

Incentives to Encourage Investment in Broadband Networks

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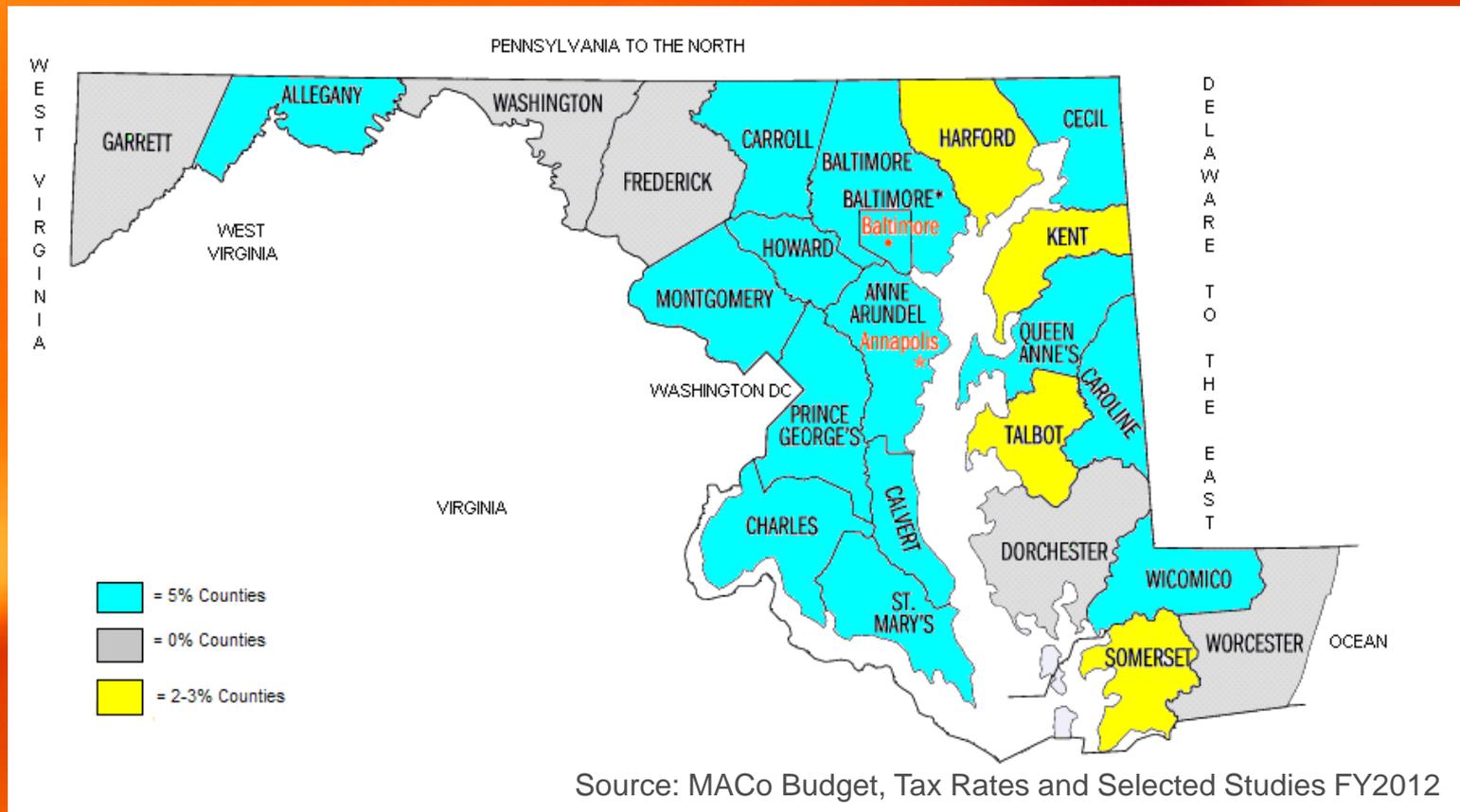
Communications Tax Reform Commission

- **Mission: Assess “the efficacy of tax and other incentives to encourage investment in broadband networks and emerging technologies”**
- **Difficult task because reductions in taxes and fees alone do not encourage deployment of broadband networks**
- **Creation of targeted incentives may be more likely to encourage investment versus general tax or fee reductions**

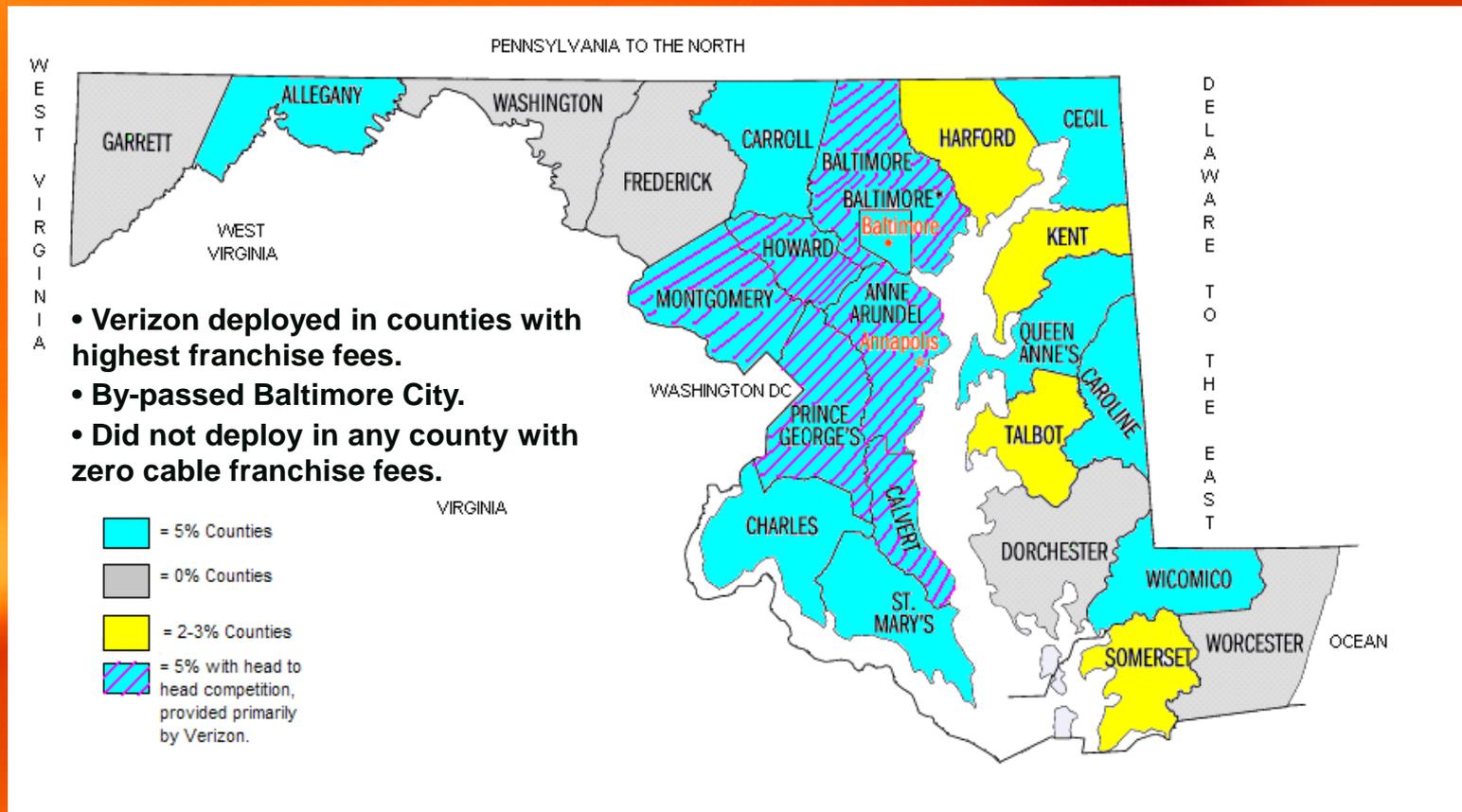
Reducing Government Taxes and Fees Alone Does Not Create Investment Incentives

- Lower cable franchise fees in Maryland did not encourage investment in new networks or lower rates for consumers
- Reducing right-of-way fees does not encourage investment in advanced broadband networks
- Reasonable regulation in Montgomery Co did not discourage investment in emerging wireless technology

Cable Franchise Fees by Maryland County

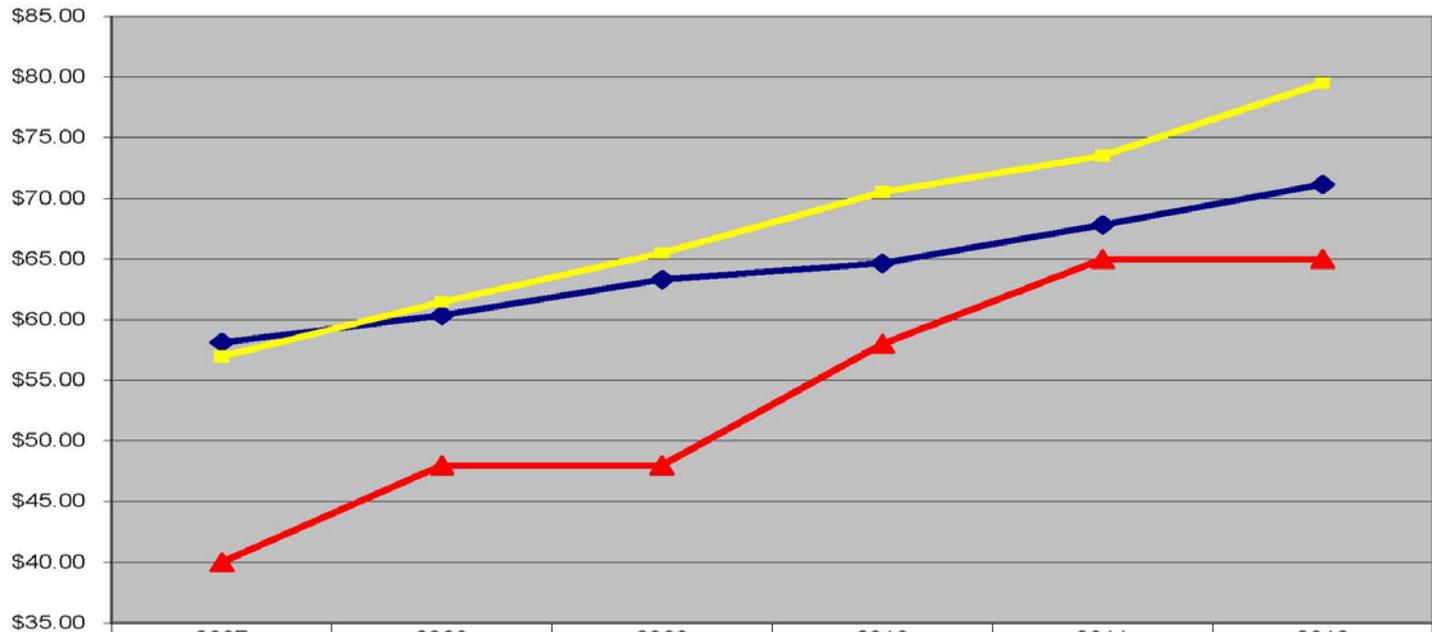


Lower Franchise Fees Did Not Encourage Investment in Competitive Fiber Optic Networks in Maryland Counties



Head to Head Cable Competition Has Not Lowered Cable Prices: 39% increase since Head to Head Competition

Montgomery County Cable Service Rates



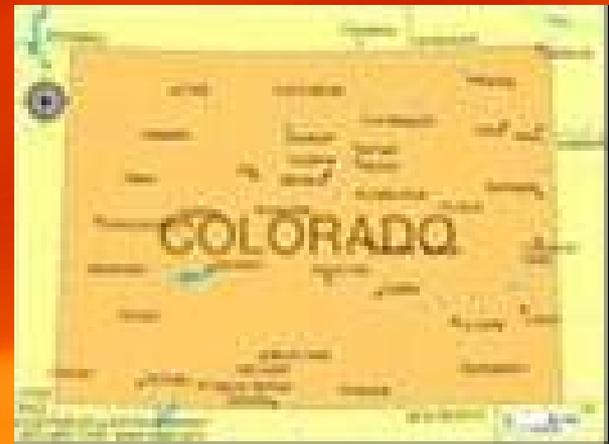
	2007	2008	2009	2010	2011	2012
Comcast Standard	\$58.10	\$60.35	\$63.30	\$64.65	\$67.80	\$71.15
RCN Standard	\$56.94	\$61.44	\$65.50	\$70.50	\$73.50	\$79.50
Verizon Standard	\$39.99	\$47.99	\$47.99	\$57.99	\$64.99	\$64.99

Right of Way Fees & Taxes Do Not Deter Investment in Broadband Networks

- **ECONorthwest Study: Effect on Broadband Deployment of Local Government Right of Way Fees and Practices (2011) (Table 1)**
 - **Did not find evidence that right of way fees have a measurable impact on broadband deployment**
 - **Negligible differences in broadband deployment between states permit fair, reasonable rent versus states that limit fees to costs**
 - **Largest difference is greater availability of high speed broadband (>50Mbps) in states that permit right of way rents**
 - **Limiting existing right of way fees would reduce local revenues and may require jurisdictions to recover lost revenue by raising other taxes or fees**

Case Study: Oregon vs Colorado (ECONorthwest)

- OR permits GR-based cable and telecom franchise fees plus utility taxes
- CO limits fees to cost-based permit fees and has higher median income, pop density and % of pop with college degrees
- Access to BB >3Mbps down >.7Mbps up
 - OR 98 percent
 - CO 99 percent
- Access to more than 3 BB providers
 - OR 100 percent
 - CO 98 percent
- Access to BB >50Mbps
 - *OR 68 percent*
 - CO 2 percent



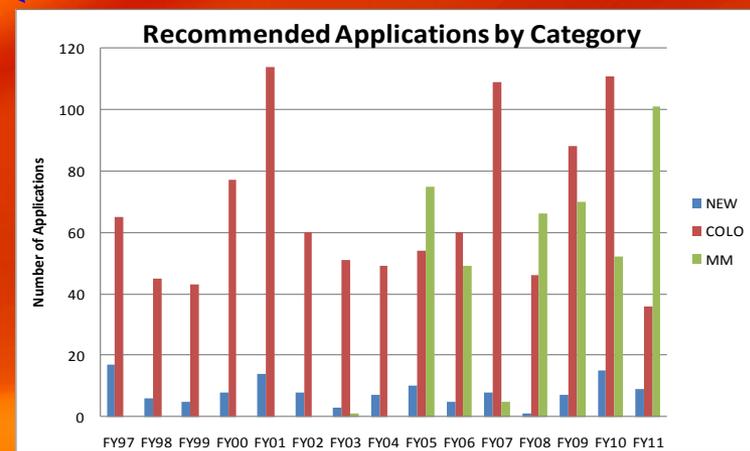
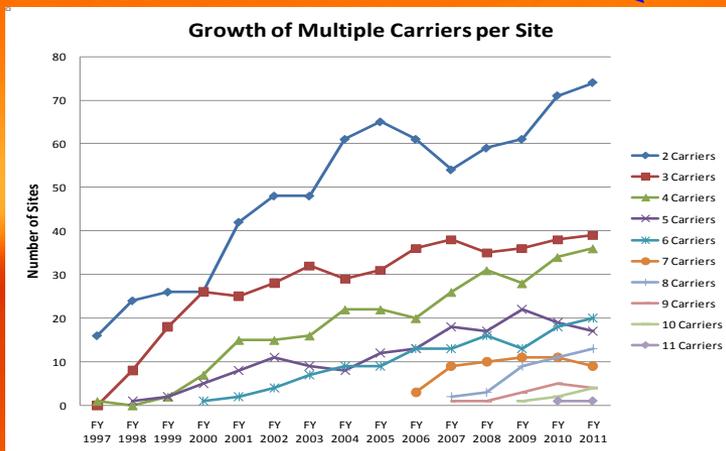
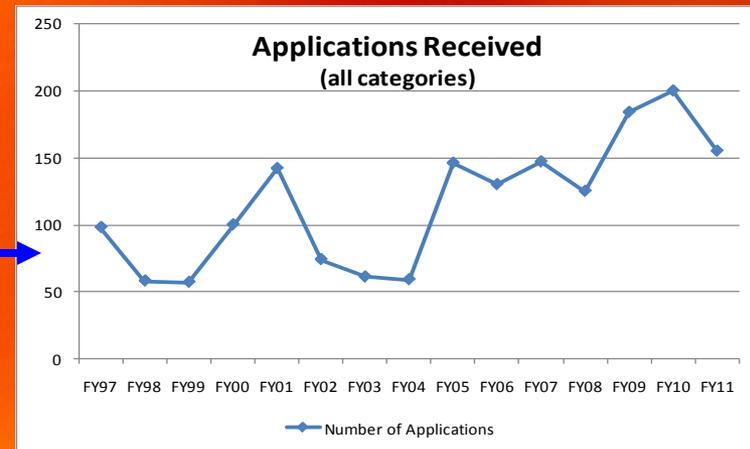
Case Study: Internet Taxing States (ITFA)

- Five states were grandfathered and permitted to continue taxing Internet access services (NH, OH, TX, WA, WI)
- These five Internet taxing states were among the first in which Verizon and AT&T deployed fiber optic networks
- Rates of broadband deployment are not lower in states that tax Internet access as compared to states that do not

Source: Center on Budget Policies & Priorities, The Internet Tax Freedom Act and the “Digital Divide” (2007)

Reasonable regulation did not deter deployment of wireless networks - Montgomery County Case Study

- Regulatory review required to determine need and ensure non-interference; co-location by right
- Growth in applications without reducing regulation; type of applications determined by industry factors; co-location growth



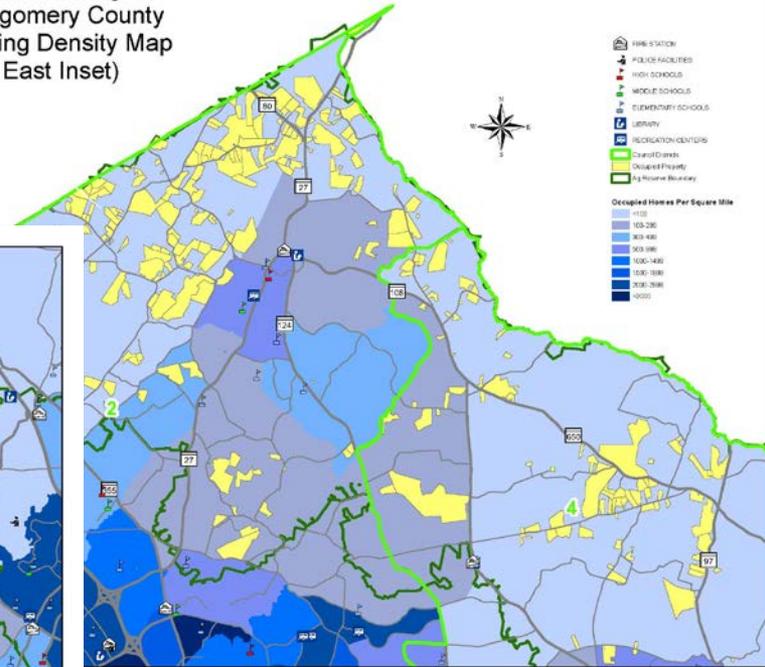
Moreover, Additional Incentives Are Needed to Spur Investment in Rural Maryland

- **Cable Franchise buildout requirements do not provide enough incentives to encourage investment in rural Maryland**
 - **Cable providers generally want to avoid or requiring cost sharing where density falls below 30 homes per line mile**
 - **Case Study: Mont. Co. Agricultural Reserve**
 - **77,726 acres (121 sq mi) set aside for agricultural use**
 - **1,201 occupied farms (10 per sq mi)**
 - **Almost no wireline broadband network buildout**
 - **Within Montgomery County franchise area but does not meet density requirements**
 - **Looking for a creative private-public solution**

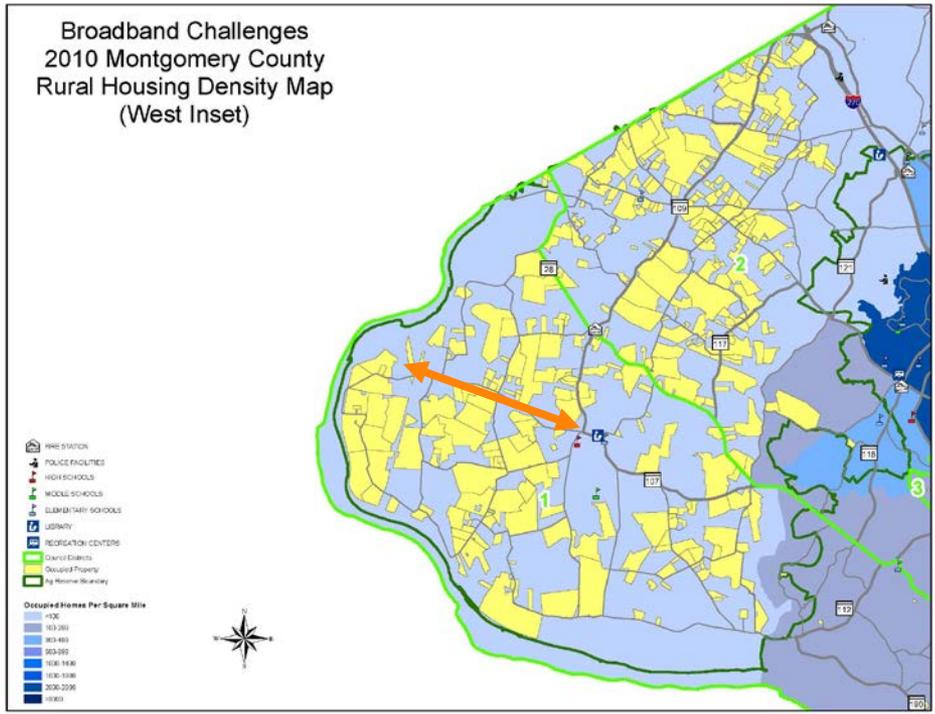
Investment Challenge: Low Return on Investment

- \$25,000 to \$100,000 aerial per mile cost
- \$70,000 to \$400,000 underground per mile

Broadband Challenges
2010 Montgomery County
Rural Housing Density Map
(North East Inset)



Broadband Challenges
2010 Montgomery County
Rural Housing Density Map
(West Inset)



- May be fewer than a dozen homes per mile
- May be significant pole attachment fees

Incentives to Spur Network Investment

- **An Engineering Analysis of Public Rights-of-Way Processes (2011)**
 - Labor is the biggest expenditure in a fiber-to-the-home (FTTH) buildout (fn 4, citing industry)
 - In aerial construction, **labor represents up to 80 percent** of the construction expense
 - Overlashing, where available, can reduce construction costs to \$13,000 to \$20,000 per mi.
 - In rural area, poles may outnumber homes per mile
- In MD, utility pole owners do not pay to use public rights of way, but may charge \$17-\$27 annually to attach to each pole

Incentives to Invest in Networks

- **Potential Revenue Factors**
 - **Population density**
 - **Market desirability (income and education levels, spending patterns, likely churn rate)**
 - **State, local and federal subsidy programs**
 - **Projections as to technological change**
 - **Mix of residential, business and institutional entities in target market**

Engineering Analysis Report at 16

Consumer Challenges for Network Investment

- **More Customers = Greater Revenue**
- **35 percent of Americans do not use the Internet at home**
 - Lack of interest or skill (41 percent)
 - Hardware or computer cost, installation fees, aversion to long term contracts (19 percent)
 - Monthly bill (15 percent)
- **20 percent do not use the Internet**
 - Lack of Interest or not relevant (48 percent)
 - Price-related (21 percent)
 - Lack of access or availability (6 percent)

ECONorthwest at 12 and Pew Internet Research (2010)

Lower Right of Way Fees

Will Not Increase Broadband Adoption

- **Limiting local taxes and fees will not reduce price enough to solve price resistance**
 - Per FCC, average monthly cost of broadband service is \$41 per month
 - Maximum price non-adopters are willing to pay is \$25 per month
 - Assuming reduction of 5 percent, \$2.05 price reduction leaves \$13.95 per month price gap

ECONorthwest at 12

Keys to Encouraging Investment in Networks

Not Incentives

- Reduced cable franchise fees
- Prohibiting right of way telecom fees
- Prohibiting telecom and Internet taxes
- Prohibiting reasonable regulation

Potential Incentives?

- Labor tax breaks
- Rural area tax incentives
- Expanded buildout requirements
- Addressing pole attachment issues
- Broadband training
- Computer subsidies
- Price subsidies