BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of: Modernizing the FCC Form 477 Data Program	WC Docket No. 11-10

COMMENTS OF THE CALIFORNIA PUBLIC UTILITIES COMMISSION

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I. INTRODUCTION

The California Public Utilities Commission (California or CPUC) submits these comments in response to the above Federal Communications Commission's (Commission or FCC) *Further Notice of Proposed Rulemaking* (*FNPRM*) released August 4, 2017, seeking comment on whether and how to reform the FCC's Form 477 data program. As the Commission notes in the *FNPRM*, Form 477 is the "principal tool used by the Commission to gather data on communications services, including broadband services, to help inform our policymaking."[1] The FCC seeks to examine its experience based on current data collection in order to collect better and more accurate information on Form 477, and to explore how it can revise other aspects of the data collection to increase its usefulness.[2]

The CPUC provides these comments regarding the impact the FCC's proposals would have on the ability of the CPUC and the FCC to perform their central functions. The CPUC relies on subscriber and deployment data for determining broadband availability and assessing competition. Among other uses, this data is critical for CPUC review of proposed mergers and in implementing the CPUC-administered California Advanced Services Fund (CASF).

California offers the following recommendations for reform of the Form 477 data program in order to improve the value of the data provided. Silence on other issues

[1] *In the Matter of Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, Further Notice of Proposed Rulemaking, at para. 1 (rel. August 4, 2017) (*FNPRM*).

[2] *Id*.

raised in the *FNPRM* should not be construed as agreement or disagreement. The CPUC reserves the right to comment further in the reply round.

II. DISCUSSION

A. The CPUC supports annual Form 477 filings to reduce delays in receiving access to the data

The *FNPRM* seeks comment on shifting from a semi-annual collection to an annual collection for all filers.[3] The CPUC supports moving to an annual Form 477 reporting requirement. If the FCC does not have sufficient staff resources to collect and disseminate the Form 477 data in a prompt manner, requiring providers to file on an annual basis, instead of every six months, may reduce the data processing burden and improve the timeliness of its publication.

Historically, the CPUC has experienced significant delays in obtaining California-specific Form 477 data from the FCC. For example, as of September 12, 2017, the latest California Form 477 subscription data set available to us contains data as of June 30, 2016, already more than a year old. There have been times when this data lag has approached two years, meaning that the most recent Form 477 data release from the FCC has been up to two years old. Reducing this delay is important, as the CPUC relies on this data to study market competition and broadband deployment, review mergers and acquisitions, and conduct legislative analyses, among other activities.

While a grant recipient of the National Telecommunications and Information Administration's State Broadband Initiative, the CPUC hired additional limited term staff

[3] *Id*. at para. 56.

to assist with collecting broadband data on a semi-annual basis. However, after that funding ended, the CPUC eliminated those positions. The CPUC chose to continue collecting this information, but only on an annual basis, because of reduced staff resources. Reducing the data processing burden may similarly allow the FCC to collect and disseminate the Form 477 data in a prompt manner, thereby improving the timeliness of its publication.

Additionally, as California has proposed on previous occasions, the CPUC strongly urges the FCC to require service providers to file concurrently Form 477 submissions with the relevant state commissions requesting the data.[4] This will significantly reduce the lag in time when state commissions can access state-specific data.

B. The CPUC supports requiring collection of broadband deployment (availability) data at a more granular geographic level, thus increasing the usefulness of Form 477 data

As the FCC notes in the *FNPRM*, current fixed broadband deployment data makes it difficult to understand availability.[5] The FCC proposes requiring fixed broadband providers to also report deployment in census blocks as:

1) Having subscribers and accepting additional subscribers;
2) Having subscribers and not accepting additional subscribers; or

[4] *See*, Comments of the California Public Utilities Commission and the People of the State of California, *In the Matter of Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, et al., (filed March 30, 2011).

[5] *FNPRM* at para. 33.

3) Not having subscribers but able to accept new subscribers.[6]

The CPUC agrees that this type of categorization would better reflect actual service availability, but would not solve the question of whether a block is partially or fully served. The proposed categorization does not add a geographic component to indicate whether an entire census block is served, or whether only certain geographic areas of that census block are served. What would be more informative would be the collection of broadband deployment at the address level. Address level data would greatly increase the accuracy of deployment data. As the FCC notes in the *FNPRM*, service providers have produced location-level deployment data in other proceedings, which was "extremely useful."[7] The CPUC recommends that the FCC collect broadband deployment at the address level.

The *FNPRM* further asks whether the FCC should continue to require mobile broadband providers to submit deployment data in a format that digitally represent the geographic areas in which a customer could expect to receive service at the minimum advertised download speed.[8] The FCC proposes this approach as an alternative to requiring a list of census tracts in which the provider's service is advertised in a specific format showing where customers might expect to get service at the minimum advertised

[6] *FNPRM* at para. 34.

[7] *Id.* at para. 37.

[8] *Id.* at para. 38.

speed.[9] The CPUC supports this requirement, as it adds accuracy to service availability maps.

C. The CPUC supports requiring collection of mobile broadband and voice subscription data at a more granular level than census tract

In the *FNPRM*, the FCC also asks whether to require mobile subscription data reporting aggregated to the census tract level and whether the billing address or the place of use should be used to determine the geography of the subscriber.[10]

As with deployment data, the CPUC strongly urges the FCC to require reporting of mobile and voice subscription data by address.[11] If addresses are the base level of data, then those subscriptions could be aggregated to the block level, which is more granular than the tract level proposed in the *FNPRM*.

The CPUC supports using the billing address as the location of the subscriber rather than the place of use, which is not always attainable for mobile services.

D. The CPUC supports field testing of mobile broadband speeds for much higher accuracy

The FCC acknowledges that "the mobile broadband service availability data that providers submit generally do not reflect their local retail presence," and that "filers claim their service is available beyond where they may have a local retail presence."[12]

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[9] *Id*.

[10] *Id*. at para. 26-29.

[11] CPUC Decision (D.)16-12-025 ordered mobile voice subscription data to be reported at the census tract level.

[12] *FNPRM* at para. 22.

Accordingly, the *FNPRM* seeks comment on whether to supplement data collection with on-the-ground data.

Since 2012, the CPUC has been studying broadband measurement techniques, particularly with regard to mobile broadband service. As part of this effort, we have: 1) created and implemented CalSPEED, an application to develop measurement techniques; 2) published a mobile crowd-sourcing application; and 3) performed semi-annual field testing of mobile broadband service quality in urban, rural and tribal areas throughout the State. Among these, the semi-annual field testing has proven to be the most effective measure of actual mobile broadband service speeds.

Every six months since 2012, we have collected approximately 2,000,000 test results at the same 1,986 locations throughout the State. In addition, we have developed an on-line tool, calspeed.org, to collect fixed broadband service speed, quality and reliability information. The CPUC enhanced its CalSPEED app to capture backhaul and middle mile information in order to compare service characteristics in urban, rural and tribal areas. In addition to data throughput rates, our testing captures information relating to the stability and reliability of service and analyzes these factors to determine if the service is capable of supporting VoIP, video streaming and video conferencing.

The FCC does not collect this type of information from providers, yet it is crucial to understanding the actual state of mobile broadband service. The type of field test results the CPUC gathers have become the standard for determining the actual speed of service in California, rather than relying on the advertised speed reported by a service provider for that particular area.

As the FCC notes, because different service providers use a host of methods to determine speed, providers are likely to report more, rather than less, coverage.[13] A field test requirement would be the best way to make accurate assessments of availability and comparisons between networks. The CPUC strongly encourages the FCC to not only retain the mobile broadband availability reporting requirement, but also to augment it with speed testing, similar to the manner in which the CPUC measures mobile broadband service. The most accurate method would be a process similar to that used by the CPUC, that regularly tests a set number of points nationally and have a third party deliver real-time speed tests from these locations.

E. The FCC should maintain requirements to report deployment by spectrum and technology

The *FNPRM* seeks comment on whether to eliminate the requirement that mobile broadband providers report coverage information for each technology deployed on their networks, and whether to eliminate the requirement that providers submit their broadband deployment data by spectrum band.[14] The CPUC urges the FCC to keep these requirements. Information on the deployment of a particular technology is useful for California to determine coverage in the CPUC wireless data collection program, use of particular spectrum in rural areas for broadband grant applicants, and determine which technology is used for deployments. Providers already provide this data, so continuing to submit this information should not be overly burdensome.

[13] *FNPRM* at para. 22.

[14] *Id*. at para. 24.

F. The CPUC supports more detailed reporting requirements for satellite services

The *FNPRM* acknowledges a growing market for satellite mobile broadband and asks whether it would be appropriate to make additional modifications to Form 477 to include this service.[15] Satellite technology is used primarily to deliver broadband services in remote areas, where a number of Californians reside. Satellite delivery may be the only option for broadband Internet service for those residents. In addition, advances in satellite broadband services indicate this market segment will continue to grow. Given these factors, the CPUC supports more detailed reporting of satellite broadband service.

G. The FCC should publicly release data that is not commercially sensitive

In the *FNPRM*, the FCC proposes that certain collected data that are currently treated as confidential be made public.[16] The FCC proposes that minimum advertised or expected speed data for mobile broadband services should not be treated as confidential, noting that this information is already available from other sources.[17] The *FNPRM* also proposes releasing propagation models, which the FCC considers not commercially sensitive, suggesting release of this data would not cause competitive harm.[18] The FCC notes that making this data available would provide consumers, states and experts the opportunity review the data for accuracy.

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[15] *Id*. at para. 16.

[16] *Id*. at para. 51.

[17] *Id*. at para. 51.

[18] *Id*. at para. 52.

The CPUC strongly supports these proposals to release publicly minimum advertised or expected speed data and non-commercially sensitive data. To the FCC's point, we can identify no reason for not making advertised speeds public. Our practice in California is to publish advertised speed data on the California Broadband Availability map. The CPUC agrees that release of this information would enable more accurate rendering of service availability, a better portrayal of speed tier competition, and a more informed consumer base in California.

III. CONCLUSION

The CPUC appreciates the opportunity to submit comments on these issues and reiterates the importance of Form 477 data in achieving our policy goals, as well as our regulatory responsibilities. Like the FCC, our goal is to help the Form 477 program deliver the most accurate, timely, and useful data possible. With the best data, we can effectively ensure the provision of quality voice and broadband services, maintain universal voice service, promote universal deployment and adoption of broadband

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services via quality services, and monitor competition and concentration in this rapidly changing industry.

Respectfully submitted,

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