A Leader in Rural Broadband Deployment

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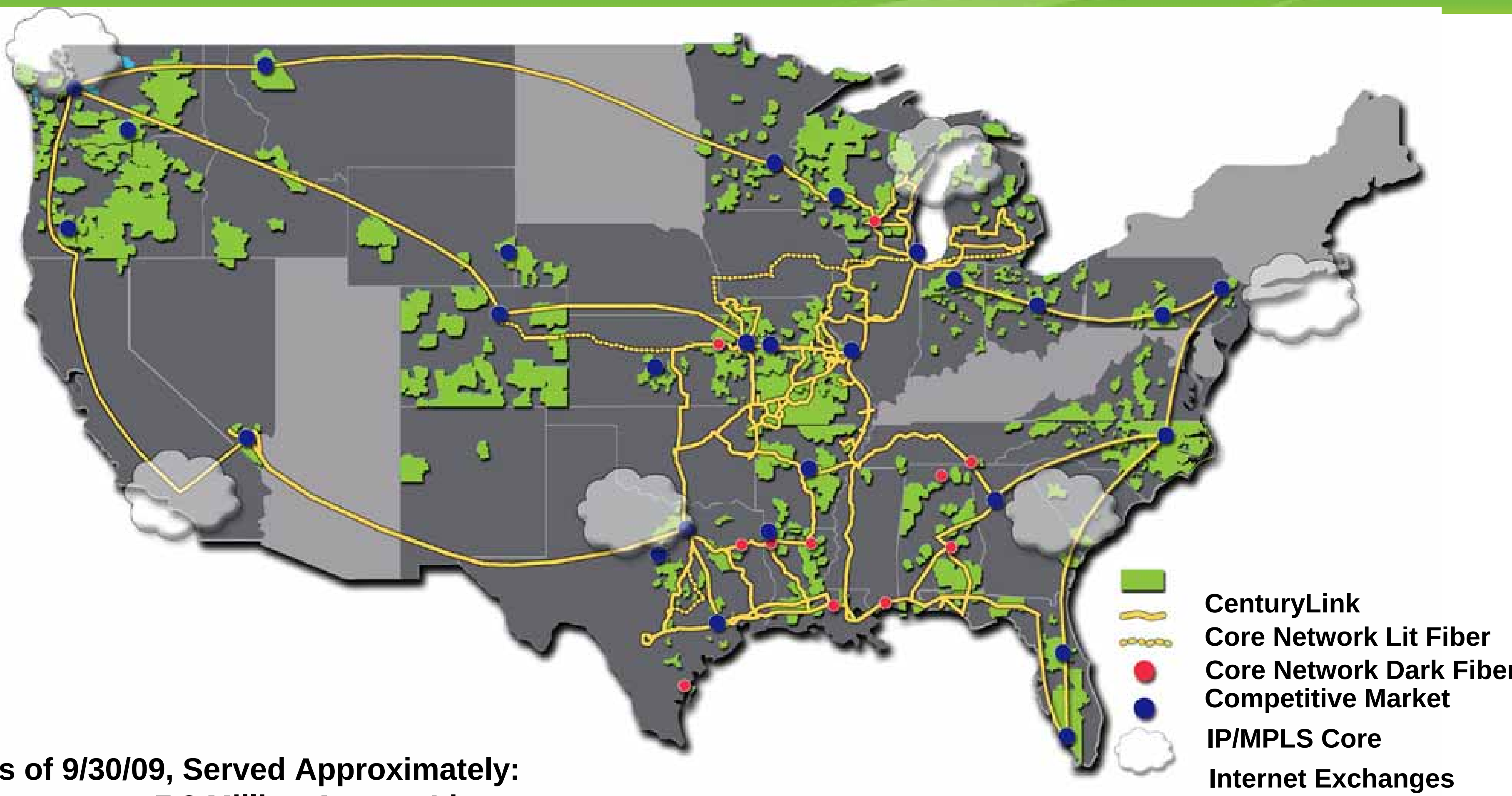
Vice President, Federal Government Affairs

Rural Broadband and Universal Service Reform

Presentation to NARUC Telecom Staff Subcommittee

February 13, 2010

CenturyLink – Network Map / Service Territory



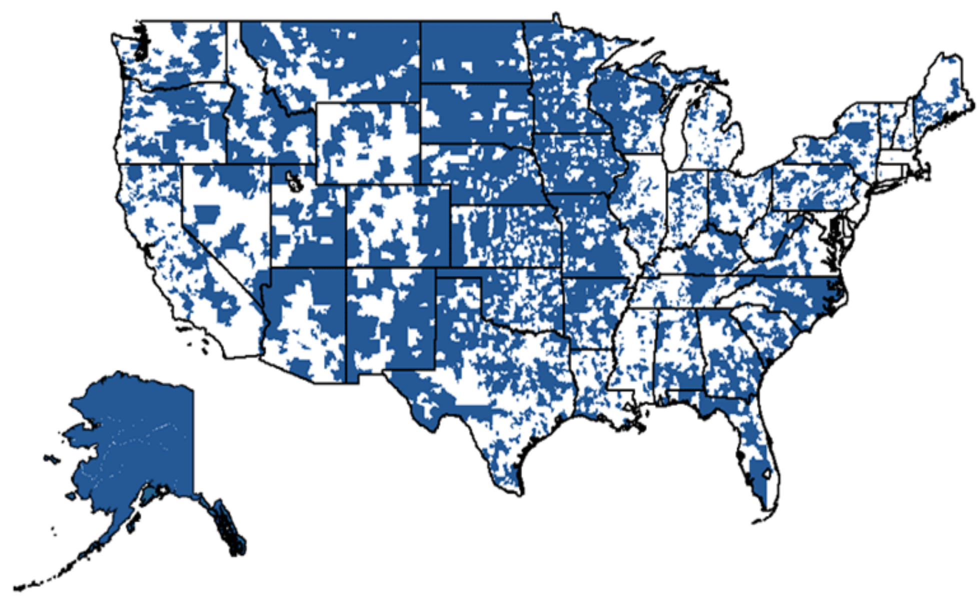
As of 9/30/09, Served Approximately:

- **7.2 Million Access Lines**
- **2.2 Million Broadband Customers**
- **501,000 Video Subscribers**
- **In 33 States**

Rural markets shifting from national carriers to midsize rural providers.

Sprint Local	→	Embarq (CenturyLink)
Verizon Missouri	→	CenturyLink
Ameritech Wisconsin	→	CenturyLink
GTE Arkansas	→	CenturyLink
Alltel Local	→	Windstream
Verizon Kentucky	→	Windstream
Verizon (14 states)	→	Frontier
Verizon Hawaii	→	Hawaiian Telcom
Verizon NH,VT, ME	→	FairPoint
GTE Iowa	→	Iowa Telecom

Combined independent telco territories



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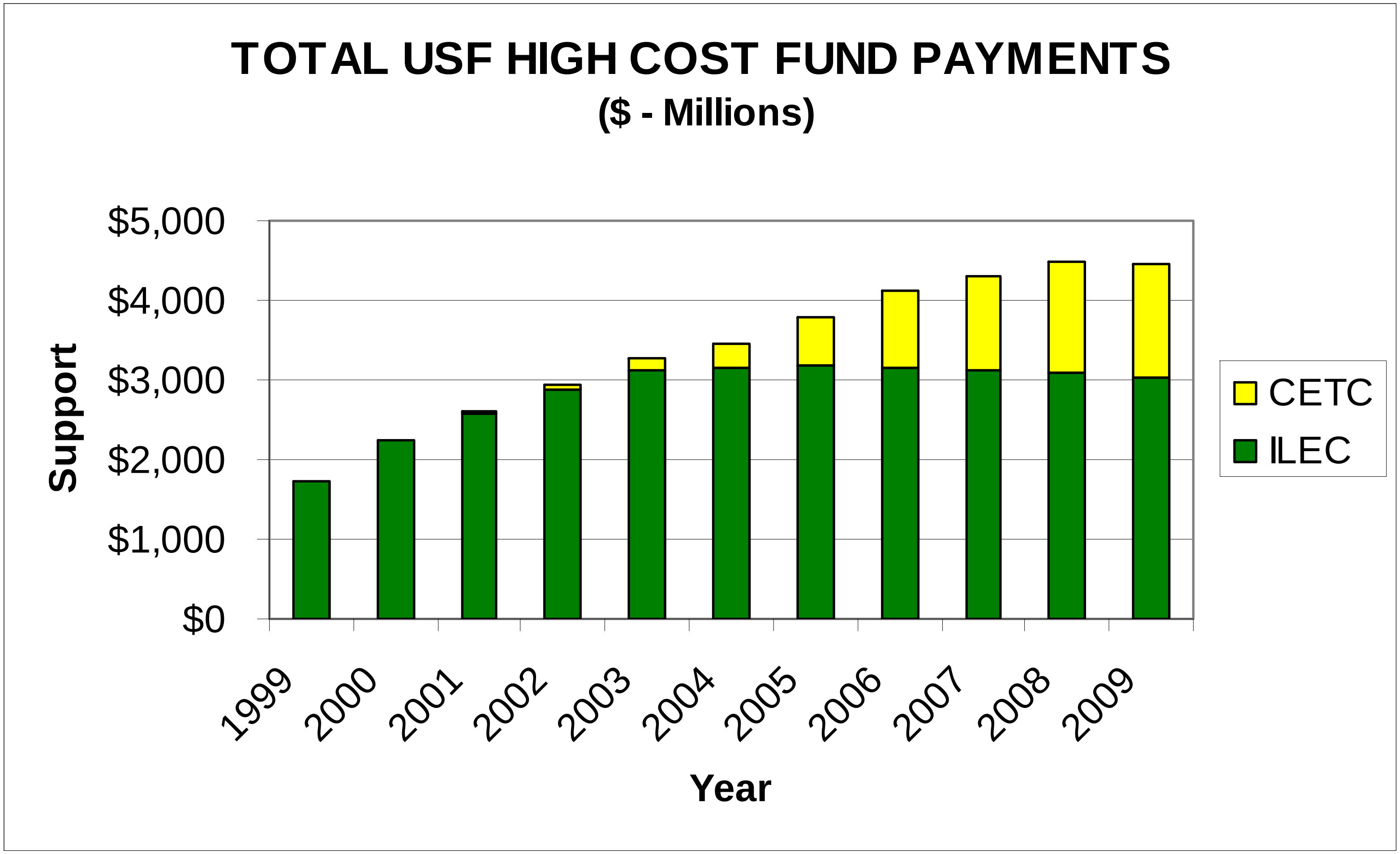
ILEC USF support declines, as other sources grow



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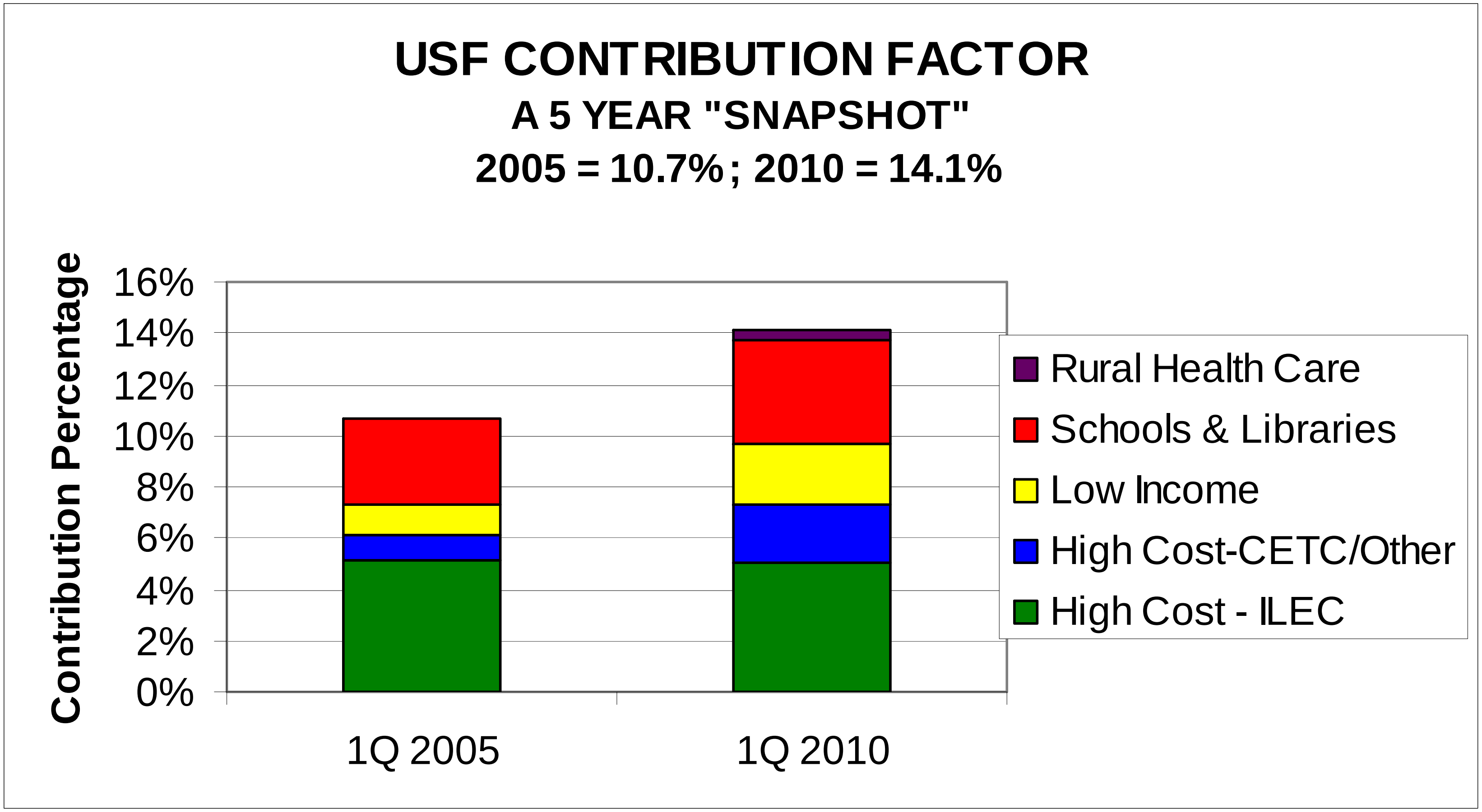

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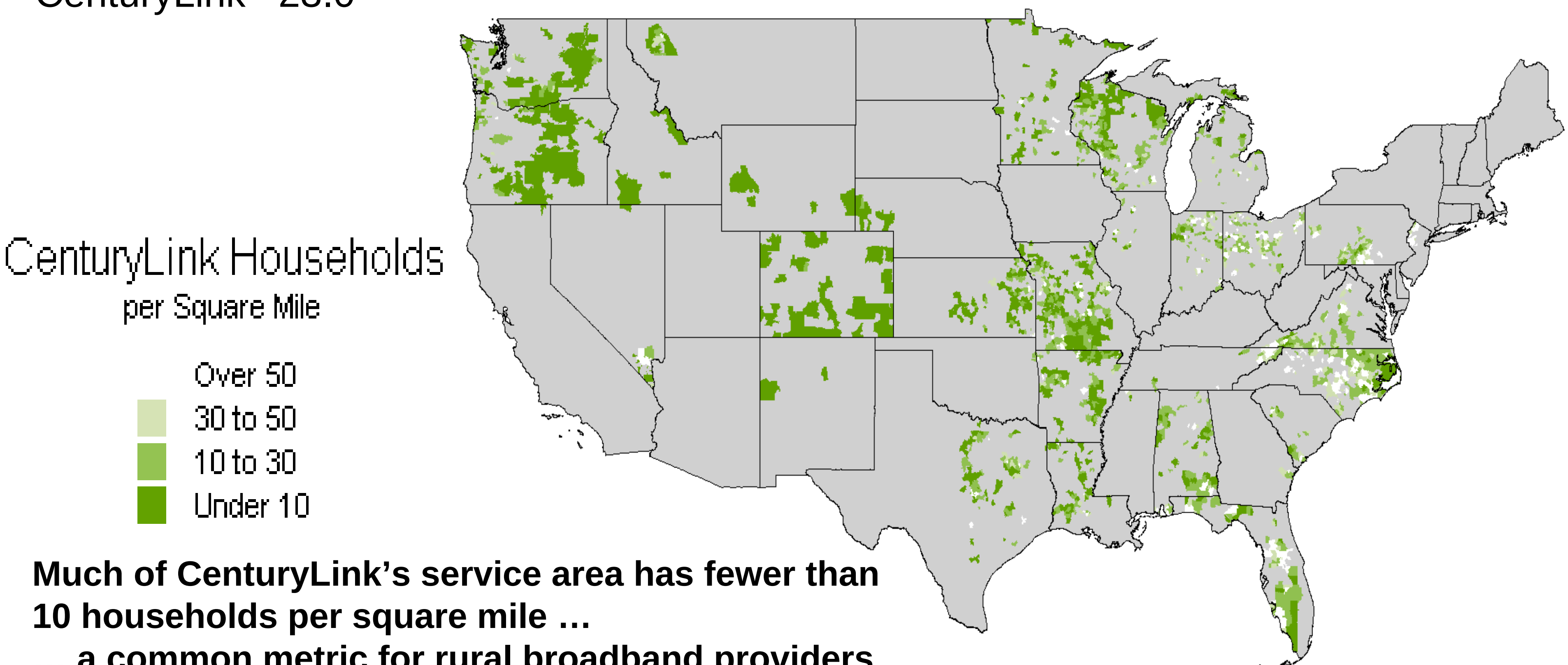
Population density is the most important driver of cost.

Density Comparison
Loops per Sq Mi

AT&T	101.0
Verizon	110.9
Qwest	43.4
CenturyLink	23.0

Footprint Comparison:

AT&T	602,391 Square Miles
Verizon	372,060 Square Miles
Qwest	355,599 Square Miles
CenturyLink	325,293 Square Miles



Much of CenturyLink's service area has fewer than 10 households per square mile …
… a common metric for rural broadband providers.

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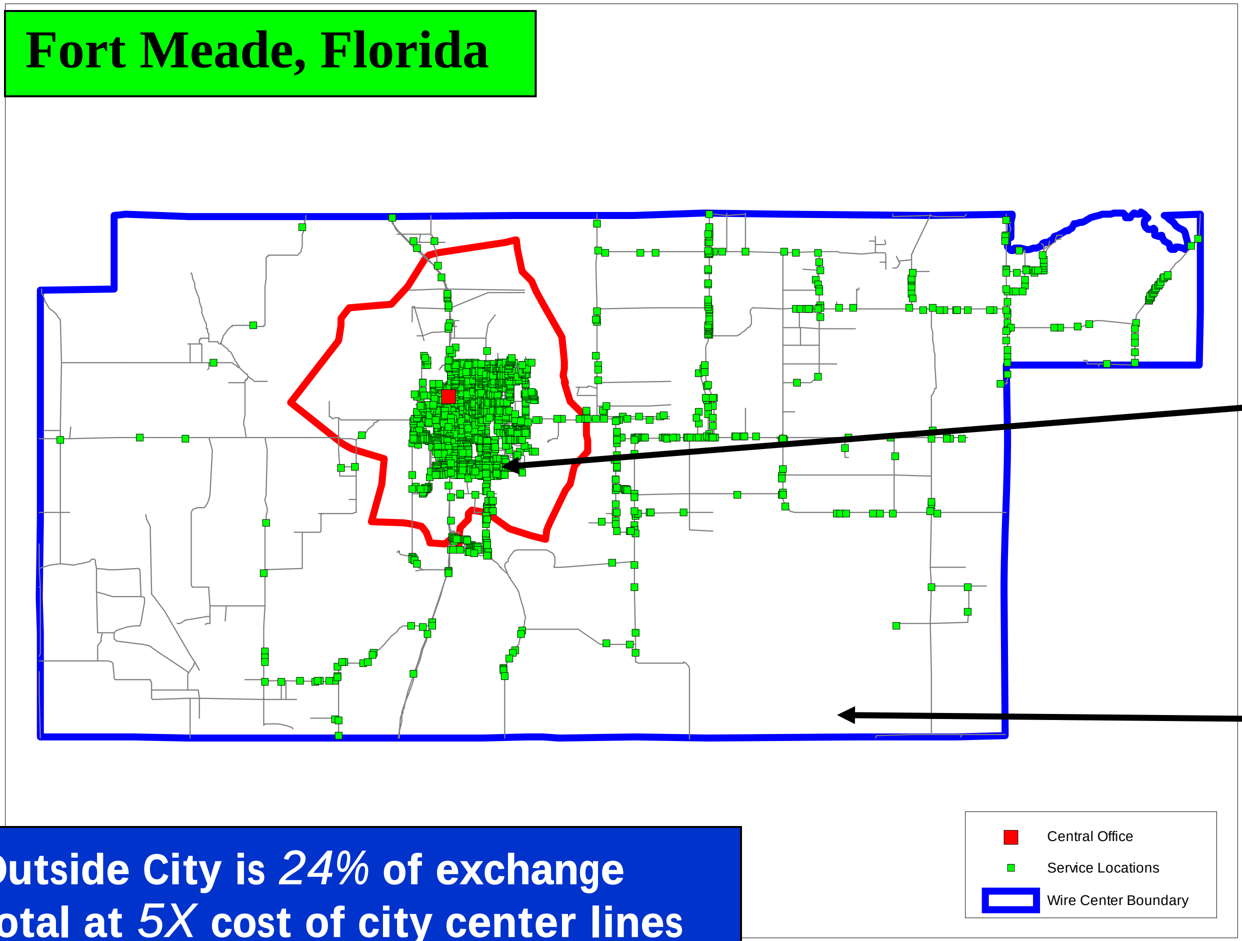
Outlying areas drive the cost of providing broadband



Wire Center
Total Lines Served
2,893
Investment per Line
$2,650

City Center
Total Lines Served
2,188
Investment per Line
$1,308

Outside City
Total Lines Served
705
Investment per Line
$6,820

Outside City is *24%* of exchange total at *5X* cost of city center lines

*Figures from FCC Synthesis Model–Illustrative Only

"Carrier of last resort" mandates require incumbent telcos to serve the WHOLE area.

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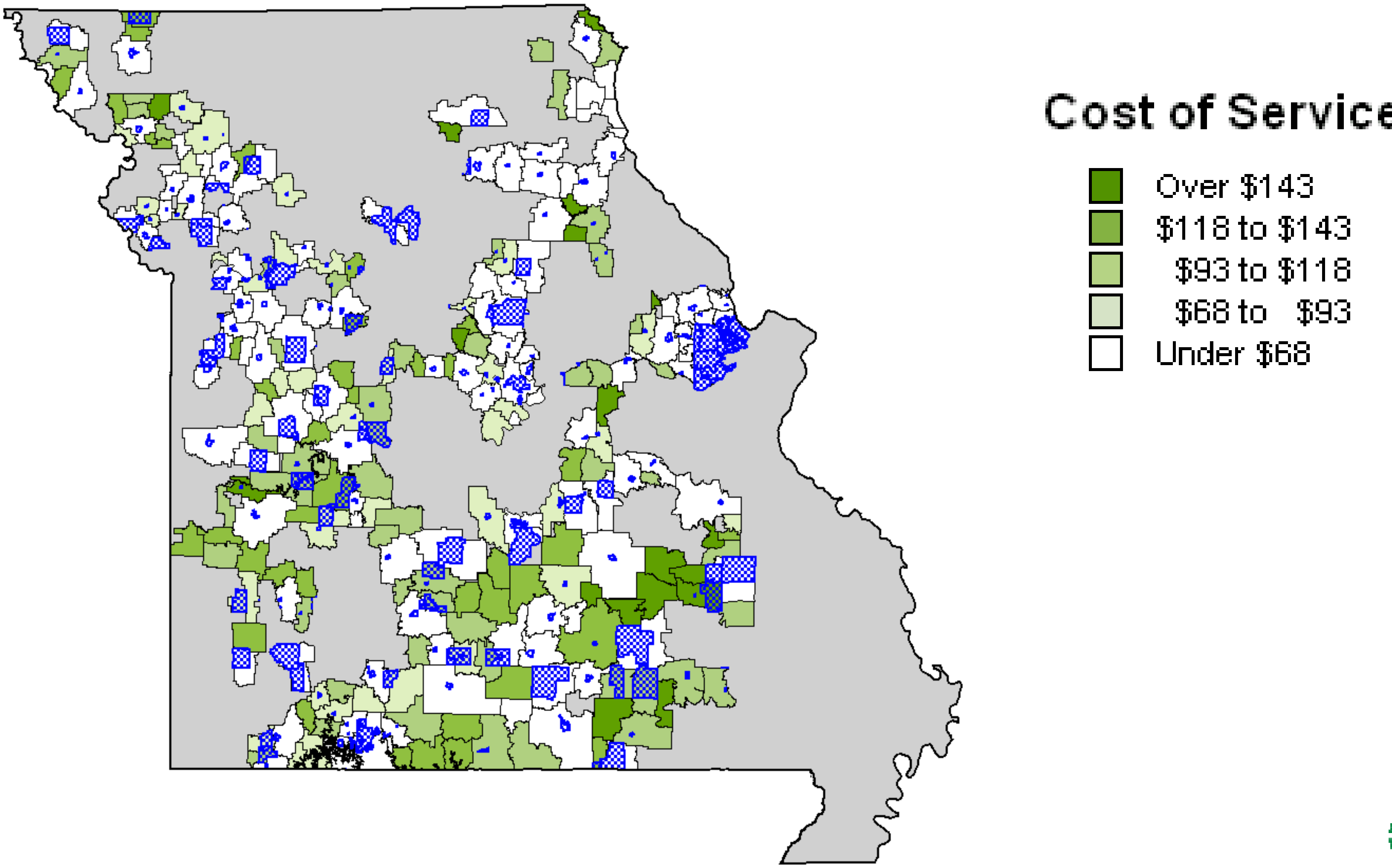
Major cable companies generally do not provide service to outlying areas.

Cable franchise areas (in blue) over CTL Missouri service areas (more rural in green)



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National Broadband Plan (expected March 17)

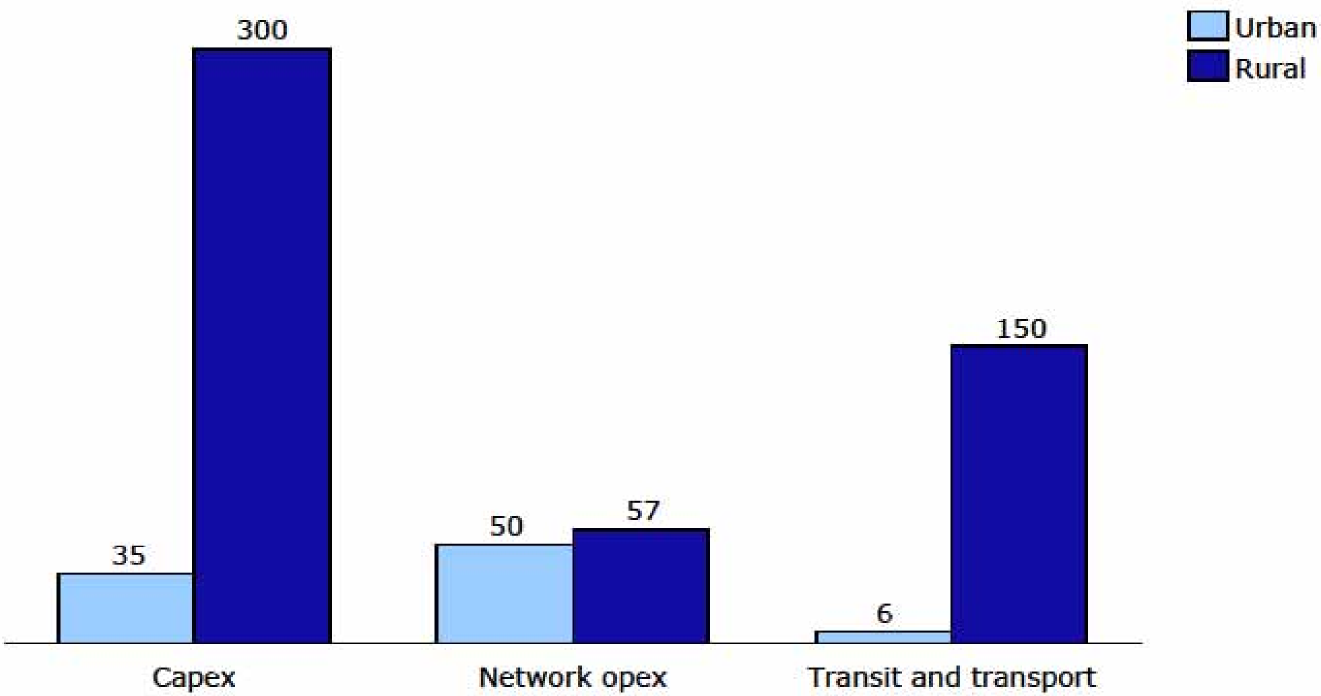
The "Broadband Now" proposal, by CenturyLink, Windstream, Frontier, Iowa Telecom and Consolidated

- **Calculates rural price cap support on a wire center basis – doubles down on the rural areas and moves support out of urban areas.**
- **Awards support in a competitively neutral manner permitting a provider requiring less targeted support to receive support in place of the incumbent (assuming COLR for that wire center).**
- **Dedicates any additional support received to broadband build-out wherever the recipient is willing to put up private capital of $800 per unserved line and $50 for already served line.**
- **Broadens the contribution base to include all connections, both broadband and voice.**
- **Reduces terminating access charges to a uniform low rate.**
- **After a 5 year transition period, begins implementing the more fundamental reforms like a broadband cost model, etc.**
- **Would result in 6 Mbps to 95% covered customers within 5 years, and a "second mile" fiber network to enhance wireless broadband availability.**

Challenge in rural areas is both capex and opex

Estimated annual cost/subscriber to provide wireline service[1]

Dollars



[1] Does not include costs already incurred (e.g., spectrum, prior plant build-out). Assumptions made with regard to penetration rate, upgrade path, cost of equipment, maintenance, operations, urban/rural mix, length of fiber run, and discount rate

Sources: Service provider, equipment manufacturer, and trade association filings and publications; analyst reports; OBI analysis

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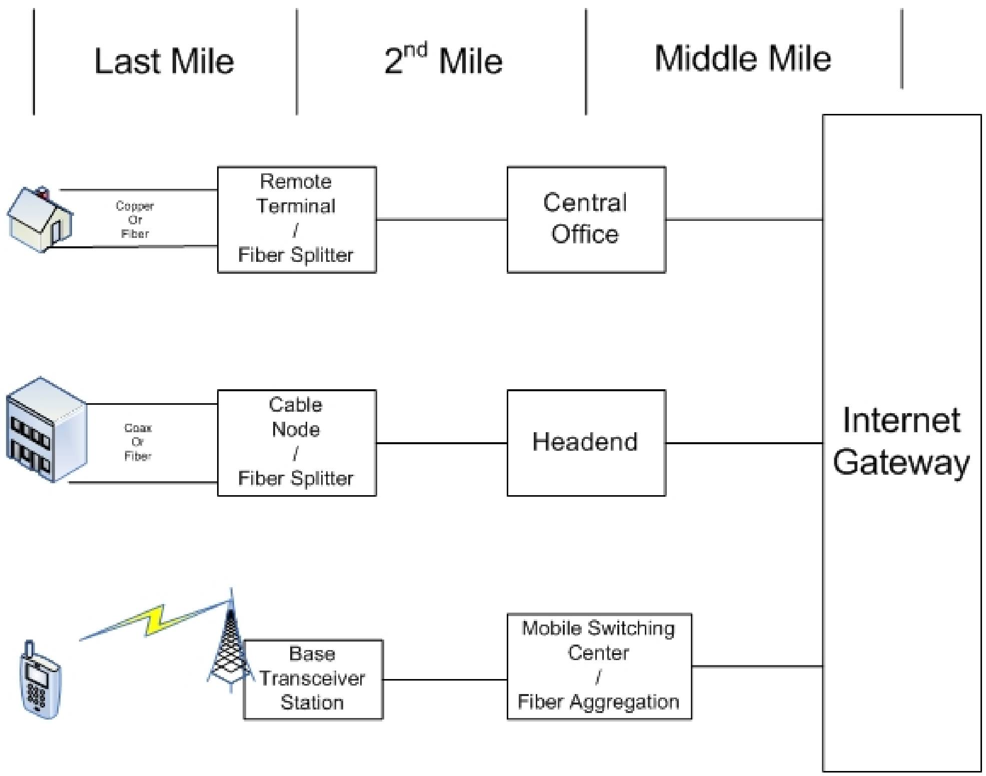
Wireless broadband cannot replace wireline broadband.

Wireless networks are complementary, but they have ***throughput limitations*** that limit the number of high-bandwidth applications that can run simultaneously at peak usage times.

"Just a few customers using Slingbox can overwhelm a cell site," *Christopher Guttman-McCabe of CTIA (See TR Daily, October 9).*

"Because of spectrum limitations, wireless providers cannot "build their way out of" capacity constraints. Unlike wired services that can add capacity through greater build-out, constraints on expansion of network capacity are currently a reality for spectrum-based services. In the absence of significant additional spectrum allocations, wireless broadband networks face capacity constraints that are unique among broadband providers." *Comments of CTIA on National Broadband Plan Notice #1; August 31, 2009.*

The “Second Mile” is the key ingredient to support wireline *AND* wireless.



Source: FCC “Blogband” entry; October 8, 2009

Symbiotic relationship

Fiber to the “second mile” is the missing element that makes both wireline and wireless broadband feasible in rural areas.

When a rural telco builds fiber to the node, it facilitates *both* mobile broadband (at lower speeds) and fixed broadband (at higher speeds).