Item 36
(6695)

State of California **Public Utilities Commission**
San Francisco

M E M O R A N D U M

Date : June 6, 2007

To : The Commission
(The Meeting of June 7, 2007)

From : Natalie Wales, Legal Division
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Subject : FCC Request for Comment - NPRM on Broadband Data Collection (Notice of Proposed Rulemaking, FCC 07-17, WC Dkt. No. 07-38, adopted February 26, 2007, Rel. April 16, 2007. [Published in Federal Register Wed. May 16, 2007].)

SUMMARY:

Staff recommends that the CPUC file initial comments in response to the FCC's Notice of Proposed Rulemaking (NPRM) on the Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership. Staff proposes that the CPUC's initial comments include the following main points:

- The FCC should collect and report broadband and telecommunication data using more precise geographic indicators;
- The Census Block Group (CBG) designation should be used for the collection of deployment and subscriber information rather than the 9-digit zip code;
- Data collected should be broken down to show residential, small business, and enterprise customer classes, and;
- VoIP service providers should report subscriptions as local telephone connections in order to collect data about the voice telephone market.

ISSUES IN THE NPRM:

The FCC seeks input on improving its data collection to better analyze and promote broadband adoption. The NPRM highlights four general areas of concern:

1. The appropriate definition of what constitutes high-speed service;
2. The need to measure broadband availability in rural and underserved areas;
3. The need for data that better captures the particularities of mobile wireless broadband; and,
4. Whether VoIP subscriptions should be reported separately as local telephone connections.

BACKGROUND:

Twice a year, U.S. broadband service providers report subscription and other data through the FCC's Form 477. The FCC monitors broadband availability based on this data, and the CPUC also publishes broadband status reports based in large part on this data. According to the FCC's Form 477 data, the U.S. and California broadband markets have grown 12-28% every six months for the last several years.

Form 477's measure of broadband deployment, however, is limited as it does not adequately identify subscriber locations within California, and deployment data is not broken out into residential or business categories. For these reasons, the data provided by Form 477 is not effective as a means to adequately identify gaps in broadband deployment or broadband adoption in the state.[1]

STAFF RECOMMENDATION:

In the past, the CPUC has been unsuccessful in collecting data directly from broadband service providers because this state commission lacks jurisdiction over this interstate service.[2] This NPRM is an opportunity to have the FCC, which does

[1] In fact, the data by zip code that the Form 477 currently collects does not provide an accurate measure of broadband deployment. An entire area is deemed served by the FCC if one subscriber to broadband resides within it.

[2] Data requests utilized in developing the Broadband Report, published in June 2006, resulted in few responses from carriers and has compromised data analysis. Pursuant to AB 2987, the Digital Infrastructure and Broadband Deployment Act (DIVCA), holders of state video franchises

have jurisdiction over broadband (an interstate service), gather information about broadband services at a granular level within California.[3]

More granular data regarding *current* deployment will focus the CPUC's efforts to increase *future* broadband deployment and adoption throughout all of California. This information would also be helpful for groups like the California Emerging Technology Fund (CETF), whose efforts focus on digital divide issues, and for addressing emergency response and disaster recovery issues. Finally, such data can provide the public with accurate information about service providers by geographic area, service availability, and price.

Unless more granular broadband deployment and adoption data are collected, however, it will be difficult for the CPUC to comprehensively identify areas within California that lack broadband deployment and adoption. The ability of the CPUC to develop this information has become increasing more important with the Governor's most recent executive order on broadband. Under that order, the CPUC is required to support and provide information to the State Broadband Task Force to assist it in identifying un-served and underserved areas in California.

Data By Customer Class: The most important statistic in many reports on broadband availability is broadband penetration. In order to ensure that broadband penetration figures are more accurate, companies should report residential and business counts separately for each question on Form 477. Currently, Form 477 does not ask for a residential percentage for speed tiers above 200 kbps in both directions. Nor does Form 477 ask for separate zip code lists for residential and business connections. In order to conduct a useful analysis of broadband penetration, however, the data should distinguish among residential, small business, and enterprise connections.

Data By Census Block Groups (CBGs): The FCC should collect more precise broadband data in order to allow analysis at a neighborhood-by-neighborhood level. Specifically, the FCC should collect subscriber counts by Census Block Groups (CBGs), which are: consistent with the demographic data (race, income, education) required for uptake analysis; located within municipal boundaries;

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are now required to provide certain broadband deployment data to the CPUC, which should assist the CPUC in its ability to collect this data.

[3] The Organization for Economic Cooperation and Development (OECD) publishes a ranking of broadband penetration. The CPUC also recommends that the FCC work with the OECD and the International Telecommunications Union (ITU) to develop consistent data, and make that data available to the states for comparison. The OECD reports and publications are freely available to the FCC. PointTopic, a British broadband organization, also offers subscriptions to its worldwide broadband data. Both the OECD and PointTopic publish their broadband rankings twice annually in advance of the FCC's own reporting.

small enough to be rearranged in multiple configurations (legislative districts, neighborhoods, etc.), and; standard sizes, with an average population density of about 1000-1500 people.[4] California is already beginning to collect data by CBG from statewide video franchise holders (typically ILECs and cable service operators) on their video and broadband deployment, pursuant to the Digital Infrastructure and Broadband Deployment Act (DIVCA).

The FCC has suggested that carriers report subscribers by 9-digit zip code instead of the current 5-digit zip code.[5] While this method is indeed more granular, zip codes are non-standard areas, and even a 9-digit zip code would need to be converted in order to provide useful demographic analysis.[6] The FCC itself notes that it has had to hire consultants to align zip code data with census data. This is an expense and endeavor that would not otherwise have to be undertaken if CBGs were utilized.

Data About Different Broadband Speeds: The CPUC recommends that the FCC review its speed tiers annually to capture increased bandwidth requirements of popular applications and to adjust its reporting requirements accordingly. At least in the immediate future, the FCC should retain the original speed tiers to allow for historical analyses.

Those reporting data to the FCC ideally should also report counts based on actual speeds realized by customers as opposed to theoretical maximums. However, reporting actual network speeds may be impractical for carriers, as actual speeds realized will inevitably vary for all providers depending on such factors as time of

[4] The FCC should nevertheless direct broadband service providers to report data according to service area boundaries that best make sense with companies' internal procedures and unique issues related to the technology deployed. For example, if a company already uses Geographic Information Systems (GIS) or locational data (XY coordinates or addresses) for boundary management, the company could provide its boundaries in native format. Smaller companies could report service area by listing CBGs if they are not GIS-capable. In conjunction with territory boundaries, service providers should also provide counts of "homes passed." As the FCC acknowledges, companies already utilize databases to tell customers if service is available in their area. Wireline companies, for example, could list DSL-enabled wire centers as an indication of potential broadband deployment.

[5] According to the USPS.GOV, "The ZIP Code system was created and designed to provide an efficient postal distribution and delivery network… [Therefore], delivery growth and changing demographics can necessitate adjustments to ZIP Code boundaries in order to achieve United States Postal Service objectives."

[6] FCC 07-17, In the Matter of Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership, ¶ 29.

day, contention for bandwidth by other users, and in the case of service provided via DSL, distance from the central office.

Data About Broadband Prices: The FCC should collect data on broadband price because price has a direct effect on broadband uptake rates. There are different ways to collect such information. For example, a representative price for an area could be a weighted average of the prices for all comparable services. Weights could correspond to the number of households each provider can serve, divided by the total number of households all providers can serve. Such information could be used in econometric analyses to determine which factors have the greatest influence on broadband uptake rates.

Data About VoIP Services: Both VoIP providers and traditional wireline providers should be required to provide customer counts by CBG. On Form 477, therefore, VoIP providers should be required to separately report an IP connection as a local telephone connection. Since VoIP is a form of voice communications service, it should be measured together with traditional wireline local telephone service, and should not be submerged in the general broadband statistics.[7] Required reporting is the only way for the FCC and the states to continue tracking voice telecommunications as local telephone services shift from traditional wireline to VoIP technology.

Data About Mobile Wireless Services: The FCC should require mobile wireless providers to distinguish between broadband-capable handsets and handsets with active broadband service, in addition to broadband service availability through coverage maps. Requiring mobile wireless providers to distinguish between full-capability broadband offerings and limited-capability broadband offerings would be particularly optimal.

CONCLUSION:

By commenting on this NPRM, the CPUC hopes to move the state and the country closer to ubiquitous broadband access by gaining an accurate understanding of where we stand in our own deployment and how our nation's broadband deployment compares to other similarly situated modern economies. It is with these bandwidth intensive economies that California and the U.S. must compete in international markets

[7] One cable telephony provider in California predicts the elimination of its traditional phone service, replaced by its VoIP offering, by the end of the year.