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Press Release

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NEW PHOENIX CENTER STUDY PROVIDES FIRST QUANTIFICATION OF FCC 477 DATA ERRORS

Correcting for Errors, Analysis Finds that Approximately 9 million Locations Without Broadband at the 25 Mbps Up/3 Mbps Down Level

WASHINGTON, D.C. – Broadband availability data collected by the Federal Communications Commission (“FCC”) using its Form 477 are heavily criticized as inaccurate. These data certainly overstate availability since a census block is indicated as having broadband throughout the block even if only a single home in the block is served. Despite the criticism and inherent flaws, these data are used to distribute billions in subsidy dollars for the construction of broadband networks. Absent some “true” measure of broadband deployment, quantifying the errors in the 477 data has been difficult.

Recently, the State of Georgia released the results of a detailed survey in which broadband availability was assessed at all household and business locations. These Georgia data, which provide served and unserved locations by census block, may be viewed as a better measure of the “true” availability rate. Thus, comparing the two data sources permits an assessment of the accuracy of the FCC’s 477 data and possibly some of their quirks.

In a new analysis released today entitled *A Quality Check on Form 477 Data: Errors, Subsidies, and Econometrics*, Phoenix Center Chief Economist Dr. George S. Ford compares the two data sources and makes several interesting findings.

First, Dr. Ford finds that the availability rate from the Form 477 is highly correlated with actual availability. That said, Dr. Ford also finds that while at high levels of aggregation the errors in the Form 477 data are small, at the Census Block level—where accuracy really matters for subsidy allocation—the Form 477 Data can mislead policymakers about availability.

Second, the errors in the Form 477 Data might be expected to be related to the size of the Census Block (which is expected). In small urban blocks, the one-served-all-served nature of the Form 477 data presumably leads to small errors, while in larger rural blocks the errors may be large. Statistical analysis confirms this relationship.

Third, by using the estimated relationship between availability and block size, Dr. Ford finds that about 9.1 million locations are without broadband at the 25 Mbps up/3 Mbps down level, once

accounting for the roughly 5 million locations addressed by the recent Rural Digital Opportunity Fund (“RDOF”) auction.

Fourth, Dr. Ford estimates the subsidies required to get broadband to the remaining 9.1 million unserved locations. According to Dr. Ford’s calculations, if the average subsidy is \$2,000 (which is the average of the RDOF auction), then the additional subsidy required to reach unserved households is \$18.2 billion. If the average subsidy level is \$3,000, then \$22.8 billion is needed. And at a very high average subsidy of \$5,000, getting broadband to every location requires approximately \$45.5 billion.

Finally, Dr. Ford considers the effects of mis-measurement in the Form 477 on econometric studies using that data.

“It is acknowledged that the Form 477 overstates broadband availability, but the Georgia data suggest the overstatement is relatively small at an aggregate level,” says Phoenix Center Chief Economist and study author Dr. George S. Ford. “At the census block level, however, the errors may be material by both over- and under-stating availability. In this respect, the push for better broadband mapping for subsidy allocation seems justified. Extrapolating the Georgia data to the nation, it appears that a subsidy budget of about \$40 billion is adequate to address the remaining unserved locations.”

A full copy of PHOENIX CENTER POLICY PERSPECTIVE No. 21-05, *A Quality Check on Form 477 Data: Errors, Subsidies, and Econometrics*, may be downloaded free from the Phoenix Center’s web page at: <http://www.phoenix-center.org/perspectives/Perspective21-05Final.pdf>.

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