue River, Roseburg, Selma, Shady Cove, White City, Wolf Creek, and Yoncalla.

<sup>13</sup> The "**Coast**" region consists of the following exchanges: Ash Valley, Astoria, Bandon, Bay City, Beaver, Brookings, Cannon Beach, Chitwood, Cloverdale, Coos Bay-North Bend, Coquille, Depoe Bay, Florence, Garibaldi, Gleneden Beach, Gold Beach, Jewell, Knappa, Lakeside, Langlois, Lincoln City, Mapleton, Myrtle Point, Nehalem, Newport, Pacific City, Port Orford, Powers, Reedsport, Rockaway, Scottsburg, Seaside, Siletz, South Beach, Tidewater, Tillamook, Toledo, Waldport, Warrenton, Westport, and Yachats.

**Figure 15. Local Exchange Carriers Market Segments and Shares**



## 1. Market Segments by Region

### A. Switched Services by Region

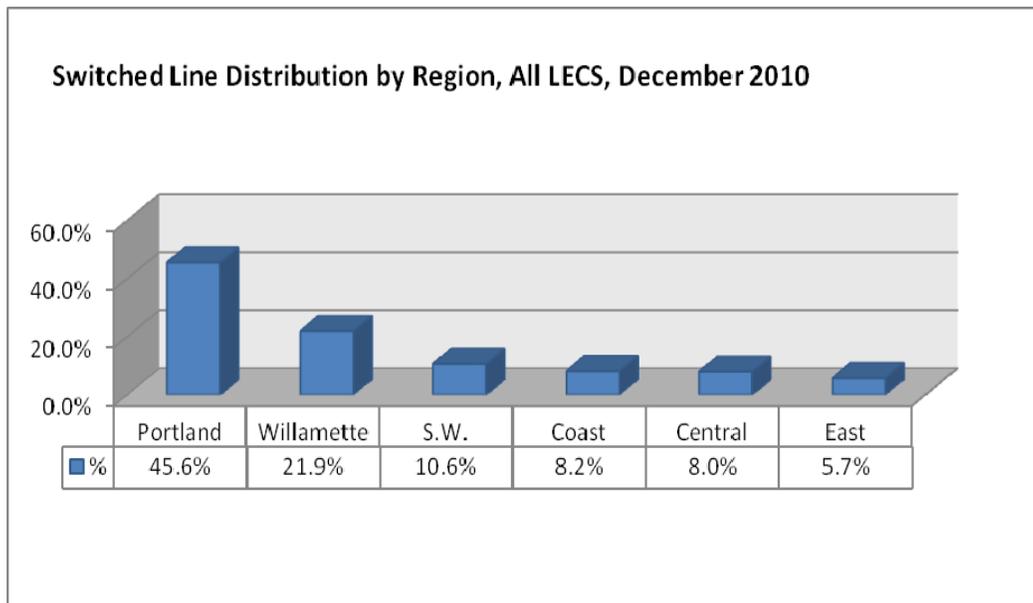
The survey asked each LEC to report the number of switched local exchange lines it supplied to customers in each region. Both ILECs and CLECs reported customers in all

<sup>14</sup> The "**Central**" region consists of the following exchanges: Antelope, Arlington, Bend, Bonanza, Bly, Camp Sherman, Cascade Locks, Chemult, Chiloquin, Condon, Culver, Dufur, Fort Klamath, Fossil, Gilchrist, Grass Valley, Hood River, Klamath Falls, Lakeview, La Pine, Madras, Malin, Maupin, Merrill, Mitchell, Moro, Mosier, Odell, Paisley, Parkdale, Paulina, Pine Grove, Prineville, Redmond, Rocky Point, Rufus, Silver Lake, Sprague River, Sisters, The Dalles, Tygh Valley, Wamic, and Wasco.

<sup>15</sup> The "**East**" region consists of the following exchanges: Adrian, Athena-Weston, Baker, Bates, Boardman, Burns, Cove, Dayville, Durkee, Echo, Elgin, Enterprise, Flora-Troy, Granite, Haines, Halfway, Harney, Harper, Helix, Heppner, Hereford-Unity, Hermiston, Huntington, Imbler, Lone, John Day, Jordan Valley, Joseph, Juntura, La Grande, Lexington, Long Creek, Lostine, Meacham, Medical Springs, Milton-Freewater, Monument, Mt. Vernon, North Powder, Nyssa, Ontario, Oregon Slope, Pendleton, Pilot Rock, Prairie City, Richland, Ridgeview, Seneca, Spray, Stanfield, Starkey, Sumpter, Ukiah, Umatilla, Union, Vale, Walla Walla (Stateline), and Wallowa.

six regions. The Portland Metropolitan region, the most populous area of the state, continues to be the largest regional market. The Portland Metropolitan region accounted for 45.6 percent (see Figure 16) of all retail local exchange switched lines in the state. Second was the Willamette Valley region, with 21.9 percent of the lines. The other four regions collectively accounted for less than a third of the state's lines: Southwest Interior (10.6%), Central (8.0%), Coast (8.2%), and East (5.7%).

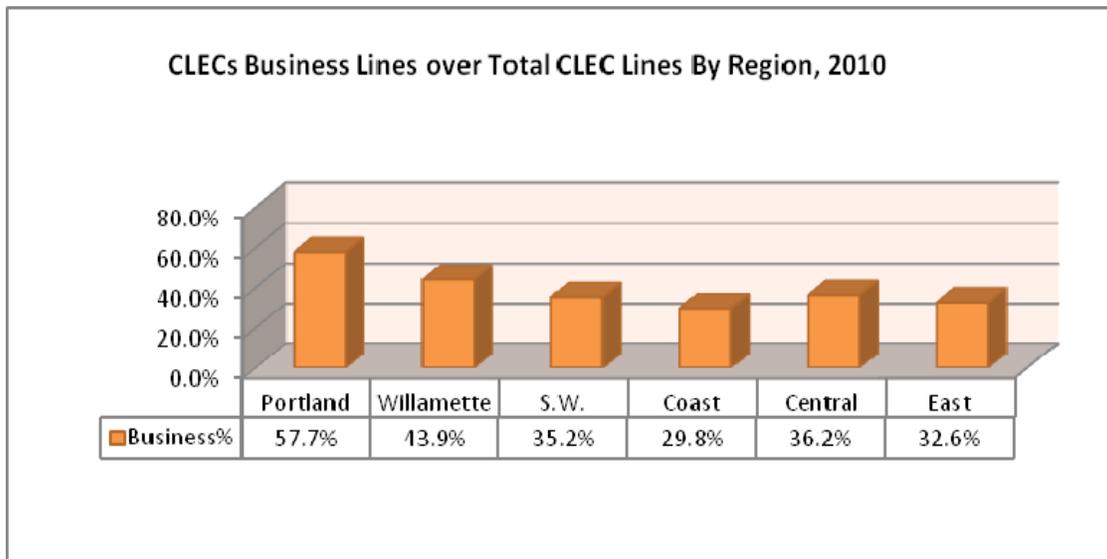
**Figure 16. Oregon LECs' Switched Lines by Region**



Survey responses indicate that CLECs provided competitive local switched service in all six regions of the state. Competitive entry is highest in the Portland Metropolitan region. Statewide, CLECs had a 25.8 percent share of switched local exchange lines. For the Residential market, CLECs had 8.3 percent of lines in the state in 2010.

In the Business market, CLECs had 48.8 percent of lines in the state, and 57.7 percent of all CLEC business switched lines were in the Portland Metro region (see Figure 17).

**Figure 17. Distribution of CLEC Business Lines by Region**

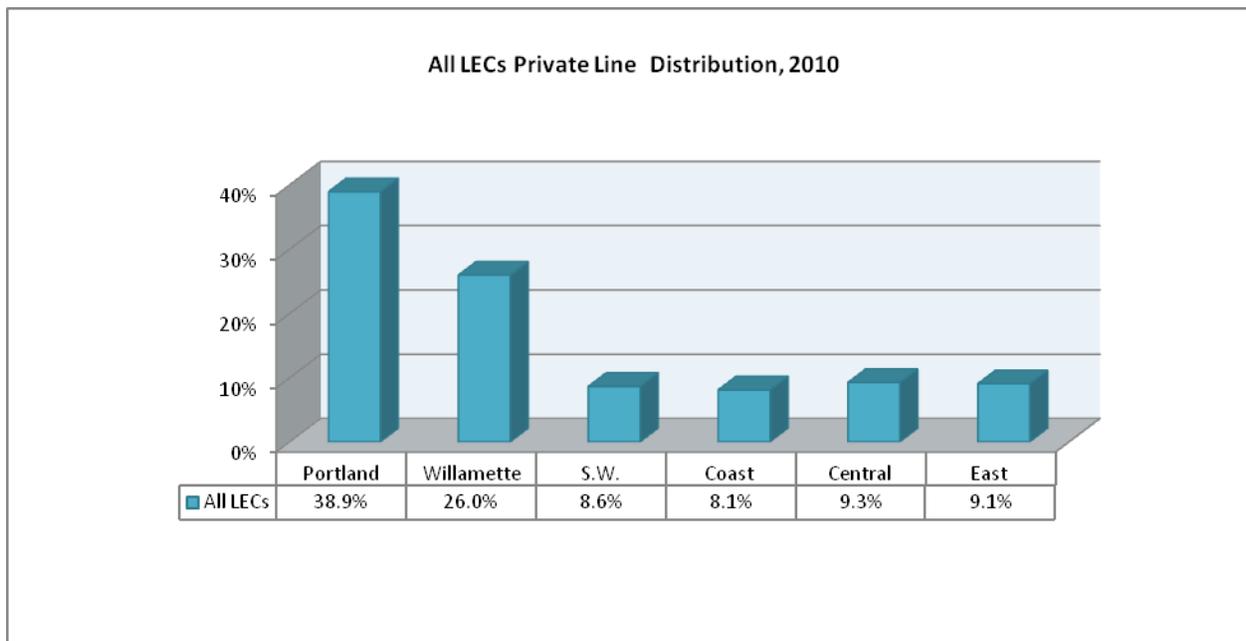


**B. Private Line Service by Region**

A private line is a dedicated, non-switched link from one or more customer-specified locations to one or more customer-specified locations. A circuit is a complete electrical path providing one or two-way communication between two points comprised of associated send and receive channels. Capacity is determined by the highest data transmission rate in either direction.

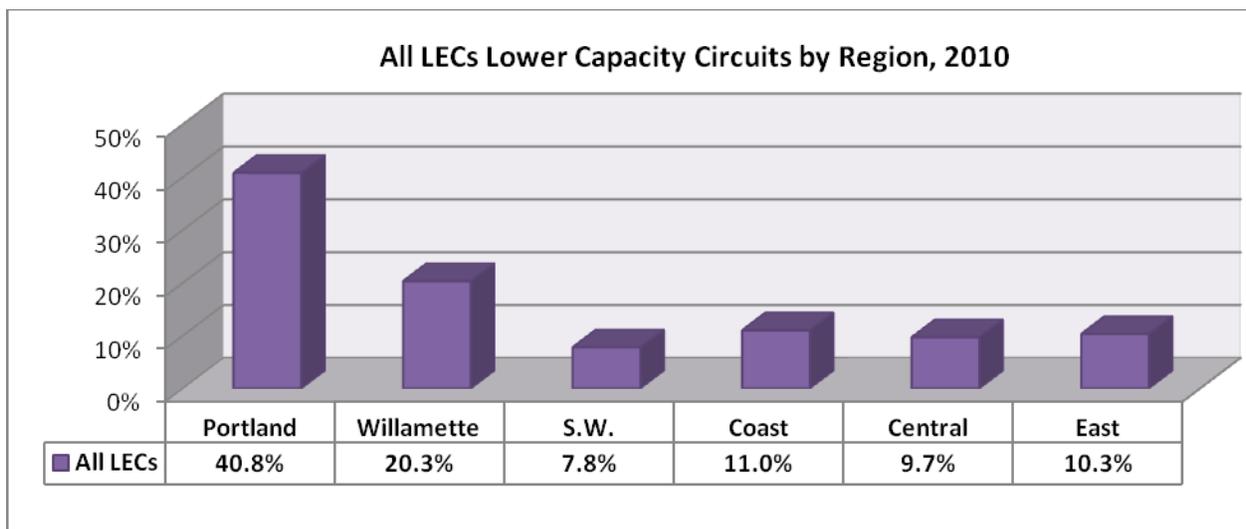
The Portland Metropolitan region is the largest regional private line market, with 38.9 percent (see Figure 18) of all retail private line circuits in the state. The second largest region was the Willamette Valley, with 26 percent of private line circuits. The other four regions collectively accounted for 35.1 percent of the state's private line circuits: Central (9.3%), Southwest Interior (8.6%), East (9.1%), and Coast (8.1%).

**Figure 18. Oregon Private Line Service by Region: 2010**



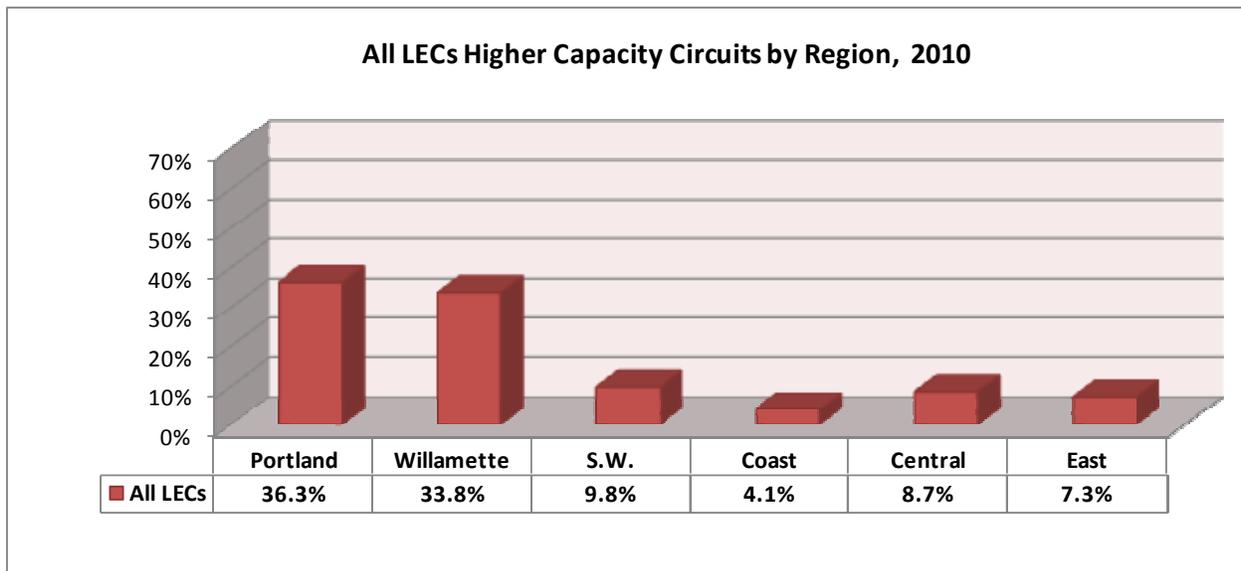
Of the state's 20,863 local exchange private line circuits, the majority (61 percent) were in the lower capacity category. The Portland Metropolitan region was the largest market for lower capacity circuits, with 40.8 percent (see Figure 19) of the lower capacity private line circuits in the state. The second largest market was the Willamette Valley region with 20.3 percent of lower capacity private line circuits, followed by the Central (9.7%), Coast (11%), Southwest Interior (7.8%), and East (10.3%) regions.

**Figure 19. Lower Capacity Private Line Circuits by Region: 2010**



Higher capacity private line circuits accounted for 39 percent of the state's total private line circuits. In December 2010, the market for higher capacity private line circuits was largest in the Portland Metropolitan region, with 36.3 percent of the state's total (see Figure 20). The second largest market was the Willamette Valley region with 33.8 percent of higher capacity private line circuits, followed by the Southwest Interior (9.8%), Central (8.7%), East (7.3%), and Coast (4.1%) regions.

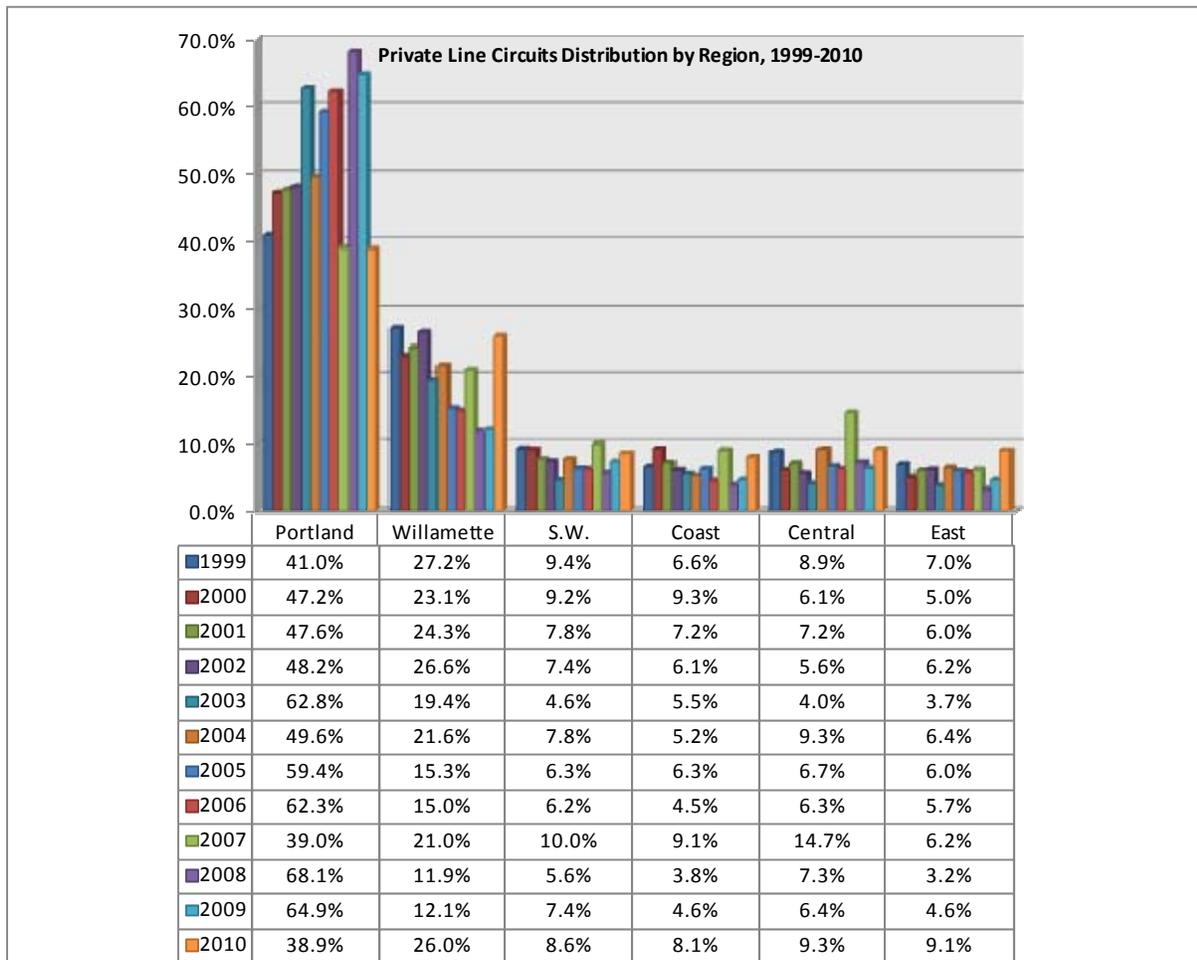
**Figure 20. Oregon Higher Capacity Circuits by Region: 2010**



CLEC's share of lower capacity circuits was 2.3 percent statewide. CLEC's share of higher capacity private line circuits was 75 percent statewide.

The regional distribution of private lines has fluctuated over the last several years as indicated in Figure 21. The Portland Metro region's share of the state's total private line circuits was 39 percent in 2010.

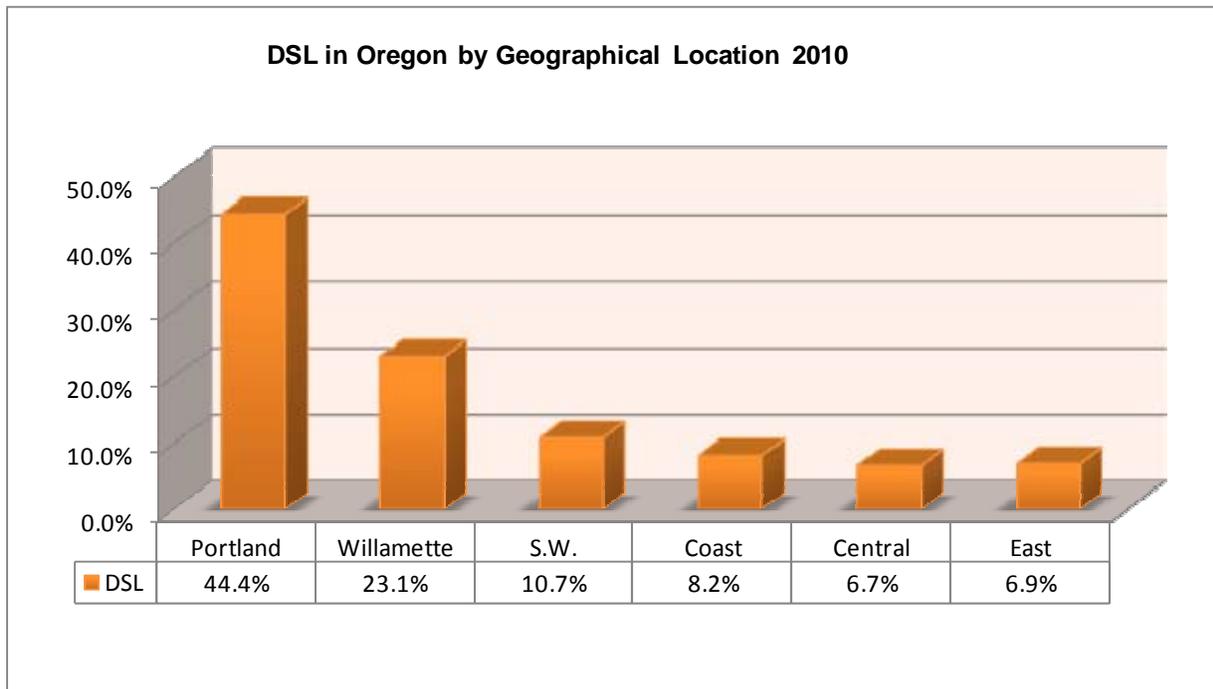
**Figure 21. Private Line Circuits Distribution: 1999 through 2010**



### C. DSL Service by Region

DSL (here referring to all types of digital subscriber lines) service was provided by 407,440 lines in 2010 and generated \$135.4 million in revenue. Of all DSL, 44.4 percent was in the Portland Metropolitan region (see Figure 22), followed by the Willamette Valley (23.1%), Southwest Interior (10.7%), Coast (8.2%), East (6.9%), and Central (6.7%) regions.

**Figure 22. Oregon DSL by Region**

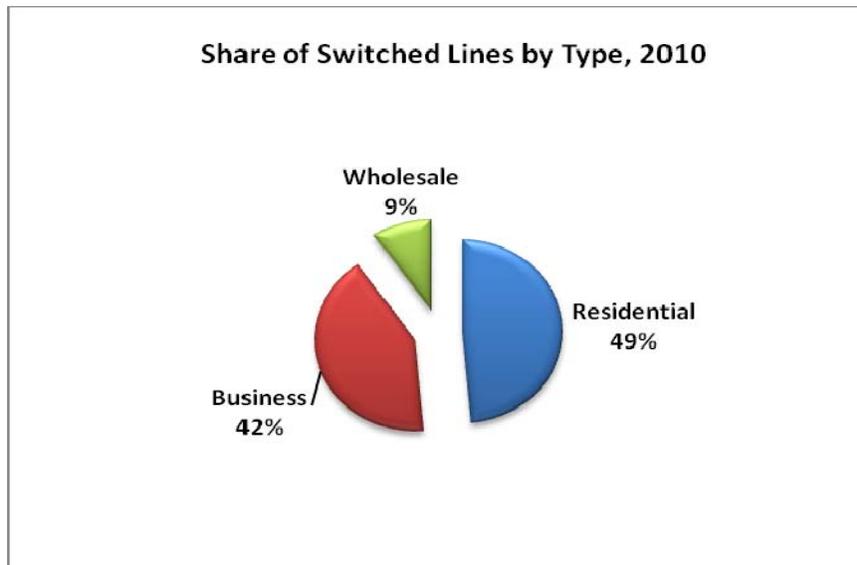


## 2. Customer Markets by Type of Service

### A. Switched Services

The survey grouped customers into three markets: residential, business, and wholesale. Forty-nine percent of switched service lines were in the residential market, 42 percent were in the business market, and 9 percent were wholesale (see Figure 23).

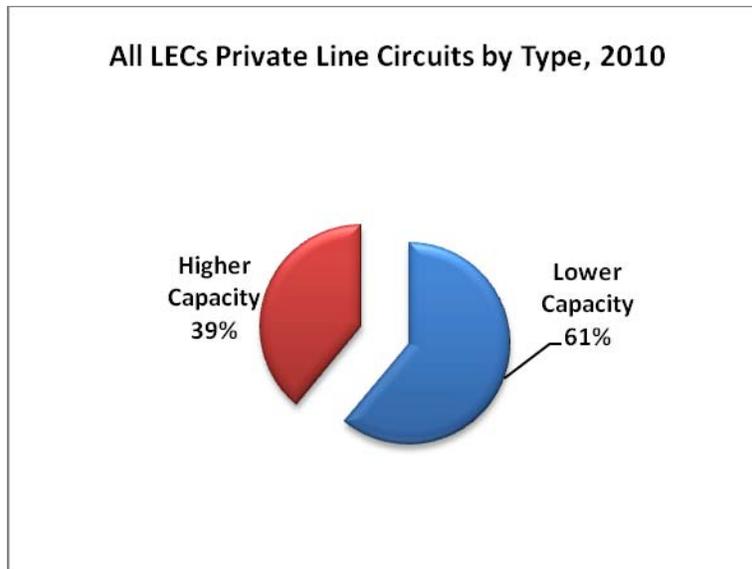
**Figure 23. Switched Service Lines by Market**



**B. Private Line**

Figure 24 shows that 61 percent of private line circuits were of lower capacity, and that 39 percent were of higher capacity.

**Figure 24. Oregon Private Line Circuits by Types**



### C. DSL

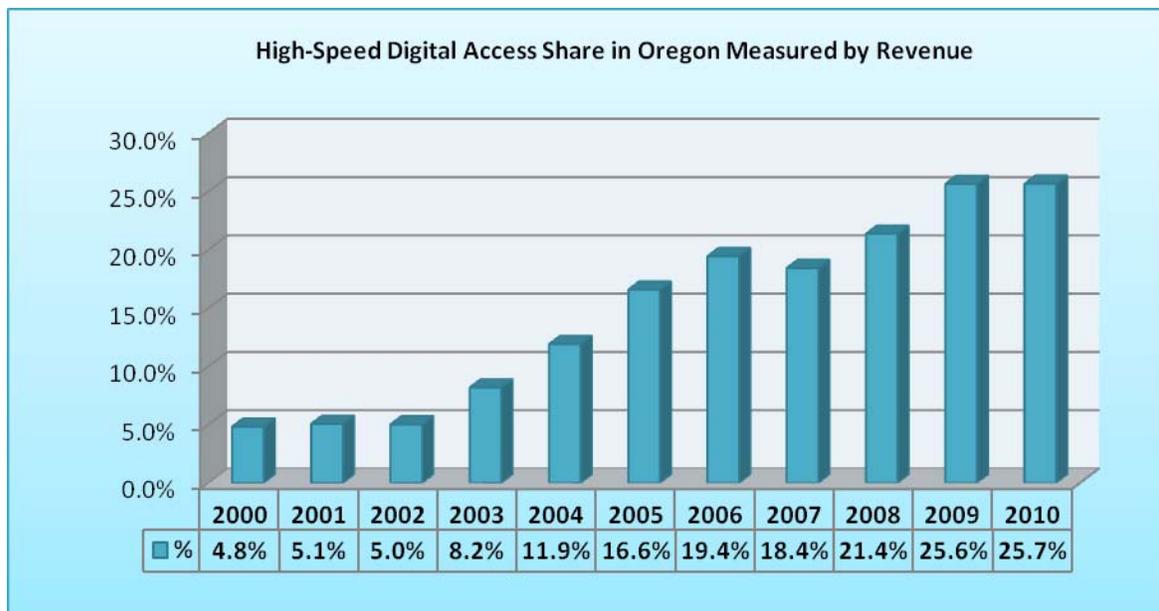
DSL service was provided on 407,440 residential and business lines and accounted for \$135.4 million of revenue in 2010. Average DSL revenue per month was \$27.69 per line.

#### Total High-Speed Digital Access in Oregon

High-speed digital access accounted for 25.7 percent of total LEC revenue in 2010. This was an increase from 25.5 percent in 2009. The 25.7 percent revenue figure for high-speed access services consists of 8.1 percent from private line services, and 17.6 percent from DSL.

High-speed digital access used to be a dream for many Oregonians. Approximately 4.8 percent of Oregon customers (residential and business) had Internet access in 2000 at a higher bandwidth than that available using a conventional modem over traditional telephone lines. This was comparable to the nationwide penetration of less than 5 percent in late 2000. The market share of high-speed digital access was low at the time because of its limited availability in Oregon. Ten years later, high-speed digital access penetration in Oregon exceeded 25 percent (see Figure 25 below).

**Figure 25. Trend of High-Speed Digital Access in Oregon**



## VII. Business Plans and Competition

### 1. Capital Expenditures

Capital expenditures are funds spent to acquire or upgrade physical assets such as switches and fiber optic cable. The survey asked for information on investment in capital assets (plant and equipment). Capital expenditures in 2010 associated with providing local exchange service in Oregon were estimated at \$180.6 million, which equates to 23.5 percent of total revenue (\$769.3 million) (see Table 11).

Of the 235 certified CLECs, 148 reported some level of capital expenditures in 2010, with 80 percent (144 of 180) having made capital expenditures totaling less than \$10,000. Total 2010 CLEC capital expenditures were \$66.4 million. CLEC's total 2010 capital investment represented 36.5 percent of CLEC's revenue (\$181.8 million).

Each of the 32 certified ILECs reported capital expenditures in 2010. Total ILEC capital expenditures were \$114.2 million, which equates to 19.4 percent of ILEC's 2010 revenue (\$587.5 million).

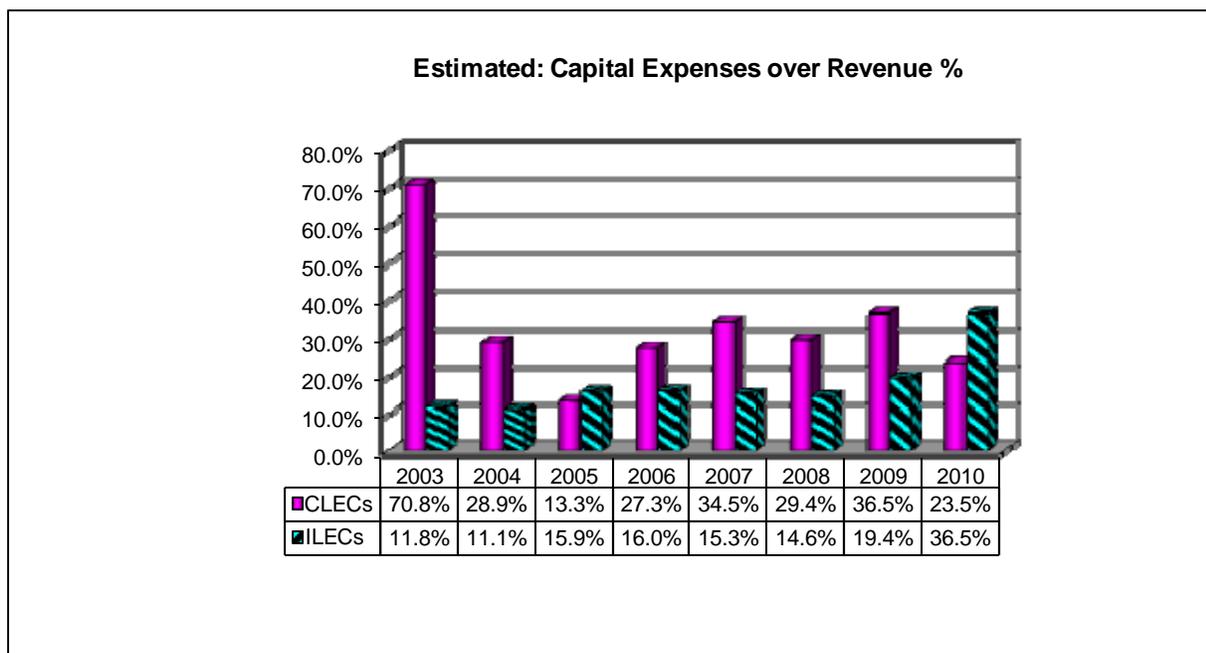
**Table 11. 2010 Capital Expenditures for Local Exchange Service**

Capital Expenditures	ILECs	CLECs	All LECs
Less than \$10,000	1	144	145
\$10,000-50,000	3	6	9
\$50,001-100,000	2	4	6
\$100,001-1,000,000	9	15	24
\$1,000,001-10,000,000	14	10	24
More than \$10,000,000	3	1	4
<b># of LECs making Capital Expenditures</b>	<b>32</b>	<b>180</b>	<b>212</b>
<b>Estimated Expenditures (\$millions)</b>	<b>\$114.2</b>	<b>\$66.4</b>	<b>\$180.6</b>
<b>Revenues (\$millions)</b>	<b>\$587.5</b>	<b>\$181.8</b>	<b>\$769.3</b>
<b>Investment as % of Revenue</b>	<b>19.4%</b>	<b>36.5%</b>	<b>23.5%</b>

Figure 26 shows estimated capital expenditures as a percent of revenues. For example, CLEC's 2003 Oregon capital expenditures for local exchange service (i.e., not associated with the provisioning of other services such as wireless or long distance) equated to 70.8 percent of Oregon revenues. For ILECs this value was 11.8 percent. In 2005, CLEC's expenditure to revenue rate dropped to 13.3 percent, and ILEC's rate

increased to 15.9 percent. For 2010, CLEC's capital expenses over the revenue rate decreased, down to 23.5 percent, while the rate for ILECs increased, up to 36.5 percent.

**Figure 26. Estimated Capital Expenditures as a Percent of Revenue**



## 2. Competition for Residential Market

The survey asked all local exchange carriers in Question K2, "What do you believe are the reasons that you do not have a bigger share of Oregon's residential market (check all that apply)?"

Seventeen of 32 ILECs (53%) noted that cell phone usage has reduced the demand for wireline (including second-line) services (see Table 12), and nine ILECs said the lower residential customer density made residential competition difficult or expensive.

Out of 219 CLECs who returned surveys, 152 answered the question K2, and 67 CLECs did not answer the question K2. Twenty-eight of the 219 responding CLECs said they could not compete on price (compared to 37 saying this in 2009), 27 said they could not compete on facilities, 15 said that the incumbent local exchange carrier has name familiarity, and 18 said that they did not have enough capacity. Since CLECs' operations focus principally on business customers, only 19 of 219 CLECs (8.7%) responded that cell phone usage has decreased the demand for residential wireline services, and 19 CLECs considered geographic location made residential competition

difficult or expensive. The percentage of responding CLECs identifying each of the above reasons for not having a higher share of the residential market has remained about the same over the eight year period this question has been asked.

**Table 12. Residential Market Competition: 2010**

Reasons	# of ILECs	# of CLECs
Cannot compete on price	4	28
Cannot compete on facilities	0	27
ILEC has name familiarity	0	15
Do not have enough capacity	1	18
Cell phone decreased the wireline demand	17	19
Hard to compete due to location	9	19
Other (explain):	18	110

Of the 110 CLECs who checked the "other" option, most stated they focused their activity on business customers or did not provide residential local exchange service in 2010. However, some of these 110 CLECs provided other reasons why they did not have a larger share of Oregon's residential market. Comments of these respondents included the following:

- Does not provide residential local exchange service due to “Complex Franchise Requirements and Excessive Property Taxation.”
- Does not provide residential local exchange service due to “Competition from cable operator.”
- Does not provide residential local exchange service due to “1) Excessive wholesale price in tier 2 and tier 3 markets, where ILECs sell finished retail products below wholesale costs. 2) ILECs do not provide services in a non-discriminatory fashion, fulfilling their orders several days before fulfilling wholesale orders for the same type services.”
- Does not provide residential local exchange service due to “Complexity of telecom billing requirements is significant barrier to entry due to cost. When we did resale services (2003) we found that the customers who would switch in our

service area did so only on price or because the LEC had terminated them due to payment credit issues.”

- Does not provide residential local exchange service because “UNE rates for DS0's are above ILEC retail phone rates.”
- Company has the following concerns: “Although unbundled network elements are theoretically available to the CLECs, the incumbent ILEC uses every nuance of the letter of the law to impede them. A true competitive environment for telecom and Internet services requires these elements to be available on the same terms to all participants. UNEs should be spun off into a regulated local loop provisioning “LoopCo”<sup>16</sup> company.”
- “The company does not market to residential customers.”
- “Business plan focuses on business customers and small carriers.”
- Company “welcomes new customers but does not proactively market its services.”
- “Provides services only to the business market.”
- “Respondent is only interested in the reselling of capacity for the purposes of economic development.”
- “We don’t provide telecommunications services to the residential commercial market. We only provide database services, data processing, listing verification and data integration/aggregation solutions to various telecommunication service providers.”
- “Company does not compete in the residential market.”
- “Company provides services to business customers only.”

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<sup>16</sup> **LoopCo** is an economic model created in the mid 1990s as a proposal to the [Federal Communications Commission](#) and the US Congress for the healthy development of competition in the local and long distance industries in the US. While there was widespread support among competitors in the industry, it was not implemented. Instead, the Telecom Act of 1996 was implemented in a form that resulted in the reduction of telecommunications competition in the local loop. The original proposal was designed and named by Roy Morris, an adjunct professor at Capitol College, and with US ONE Communications, one of the early entrants in the local telephone business, which also was one of the first to exit that business. The fundamental economic principles were developed based on earlier research and publications of Jerry Duvall, a prominent economist at the Federal Communications Commission.  
<http://en.wikipedia.org/wiki/LoopCo>

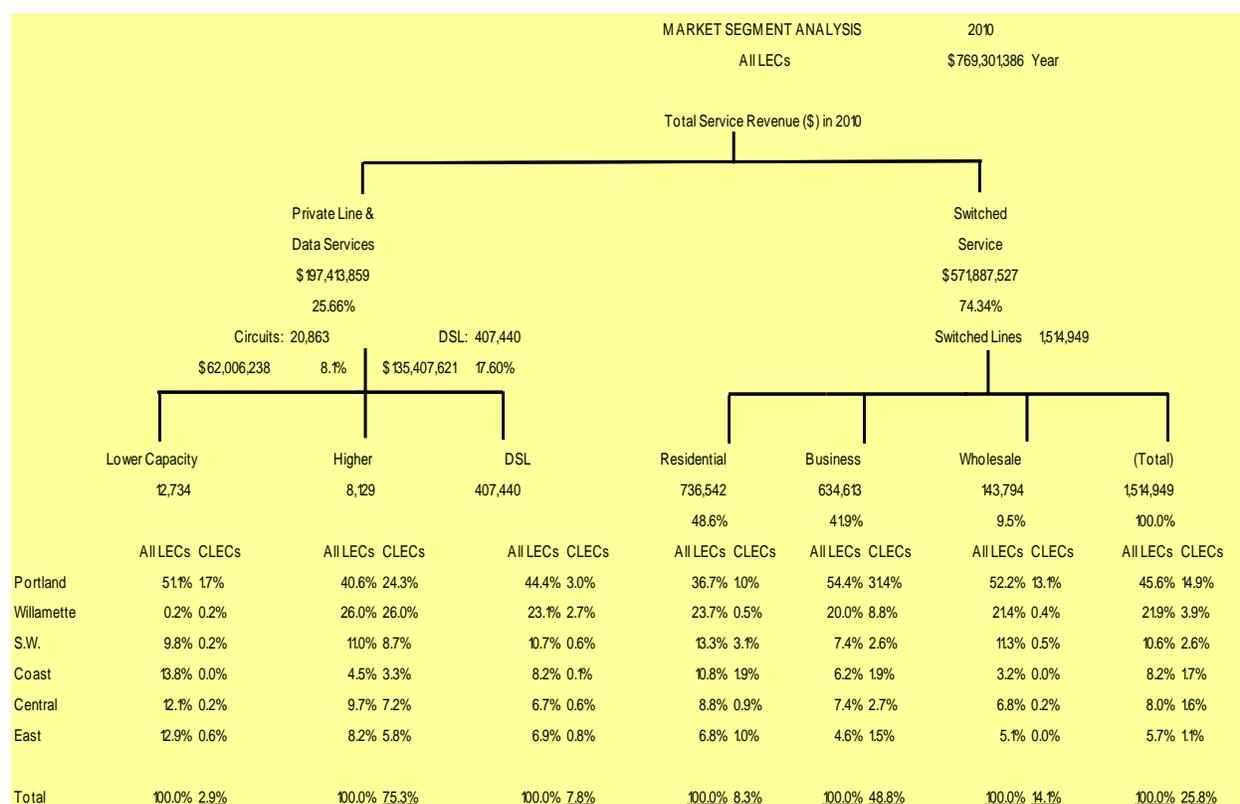
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- “Business plan focus on business customers and small carriers.”
- Company’s residential services are provided through wholesale partners and company is dependent on the marketing success of those partners.
- City is “Not interested in serving Oregon's residential market; only interested in broadband service within the City.”
- Company did not pursue the residential market in Oregon.

## VIII. Conclusions

Oregon's local telecommunications market in 2010 was a \$769.3 million industry, comprised of 1.51 million switched lines, 20,863 private line circuits, and 407,440 DSL. Industry-wide revenues in Oregon declined \$60 million from those of 2009. The number of switched lines served is now lower than when this survey was first taken in 1998, reflecting the competitive impact from the cellular phone, cable, and high-speed internet access services (see Figure 27 below).

**Figure 27. Local Exchange Carriers' Market Segments and Shares**



Competitive entry shows a relatively flat trend over the last few years and Oregon's local telecommunications markets remain dominated by the incumbent providers, with competitors accounting for 25.8 percent of local exchange switched access lines. CLEC's share of exchange lines in the residential market was 8.3 percent in 2010.

There does not appear to be sufficient incentives for CLECs to compete with ILECs on a broad scale in the local residential market. CLECs provided 48.8 percent (up from 48.2% the year before) of business lines in 2010, indicating the larger margins potentially available in that market.

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High-speed digital access accounted for 25.7 percent of total LEC revenue in 2010. This was an increase from 25.5 percent in 2009. The 25.7 percent revenue figure for high-speed access services consists of 8.1 percent from private line services, and 17.6 percent from DSL.

Capital expenditures in support of providing local exchange service in Oregon in 2010 were estimated at \$180.6 million, which equated to 23.5 percent of total revenue (\$769.3 million). Capital investment by ILECs equated to 19.4 percent of ILEC revenues, while CLECs invested an amount equivalent to 36.5 percent of CLEC revenues.

In the residential local exchange market, 28 CLECs said they could not compete with the ILECs on price; 27 thought they could not compete on facilities; 15 believed that the incumbent carrier's name familiarity was a barrier; 18 answered that they did not have enough capacity; 19 responded that cell phone usage has decreased the demand for residential wireline and second-line services; and 19 considered that geographic location made residential competition difficult or expensive.

Seventeen of the 32 ILECs noted that increased cell phone usage has decreased the demand for wireline and second-line services, and 9 ILECs were restrained by their geographic location, which made providing residential competition difficult or expensive.

While CLECs had a small percentage of the overall market, they achieved a significant presence in specific market segments. CLECs provided 48.8 percent of switched business lines. The predominant form of CLEC competitive entry was resale. The greatest 2010 CLEC market concentration was in the Portland Metropolitan region, where CLECs provided 64.3 percent of business lines.

CLECs have an 8.3 percent share of the Residential market. CLEC's share of residential lines has increased from 0.7 percent in 1998 to 8.3 percent in 2010.

Finally, revenues from DSL service were decreased by 2.7 percent in 2010. The number of DSL was 407,440, increased from the previous year.

Note that new technologies have a significant impact on telecommunications markets. They facilitate the introduction of products and services with significantly improved or new features into the market. These new products and services often replace traditional telephony products and services.