

**BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C.**

In the Matter of:

Modernizing the FCC Form 477 Data Program

WC Docket No. 11-10

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

WC Docket No. 07-38

Service Quality, Customer Satisfaction, Infrastructure and Operating Data Gathering

WC Docket No. 08-190

Review of Wireline Competition Bureau Data Practices

WC Docket No. 10-132

**COMMENTS OF THE  
CALIFORNIA PUBLIC UTILITIES COMMISSION AND THE PEOPLE  
OF THE STATE OF CALIFORNIA**

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## INTRODUCTION AND SUMMARY

The California Public Utilities Commission and the People of the State of California (CPUC or California) submit these comments in response to the above Notice of Proposed Rulemaking (NPRM) released February 8, 2011, seeking comment on whether and how to reform the Federal Communications Commission's (FCC or Commission) Form 477 data program. As the Commission notes in the NPRM, "Form 477 is the Commission's primary tool for collecting data about broadband and local telephone networks and services. The form requires providers of broadband service, local telephone service, interconnected Voice over Internet Protocol (VoIP) service, and mobile telephone service to report the number of subscribers they have in their respective service areas."<sup>1</sup> The Commission initiated the Form 477 data program in May 2000 to "materially improve its ability to develop, evaluate, and revise policy" for broadband and telephone services, and "to provide valuable benchmarks for Congress, the Commission, other policy makers, and consumers."<sup>2</sup> Noting that since the FCC last revised Form 477 there have been "a number of legislative and regulatory developments [that] have affected the obligations of the Commission and other government agencies to collect data related to telephone and broadband services,"<sup>3</sup> the FCC now seeks comment on what changes are necessary, if any, "to improve the Commission's ability to carry out

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<sup>1</sup> NPRM at para. 2.

<sup>2</sup> *Id.* at para. 3.

<sup>3</sup> *Id.* at para. 11.

its statutory duties, while streamlining and minimizing the overall costs of the program, including the burdens imposed on service providers.”<sup>4</sup>

California offers the following recommendations for reform of the Form 477 data program. Our proposed changes to the program will enhance the ability of the Commission to meet its goals of ensuring universal service at just, reasonable and affordable prices, meeting public safety requirements, promoting broadband deployment and adoption, promoting competition and protecting consumers.<sup>5</sup>

## **DISCUSSION<sup>6</sup>**

### **IV. REVISIONS TO THE FCC FORM 477 DATA PROGRAM**

#### **A. General Considerations**

California agrees with the FCC that there are at least “five categories of data that may be necessary to meet the Congressional mandates described in the prior section: deployment, pricing, and service quality and customer satisfaction data, which provide measures of supply; subscription data, which provides a measure of consumer demand; and ownership and contact information, which serves multiple statutory purposes.”<sup>7</sup>

#### **2. Use of Third-Party and Publicly Available Data**

The FCC seeks comment on whether and how the Commission can obtain reliable data from third parties and publicly available sources.<sup>8</sup>

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<sup>4</sup> *Id.* at para. 1.

<sup>5</sup> *Id.* at para. 1, and paras. 24-34.

<sup>6</sup> The numerology of the discussion follows the outline of the NPRM.

<sup>7</sup> NPRM at para. 36.

<sup>8</sup> *Id.* at paras. 37, 41.

The CPUC recommends that the FCC not use a third party as the primary source of availability data. The FCC should require wireline and wireless providers to report information directly. However, wireline and wireless availability and subscription data filed in Form 477 should be verified. Third parties, such as AmericanRoamer, would be useful in helping to verify the data, similar to the SamKnows activity today surveying actual broadband speeds. Other verification methods could also be utilized. The FCC could employ a crowd sourcing methodology or one of the Best Practices the National Telecommunications Information Administration (NTIA) is developing for verification of broadband grantee information. An “actual drive test” could be utilized to verify the wireless availability data of larger carriers.

#### **4. Frequency of Reporting**

The Commission seeks comment on how frequently service providers should be required to report Form 477 data. Currently the information is filed semi-annually as the FCC decided this frequency of reporting provides “the best balance” between the FCC’s “need for timely information with its desire to minimize the reporting burden on respondents by requiring providers to report data on a semi-annual basis.”<sup>9</sup>

California recommends the FCC continue to collect Form 477 data on a semi-annual basis. Twice a year is adequate for our purposes. However, the CPUC strongly urges the Commission to require service providers to report their data to the relevant state commission at the same time that it is provided to the FCC. Currently the lag time between when the FCC receives the data and when the state-specific information is made

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<sup>9</sup> *Id.* at para. 46.

available to an authorized state commission is at least 6 months or more on average. For example, the most current state-specific Form 477 data available to the CPUC, just released on March 25, 2011, is for June 30, 2010, almost a year old. Up-to-date information is invaluable to states such as California that are actively promoting deployment and adoption of broadband services through various state programs. Timely access to the Form 477 state-specific data information is necessary to ensure adoption of adequate and effective state policies in this area. The CPUC provides grants to telephone corporations for deployment of broadband in unserved and underserved areas of the state via our California Advanced Services Fund program. We need the most current information on broadband services in California to effectively administer this program. The CPUC is also the designated state mapping entity under the NTIA's State Broadband Data and Development Grant Program (SBDD) initiative. Once the SBDD program ends in 2014, California is recommending the FCC start collecting this availability information as part of the Form 477 report. (See discussion below under "Specific Categories of Data"). Timely receipt by California of state specific Form 477 data will be even more necessary and valuable if the data required on the Form is expanded as contemplated in this NPRM and as suggested in these comments.

Requiring the service providers to file with the states at the same time they file with the FCC can benefit the FCC, as well. One of the reasons for the long delay in FCC release of Form 477 data is the need to "scrub" the information before it is made available to authorized states. If states receive this information at the same time, the

states could assist the FCC in this task. States are in a better position than the FCC staff to verify information about services provided in their states.

## **B. Specific Categories of Data**

The Commission states: “Commenters have identified five categories of data that may help the Commission more effectively carry out its statutory obligations:

deployment, price, subscription, service quality and customer satisfaction, and ownership and contact information.”<sup>10</sup> It seeks comment on whether and how the FCC should collect such data.

### **1. Deployment**

#### **a. Voice Network Deployment**

##### **(ii) Mobile**

The NPRM states that “[t]he Commission currently licenses a dataset from a commercial source, American Roamer, for data on mobile network deployment.

American Roamer provides coverage boundary maps for mobile voice and broadband networks based on information provided to them by mobile wireless network

operators.”<sup>11</sup> The FCC seeks comment on whether it is appropriate to continue relying on American Roamer’s mobile telephony deployment data. The Commission asks whether it should require carriers to submit mobile telephony deployment data, notwithstanding the availability of some data from third parties.

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<sup>10</sup> *Id.* at 47.

<sup>11</sup> *Id.* at para. 51.

As stated above the CPUC does not recommend use of third-parties as the primary source of data. Rather we urge the FCC to require wireless carriers to report mobile network deployment and other information on the Form 477. Third party information can be a source of verification, however.

## **b. Broadband Network Deployment**

### **(i) SBDD Data**

The NPRM states that “Verizon, Sprint, T-Mobile, and NCTA suggest that the Commission consider the extent to which it is necessary to collect broadband deployment data through Form 477 once NTIA’s national broadband inventory map is online and the data become available to the Commission.”<sup>12</sup> The FCC seeks comment on this suggestion.

After 2014, when the NTIA twice-a-year collection of broadband data under the SBDD program ends, the FCC, after consultation with the NTIA, should begin collecting via Form 477 the availability information and other useful information now collected by NTIA under this program. Although we provide suggestions below on the how the FCC should collect this availability data, California recommends that the FCC consult with NTIA to determine which information being collected now under the SBDD program it considers to be useful and whether the NTIA recommends changes to its collection requirements.

The FCC should also consider providing funding to States to help collect this information as States are doing now for NTIA under the SBDD program.

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<sup>12</sup> *Id.* at para. 54.

## **(ii) Data Collection by the FCC**

The FCC seeks comment on a number of issues concerning data collection on broadband network deployment.

### *Geographic Area*

The FCC seeks comment on what levels of geographic specificity the Commission should require when collecting deployment information. The NTIA now collects availability data at census block/road segment level. As a first step, the FCC should study the NTIA map and consult those involved with the program to determine if this level provides sufficient information to guide broadband policies, or if address-level information would be more useful.<sup>13</sup>

Having said that, the CPUC recommends that the FCC require that landline broadband availability data be collected at least at the census block level. Census block data should be sufficient for smaller census blocks. If the census block is larger than 2 square miles, the FCC should consider collecting by street address or by road segment. Street address obviously provides the most ideal indication of availability. We note also that reporting by street segment, such as what block of the street is served, is not always effective. Some streets can be miles long and in high growth areas this information could change rapidly. It is also harder to map by street segment.

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<sup>13</sup> The FCC states at para. 56 that California already requires address-level reporting for the construction of its broadband map. We would like to respectfully clarify this statement. For the purposes of formulating effective broadband deployment and adoption policy recommendations, the California Broadband Task Force, which convened earlier in the decade, requested address information of broadband providers in the state. However the information was provided to a third-party under protective order. It was subsequently destroyed. Today broadband providers may voluntarily provide the CPUC mapping group with this information but we do not make this information public. We translate the information into census blocks. If the FCC requires address by address reporting it should not make this information available to the public at large.

For wireless providers, under the SBDD program, NTIA is currently collecting from the States wireless availability information in the form of shapefiles with speed and spectrum information. The CPUC recommends that the FCC collect wireless availability information in a similar manner. As an alternative for small companies like Wireless Internet Service Providers (WISPs), which do not have the software ability to provide shapefiles, availability information could be collected by the addresses they serve, or perhaps the FCC could provide an interactive mapping tool where carriers can upload information for select geographic locations of availability.

### *Speed*

The CPUC agrees it is important to collect speed data as part of Form 477. The Commission currently collects information about advertised broadband speeds in its Form 477 collection.<sup>14</sup> It seeks further comment on:

whether the Commission should continue to collect data only on advertised speeds, or whether, for example, providers should provide information about actual speeds by geographic area, or speeds that extend beyond the access network (*e.g.*, end-to-end speeds that reflect an end user's typical Internet performance). We also seek comment on how to best measure the actual speeds of services that can be provided over a network. The Commission has undertaken a program to measure such speeds directly for a sample of end users of fixed broadband, and is considering a similar program for mobile broadband. We seek comment on whether an approach like this one, a similar approach with more measurements, or some other method is appropriate.<sup>15</sup>

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<sup>14</sup> NPRM. at para. 59.

<sup>15</sup> *Id.*

If the use of the SamKnows program proves effective to survey Internet access speeds, California recommends the FCC expand the program to gather data regarding service from WISPs as well. The current scope of 10,000 boxes nationwide is not likely to include enough WISPs in the sample to support any conclusions. There are many WISPs operating in California and this information would be very useful for determining the level of broadband service available in areas served by WISPs and hence the level of competition in these areas. This type of information would inform our state broadband deployment efforts.

## **2. Price**

The FCC seeks comment on “whether price data are necessary to fulfill several of the purposes discussed above, including ensuring universal service by determining whether rural consumers are paying affordable and reasonably comparable rates to those in urban areas; monitoring telephone and broadband competition (*e.g.*, in forbearance proceedings) by providing data regarding the effect, if any, of competition on pricing or by determining whether nominally competitive providers in fact have comparable offerings in the market; reporting a comparison of U.S. and international prices for broadband service capability; and promoting broadband deployment and availability.”<sup>16</sup> The Commission also notes that “some state regulators have urged the Commission to collect price information for stand-alone and bundled services, and not to consider promotional prices or short term deals.”<sup>17</sup>

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<sup>16</sup> *Id.* at para. 66.

<sup>17</sup> *Id.* at para. 69.

California agrees that the FCC should collect at least the price of the lowest cost stand-alone voice service provided by the service provider and the price of the lowest-cost bundle that includes Internet Access and voice, excluding promotional prices or short term deals. Going forward, once the FCC has gathered enough information to make a determination, the FCC could focus price data collection on the most common types of bundles purchased by subscribers, so that the data collected on bundles is representative of what most customers order. If the FCC requires service providers to allocate a bundle's price among its component services, it should proceed carefully, particularly if video is in the bundle. Unlike voice and broadband, there are greater variations in the actual content and functionality of video services.

### **3. Subscription**

The FCC seeks comment on its collection of subscription data.<sup>18</sup>

[The FCC seeks] comment on whether subscription data, which the Commission currently collects, are necessary to fulfill several of the purposes discussed above: monitoring telephone and broadband competition by providing a measure of competition's outcome: how many customers subscribe to different providers' services in each area; promoting broadband deployment and availability; ensuring public safety by providing a measure of what networks and providers are relied on by how many customers in each area; monitoring the effects of PSTN-to-IP conversion by providing insight into how many customers are reliant on each type of network technology in each area; and ensuring that affordable voice and broadband services are available to all Americans.<sup>19</sup>

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<sup>18</sup> *Id.* at paras. 38, 77-88.

<sup>19</sup> *Id.* at para 77.

**a. Issues Applicable to Both Voice and Broadband Subscription**

The CPUC supports the continued collection of voice subscription data – from both wireline and wireless service providers, as well as from VoIP service providers. Such information is necessary to meet the goals enunciated above.

*Geographic Area*

“Form 477 currently collects voice telephony subscription data at the state level and broadband subscription data at the census tract level. [The FCC seeks] comment on whether voice and broadband subscription data should be collected at the same level of geographic specificity.”<sup>20</sup> The FCC notes that “[c]ommenters have also suggested that policymakers need more granular data about voice services, particularly in order to address competition issues and asks whether voice and broadband subscription data should be reported at the address level, the census block level or some other level?”<sup>21</sup>

The CPUC urges the FCC to collect subscription data at the address level. As the FCC notes; “[Form 477] Reporting entities already maintain subscriber databases that include address-level information; thus, providing subscribership information at the address level could simplify reporting.”<sup>22</sup> For wireless providers especially, the FCC should collect subscription data at a more granular level than is currently being collected in the Form 477 program.

Also, the FCC should require service providers to report subscriber data distinguishing between stand-alone voice subscriptions and subscriptions for voice that

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<sup>20</sup> *Id.* at para. 80.

<sup>21</sup> *Id.* at para 81.

<sup>22</sup> *Id.* at para. 38.

are bundled with Internet access or other services. As the industry transitions to an all IP world, this type of information will inform policymakers about what services are desired by the majority of consumers. This information will be very valuable for purposes of promoting universal adoption of broadband services, assessing market concentration and competition and informing on pricing decisions.

#### **4. Service Quality and Customer Satisfaction**

The FCC seeks comment on whether service quality and customer satisfaction data are necessary to fulfill the FCC goals. Among other questions, the FCC asks for comment on the Communications Workers of America's (CWA) proposal "that the Commission require all providers of voice telecommunications service to file all of the data previously submitted on ARMIS Reports 43-05 and 43-06, and to expand service quality measurements to include answer times for live representatives responding to customer inquiries."<sup>23</sup>

As stated in CPUC comments filed in 2008 in the FCC's proceeding on service quality <sup>24</sup> (and referenced in this NPRM at para. 95) the CPUC recommends that the FCC continue to collect some of the service quality and customer satisfaction data in ARMIS Reports 43-05 and 43-06. California also recommends that the FCC extend this data collection, with necessary modifications for technological differences, to all facilities-based broadband and telecommunications providers.

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<sup>23</sup> *Id.* at para. 95.

<sup>24</sup> CPUC Comments filed No. 14, 2008, In the Matter of Service Quality, Customer Satisfaction, Infrastructure and Operating Data Gathering; WC Docket No. 08-190; *Memorandum Opinion and Order and Notice of Proposed Rulemaking*, FCC 08-203, adopted September 6, 2008.

California urges the FCC to retain the following information collected from these two ARMIS reports when extended to all relevant players:

ARMIS Report 43-05 -- Service Quality:

- Table I and Table II (Combine into one Table): Installation and Repair Intervals for access customers (*e.g.*, switched access, high-speed access and other special access) and Installation and Repair Intervals for business and residential local service, extended to comparable equipment in service for other voice and broadband providers.
- Table IV and Table IVA: Total Switch Downtime covering the number of switches and switch equivalents, switches and switch equivalents with downtime, scheduled and unscheduled downtime for occurrences under two minutes. Occurrences of Two or More Minutes Duration would be continue to be collected and extended to comparable equipment in service for other voice and broadband providers.

ARMIS Report 43-06 -- Customer Satisfaction Survey -in its entirety.

This ARMIS information would be useful to consumers, as well as to the FCC and state commissions. Service quality can and does have an effect on consumer purchasing decisions. Consequently, public availability of service quality information serves important consumer protection functions. Furthermore, making such information available to the public provides a strong incentive to carriers to offer reliable services, and spurs innovation. The CPUC also concurs that such information will be more useful to consumers if it were available from all facilities-based providers of broadband and telecommunications services. Collection of this information across all technologies would be more useful as a federal consumer education tool and as a sound basis for public safety and broadband policymaking.

The FCC also asks “whether the Commission should use Form 477 to collect service quality and customer satisfaction data for voice networks.”<sup>25</sup> California recommends retaining the ARMIS filing as a separate report. Carrier-specific Form 477 data is treated as confidential whereas ARMIS carrier-specific information is generally available to the public, which is one of the compelling rationales for its collection and publication. We therefore support an extension of the same hybrid process as is used today. That is, *all* facilities-based telecommunications carriers and broadband providers would file with the FCC the data as recommended above to be compiled in ARMIS-type reports modified (via the Tables specified and modified to be technology-neutral). The collection of data via Form 477 would continue on a separate track.

## CONCLUSION

California appreciates the opportunity to comment on these important issues. Changes to the FCC’s collection of data under Form 477 and the ARMIS Reports 43-05 and 43-06 are necessary in order to effectively ensure the provision of quality voice and broadband services, maintain universal voice service, promote universal deployment and

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<sup>25</sup> *Id.* at para. 96.

adoption of broadband services, ensure the provision of quality voice and broadband services, and monitor competition and concentration in this changing industry.

Respectfully submitted,

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