

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

In the Matter of Improving
the Resiliency of Mobile
Wireless Communications
Networks.

PS Docket No. 13-239

Reliability and Continuity of
Communications Networks,
Including Broadband
Technologies.

PS Docket No. 11-60

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

FRANK R. LINDH
HELEN M. MICKIEWICZ
CHRISTOPHER WITTEMAN

Attorneys of the California
Public Utilities Commission and
the People of the State of California

505 Van Ness Avenue
San Francisco, CA 94102
Telephone: (415) 355-5524
Facsimile (415) 703-2262
Email: wit@cpuc.ca.gov

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I. 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 proposal of the Federal Communications Commission (Commission) to require mobile telephone (commercial mobile radio service or CMRS) providers "to submit to the Commission for public disclosure, on a daily basis during and immediately after major disasters, the percentage of cell sites within their networks that are providing CMRS."¹ The Commission's stated purpose is to promote consumer understanding of how mobile wireless service providers compare in keeping their networks operational during disasters, which in turn could encourage competitive efforts to improve the resiliency of mobile wireless communications networks during emergencies of all sorts. The CPUC supports the Commission's proposal, but urges the Commission to expand the types of carriers which report to DIRS, and (potentially) the information they report.

One of the factors driving the Commission's proposal is its perception that "service impacts during Superstorm Sandy and in its aftermath were not evenly distributed among mobile service providers," and that "operational choices and practices [including the deployment of back-up power facilities] may account for much of this variation."² The Commission's proposed rules would require facilities-based wireless carriers, during periods of activation of the Disaster Information Reporting System

¹ The Commission's Notice of Proposed Rulemaking *In the Matter of Improving the Resiliency of Mobile Wireless Communications Networks* (NPRM) was adopted September 26 and released September 27, 2013. Quotation at ¶ 1. The NPRM is available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-13-125A1.docx, and at 28 FCC Rcd 14373, 2013 FCC LEXIS 4033.

² NPRM at ¶ 3.

(DIRS), to report the percentage of their “network sites in each county that are operational sites at the time the percentage is reported.”³ The CPUC agrees with this proposal, and believes it is an important step towards network resiliency during times of disaster or emergency, entirely consistent with the original and continuing charge of this Commission to “promot[e] safety of life and property.”⁴

Additionally, the CPUC urges the Commission to provide states with direct access to the DIRS data, as well as data from the Network Outage Reporting System (NORS) for their states. As explained below, DIRS is activated only during emergencies (to date, primarily large weather systems), while NORS provides ongoing reporting of all significant outages, and hence, a long-term look at network reliability.⁵ Both are useful indicators, if not predictors, of the resiliency of a carrier’s wireless service during a disaster or emergency. California requests access to the DIRS data when DIRS is activated in California, and has already petitioned the Commission for direct access to California data in NORS.⁶

³ *Id.* at Appendix A (“Proposed Rules”). DIRS has been a voluntary disaster reporting system instituted by the Commission in 2007. See *The FCC's Public Safety and Homeland Security Bureau Launches Disaster Information Reporting System (DIRS)*, Public Notice, DA 07-3871, 22 FCC Rcd 16757 (Sept. 11, 2007) (DIRS Public Notice). The new Proposed Rules come in the form of a proposed new section (§ 4.15 Disaster Reporting Requirements for Commercial Mobile Radio Services Providers) in 47 CFR Part 4, relating to Disruptions of Communications, and would apply only to CMRS providers, making DIRS reporting mandatory for such carriers.

⁴ See 47 U.S.C. § 151.

⁵ As noted above, DIRS was instituted as a voluntary disaster reporting system in 2007. NORS, on the other hand, has existed in some form since at least 1993, if not before. See *Changes in Network Outage Reporting Requirements*, CC Docket 91-273, Report No. DC 2529, 1993 FCC LEXIS 5689 (1993). The current form of the NORS regulations are found at 47 CFR Part 4 (47 CFR §§ 4.1 - 4.13). The instant NPRM proposes the first addition to Part 4 related solely to disaster reporting.

⁶ *Petition of the California Public Utilities Commission and the People of the State of California for Rulemaking on States’ Access to the Network Outage Reporting System (“NORS”) Database and a Ruling Granting California Access to NORS*, ET Docket 04-35, November 13, 2009 (*California NORS*)

The Commission's proposal has both safety and consumer protection aspects to it. The Commission's proposal is designed to encourage carriers to "improve communications during such emergencies" as Superstorm Sandy,⁷ and it is also aimed at arming consumers with sufficient information to make informed market choices.⁸ Indeed, the Commission's proposal sits at the nexus of safety and consumer protection, as one of the criteria in shopping for a cell phone is its utility during a disaster or emergency.⁹

The CPUC has expressed its views on wireless network reliability before, including but not limited to: the Commission's Decision 04-09-062 after its *Investigation of Cingular Wireless*, in which the Commission analyzed granular information about that carrier's wireless cell site operation in California;¹⁰ the Report of the Commission's [Tele]Communications Division on the 2007 Southern California Firestorms;¹¹ the

Petition).

⁷ NPRM at ¶ 5.

⁸ *Id.* at ¶¶ 19 ff ("We seek comment in this *NPRM* on the reporting and disclosure of information to enable consumers to compare how well various mobile wireless networks are able to withstand and recover from disaster conditions. There is precedent in the telecommunications sector and in other industry contexts for using informational disclosures of this sort to enhance consumer welfare and drive product and service improvements"); compare Cal. P.U. Code § 2896 (consumers should have "Sufficient information upon which to make informed choices among telecommunications services and providers").

⁹ The *NPRM* was most immediately precipitated by a May 13, 2013, letter to the Commission from Consumers Union (CU), which urged the Commission to conduct a rulemaking proceeding to "establish appropriate metrics for measuring a wireless carrier's network performance," such as "the number of a wireless carrier's non-functioning cell towers in each county" within a disaster area, "and the percentage of the carrier's cell towers in that county that the number represents."

¹⁰ D.04-09-062, Slip Op. at 46 (discussing carrier's information "enabling customers to be informed about dead spots, areas of no coverage, and closest working and planned cell sites"); see also *id.* at 18 (discussing variety of coverage "holes"); available at http://docs.cpuc.ca.gov/PublishedDocs/PUBLISHED/FINAL_DECISION/40226.htm.

¹¹ *Communications System Performance During the 2007 Southern California Firestorm (California Firestorm Report)*, available at ftp://ftp.cpuc.ca.gov/Telco/CPUC_Firestorm_Report_9.08.pdf.

November 2009 CPUC Petition for an FCC Rulemaking on States' Access to the Network Outage Reporting System (NORS);¹² as well as recent comments to the Commission on improving 9-1-1 reliability and the continuity of communications networks.¹³

II. Discussion

A. Cell Site Resiliency Data Is Crucial to Ensure Emergency Communications, Public Safety, and Consumer Choice.

The Commission cites the increasing use of wireless networks for consumers to make 9-1-1 calls;¹⁴ data available to the CPUC supports this.¹⁵ The Commission asks whether other telecommunication sectors including wireline or cable providers, should be considered in the proposed reporting and disclosure requirements.¹⁶ Notwithstanding the urgency of having a functioning reporting system for wireless communications during disasters, the Commission should ultimately include all critical infrastructure telecommunications providers, including cable, satellite and interconnected VoIP providers, in DIRS reporting, as NORS reporting regulations currently require.¹⁷ The

¹² *California NORS Petition, supra*, note 6.

¹³ *See, e.g.*, May 13, 2013, CPUC Comments *In re Improving 9-1-1 Reliability and Continuity of Communications Networks, Including Broadband Technologies*, FCC PS Docket No. 13-75.

¹⁴ NPRM, at ¶¶ 14, 17, *passim*.

¹⁵ The largest percentage (40% or more) of emergency calls during the 2007 California firestorms came from wireless handsets. *See California Firestorm Report, supra*, at 45. By 2013, the percentage of wireless 911 calls had increased dramatically. In September of last year, the California Office of Emergency Services reported that “As such, 55.8% of 9-1-1 calls were wireless in 2007, whereas 71.6% of 9-1-1 calls were wireless in 2012. As of June 30, 2013, wireless 9-1-1 calls comprised 72.7% of California's total 9-1-1 call volume.” *See* September 25, 2013 letter of State of California, Governor's Office of Emergency Services, Public Safety Communications to the Commission, in response to FCC public notice DA 13-1873, re Public Safety Communications Comments on E9-1-1 Location Accuracy.

¹⁶ NPRM ¶ 29.

¹⁷ 47 CFR § 4.9 (NORS outage reporting requirements for cable, IXC/LEC tandem facilities, satellite,

Commission should apply rules for outage reporting, whether NORS or DIRS, to communications providers on a technology-neutral basis. Under the Commission's universal service rules, supported voice services are defined as voice telephony service, which may be provided over IP-enabled broadband networks.¹⁸ The Commission has found interconnected VoIP services, for instance, to be the "functional equivalent" of traditional TDM voice service, as both allow customers to make and receive real time voice calls over the PSTN, and as VoIP increasingly appears to be viewed by consumers as a substitute for traditional voice telephone services.¹⁹

While DIRS is a reporting system for use during large-scale disasters and restoration efforts, NORS is designed to enable the Commission to monitor network performance over time, and to create a consistent body of data allowing statistical

SS7 system, wireless, wireline, and interconnected VoIP providers).

¹⁸ FCC Report & Order, and Further Notice of Proposed Rulemaking, *In re Matter of Connect America Fund*, WC Docket No. 10-90; *A National Broadband Plan for Our Future*, GN Docket No. 09-51; *Establishing Just and Reasonable Rates for Local Exchange Carriers*, WC Docket No. 07-135; *High-Cost Universal Service Support*, WC Docket No. 05-337; *Developing an Unified Intercarrier Compensation Regime*, CC Docket No. 01-92; *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45; *Lifeline and Link-Up*, WC Docket No. 03-109; *Universal Service Reform – Mobility Fund*, WT Docket No. 10-208, FCC No. 11-161, 26 FCCR 17663 (Nov. 18, 2011) (Transformation Order), at ¶¶ 76-78 ("voice telephony service" includes "functional equivalent[s]").

¹⁹ *Id.*; see also *id.* at ¶63 (consumers increasingly obtaining voice services over broadband networks). Another example of functional equivalency the Commission has used can be found in its the Part 4 rules for SS7 communications. See 47 CFR § 4.3(e) ("For the purposes of this rule part, SS7 refers to both the SS7 protocol and the packet networks through which signaling information is transported and switched or routed. It includes future modifications to the existing SS7 architecture that will provide the functional equivalency of the SS7 services and network elements..."). The CPUC is aware that the Commission extended DIRS reporting to VoIP providers, but – unlike the current NPRM – did so on a voluntary basis:

As of June 28, 2012 the Federal Communications Commission's (Commission) Disaster Information Reporting System (DIRS) will accept disaster outage information on interconnected Voice over Internet Protocol (VoIP) and broadband Internet services. DIRS is a voluntary, web-based system ... The expansion of DIRS to interconnected VoIP and broadband Internet services recognizes that consumers, businesses, and government agencies increasingly rely on broadband and interconnected VoIP services for everyday and emergency communications needs, including 9-1-1 services.

FCC Public Notice re DIRS, 27 FCC Rcd 731 (June 29, 2012) at ¶ 1.

analysis of trends and patterns. NORS reporting is suspended in favor of the more real-time DIRS system in a disaster area for the duration of the crisis.²⁰ Although designed for different purposes, DIRS and NORS provide important complementary information regarding carrier performance during disasters and normal operations, which consumers can use in selecting a service provider.

The Commission extended mandatory NORS reporting to wireless, cable and satellite providers in 2004,²¹ and to VoIP providers in 2012,²² so that almost all communications providers are now subject to ongoing outage reporting requirements. As with the increased use of wireless networks for 911 calls, the Commission has recognized the similarly growing dependence on VoIP for emergency communications as a reason to impose mandatory NORS reporting on interconnected VoIP providers.²³ The Commission should apply a similar rationale to DIRS reporting.

B. The Commission’s Proposal Asks for Data that the Carriers Have, and in Many Cases Are Already Reporting.

The Commission asks about the cost/benefit balance of requiring the proposed disclosure.²⁴ The CPUC learned, in its investigation of Cingular Wireless in 2003 and 2004, that carriers have very granular data about the performance of their cell sites,

²⁰ NPRM ¶ 7 (“...the Commission generally suspends otherwise mandatory NORS reporting obligations of DIRS participants throughout periods when the latter system is fully activated”).

²¹ Report and Order, *In the Matter of New Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, ET Docket 04-35 (FCC 04-188) (2004) at ¶ 1.

²² Report and Order, *In the Matter of the Proposed Extension of Part 4 of the Commission’s Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, PS Dkt. 11-81 (FCC 12-22), Released Feb 21, 2012.

²³ *Id.* at ¶ 46.

²⁴ NPRM, at ¶ 10 *ff.*

including hour-by-hour dropped calls, "system busy" calls, and other categories, for each cell-site (or "network sites" in the Commission's parlance).²⁵ The fact that carriers collect this data at the most granular levels for operational purposes allows the inference that the carriers' disclosure of this data at higher levels of aggregation, such as the Commission proposes, would not impose significant new cost burdens on the carriers. Indeed, the Commission notes that much of this data is "information [that] many providers already report to the Commission voluntarily."²⁶

C. Consumers Would Benefit From the Targeted Data.

The Commission also asks whether consumers would make use of this information.²⁷ There are, in effect, two target audiences for this data: the consumer directly; and regulatory agencies and consumer groups, indirectly. The latter may be required to interpret for the former, depending on the nature of the data. In the CPUC's experience, the raw data sometimes needs interpretation for public consumption,²⁸ and

²⁵ D.04-09-062, Slip Op. at 45-46. The atomized cell site data was presented as attachments to the testimony of Robert Zicker. *See, e.g., id.* at fn. 12. Zicker also presented Cingular engineering coverage maps, obtained in discovery, demonstrating that the carriers have or can have very precise information about signal strength at every point in most urban landscapes.

²⁶ NPRM, at ¶ 1. The CPUC is aware that DIRS allows wireless carriers, on a voluntary basis, to upload "Wireless Coverage Maps" that "show[] areas where your carrier's service is and is not working," as well as data on the status of Mobile Switching Centers, Signaling Transfer Point, and Mobile Soft Switches. DIRS User Manual, Version 4 (June 2013), at 9, 19, 38-40, available at <http://transition.fcc.gov/pshs/services/cip/dirs/dirs.html> (tab for "DIRS User Manual" on right side of webpage – last visited January 4, 2014). As discussed herein, wireless carriers have readily available to them a wealth of technical/operational data about their networks. The CPUC looks to the carriers to provide this information in an aggregated and easily understandable format, while retaining and making available on request the granular data on which their reporting is based.

²⁷ NPRM, at ¶ 20.

²⁸ Information on a cell-site by cell-site basis about dropped or system busy signals, for example, would need to be aggregated and explained before it would provide meaningful assistance to the lay consumer.

sometimes not.²⁹ Consumers would benefit from the release of the data in an appropriate form, as it would likely inform consumers' choices and drive market efficiency and development.³⁰

The CPUC also requests that state commissions have access to the underlying data for their respective states. This would allow state commissions, to the extent they deem it necessary and have sufficient resources, to: (a) design consumer education materials and disclosures that report, or are informed by, actual carrier data; (b) supplement and check the data provided by carriers in response to state service quality reporting requirements; and (c) monitor network activity so as to track developing issues, such as a battery backup problem referenced in the NPRM.

Indeed, the Commission asks about battery backup requirements as a complementary or alternative measure in this rulemaking.³¹ The CPUC is on record supporting battery back-up standards at multiple levels of the network.³² Meaningful

²⁹ On the other hand, Cingular's coverage maps, although designed for engineers, were immediately understandable, as signal strength levels (dBm ranges, e.g., mid -70s dBm to mid -80s dBm for "good to marginal coverage") were translated into colored bands: green for good signal strength; yellow for "good to marginal," not sufficient for some in-building coverage; red for poor signal strength; and grey for no signal.

³⁰ Compare CPUC D.04-09-062, Slip Op. at 25-26 (distinguishing between network information that is and is not available to the consumer).

³¹ NPRM ¶ 62.

³² The CPUC supported the now-vacated Commission order for cell site battery backup requirements, and backup requirements for central offices. See CPUC Comments, *In the Matter of Reliability and Continuity of Communications Networks, Including Broadband Technologies, et al., Notice of Inquiry*, PS Docket No. 11-60, et al., 26 FCC Rcd 5614 (2011) (*Reliability NOI*), filed August 17, 2012; CPUC Comments, *In the Matter of Improving 9-1-1 Reliability and Continuity of Communications Networks, Including Broadband Technologies, Notice of Proposed Rulemaking, PS Docket 13-75; PS Dkt 11-60, (Reliability NPRM)*, filed May 13, 2013.

battery back-up standards are a useful complement to disaster and network outage reporting.

D. All Carriers, including MVNOs, Should Be Covered by the Rules.

The Commission asks whether the proposed rules should apply only to facilities-based carriers, or also to mobile virtual network operators (MVNOs).³³

The CPUC recommends that carriers without facilities should also report network operational information, and disclose “their” network operational status (i.e., that of the facilities-based carriers they use to provide service in a given area). To the extent that carriers share “much of the same underlying infrastructure,” their performance data should be the same or similar.³⁴ MVNOs choose among facilities inputs, and often present themselves as nationwide networks.³⁵ There is no reason not to include their performance data in the Commission’s current proposal, or to associate their virtual networks with the performance data of the underlying networks they employ.

In California, over seventy-five (75) companies are registered as cellular resellers by the CPUC, and each company brands its product for consumers in the market under a different name.³⁶ The MVNOs have varying levels of transparency regarding which facilities-based wireless carrier the MVNO has contracted for service. Consequently, many Californians do not know if their carrier is facilities-based or is operating as an

³³ NPRM at ¶ 31.

³⁴ *Id.*

³⁵ *See, e.g.*, CPUC Decision D.12-02-032, Finding of Fact 16: “TracFone provides customer service and manages customers as though it were a network-based carrier.”

³⁶ Some, like TracFone Wireless, market under several names (TracFone, Net10, Straight Talk, and recently, Simple Mobile).

MVNO, and if an MVNO, have no idea on which network their calls in a given region are being carried. These carriers often offer Lifeline service, which provides the most vulnerable communities with 9-1-1 calling, emergency communications, and other critical calling requirements.

If the premise of publishing the cell site operational data is for consumers to have the information to choose the most reliable network,³⁷ then the consumers should be able to correlate the brand name they purchased (i.e., the MVNO) with the carrier actually carrying their traffic, as posted to DIRS and found on the Commission's proposed resiliency web site. At a minimum, MVNOs should report on a county by county basis which underlying carriers are being used. To allow MVNOs to escape this requirement would be to circumvent the public information purpose of publishing DIRS data. There is a substantial government interest in providing information to consumers on operational choices made both by facilities-based carriers and by MVNOs (in choosing the facilities-based carrier to carry their traffic). Anything less departs from the Commission's principles of technological and competitive neutrality.³⁸

The Commission might accomplish this transparency in multiple ways. One way would be for the MVNOs to report to the Commission which facilities-based wireless carriers carry the MVNO's traffic in which areas, and the Commission would add this information to (and correlate it with) the reporting on the resiliency web site. Another way would be for the facilities-based carriers to identify which MVNOs they carry on

³⁷ NPRM § 19.

³⁸ See, e.g., 47 U.S.C. §253(a) and (b).

their networks (again requiring the Commission to add and correlate the information). Perhaps the most efficient alternative would be to require the MVNOs to integrate the operational results of the facilities-based carriers they use, and report network results on a per-county or more granular basis, like the facilities-based carriers will do for their own traffic. Regardless of how this transparency is achieved, and the CPUC is neutral on the methodology, the bottom line for California is that consumers should be able to find “their” network on the Commission’s proposed website, and compare its operational results with those of other carriers.

The Commission asks about applicability of these proposed rules to smaller mobile wireless service providers.³⁹ The CPUC recommends that the proposed rules for DIRS reporting apply to all wireless service providers. People who will use this information live in both cities and rural areas; reporting should be provided for the benefit of all wireless users in a given footprint.

E. The Relationship Between DIRS and NORS Data

The Commission seeks comment on “possible alternative or complementary measures that could improve wireless network resiliency.” The focus of the Commission’s NPRM, the DIRS database, is obviously complementary to the NORS database, as described above. DIRS captures network conditions during times of disaster; NORS captures a baseline of network outages during normal operations. Consumers have an interest in how a carrier operates under normal operating conditions as well as during and after emergency conditions.

³⁹ NPRM, § 55.

Network outage information is critical to state disaster planning and state efforts to ensure resilient networks, as well as the federal efforts the Commission contemplates in the NPRM. NARUC’s committee on critical infrastructure adopted a resolution to urge government agencies to share outage information, and noted that the “restoration efforts of all Service Providers may be enhanced by the improvement of communications, coordination and the sharing of information among such providers and with State commissions and other appropriate governmental bodies....”⁴⁰

State commissions should have secure and direct access to the DIRS data for their states for the same reasons that they should have secure and direct access to the NORS data for their states. California petitioned the Commission for direct access to NORS data in 2009,⁴¹ and other states, municipalities, public interest and industry groups supported California’s request, with an eye to access the NORS information for their states or localities.⁴² The Commission recently noted that California’s Petition remains pending, and that the Commission wanted to “defer a decision about sharing certification

⁴⁰ National Association of Regulatory Utility Commissioners, *Resolution Urging Governmental Agencies to Take Action to Coordinate Emergency Planning to Ensure the Sharing of Outage and Other Critical Information in Emergency Situations* (February 6, 2013).

⁴¹ *California NORS Petition, supra*

⁴² *See, e.g.*, Comments of the National Association of State Utility Consumer Advocates, ET Docket No. 04-35, filed Mar. 4, 2010; Comments of the City of New York, ET Docket No. 04-35, filed Mar. 4, 2010; Comments of Massachusetts Department of Telecommunications and Cable, ET Docket No. 04-35, filed Mar. 4, 2010; Comments of the Public Service Commission of the District of Columbia, ET Docket No. 04-35, filed Mar. 4, 2010; Comments of the Missouri Public Service Commission, ET Docket No. 04-35, filed Mar. 26, 2010; *and* Comments on behalf of the New York Public Service Commission, ET Docket No. 04-35, filed Mar. 4, 2010; *see also* Comments of CALTEL (California Association of Competitive Telecommunications Companies), ET Docket No. 04-35, filed Mar. 8, 2010; Comments of the Alliance for Telecommunications Industry Solutions, ET Docket No. 04-35, filed Mar. 4, 2010 at 1 “ATIS recognizes the legitimate needs of states to have access to outage reporting data...”; Comments of The United States Telecom Association, ET Docket No. 04-35 filed Mar. 4, 2010 at 1 “US Telecom’s members recognize the legitimate interest that the California Public Utilities Commission (CPUC) has in obtaining federally collected outage reports for its jurisdiction.” .

data with state regulators until the issue is resolved in the context of outage reporting.”⁴³

As DIRS is about outage reporting, albeit in a particular context, the CPUC hopes that the time is ripe to address its Petition. The fundamental reason animating California’s NORS Petition is the same as the Commission’s rationale in the instant proceeding, public safety.⁴⁴ As California stated in its NORS Petition:

California law requires every public utility to furnish and maintain adequate, efficient, just, and reasonable service, equipment, and facilities, necessary to promote the safety, health, comfort, and convenience of the public. Frequent or widespread service outages pose a potential significant threat to public safety, as well as tremendous inconvenience to all users of communications services. Tracking and reporting major service interruptions continues to be an important way for the CPUC to be apprised of service interruptions that may affect public safety, and to assess changes that may be necessary to ensure that the public receives adequate, efficient, just, and reasonable telephone service, including uninterrupted access to 911 emergency services.⁴⁵

Direct state access to the NORS and DIRS databases would be a useful complement to disclosure of the DIRS data as proposed in the instant NPRM.

F. Implementation

1. Collection of Data, and Presentation to Consumers, in More Precise Geographic Units

The Commission asks if per-county data is granular enough, and “whether it is more useful to require reporting on a more or less granular level than per-county, and if

⁴³ Report and Order, *In the Matter of Improving 911 Reliability, Reliability and Continuity of Communications Networks, Including Broadband Technologies*, PS 13-75, PS Docket 11-60, (FCC 13-158), Rel. Dec 12, 2013, at ¶ 156. footnote 419.

⁴⁴ Compare NPRM, § 9.

⁴⁵ *California NORS Petition*, page 5 (footnotes in original omitted).

so, what level?”⁴⁶ The Commission notes that the per-county metric is the one currently used in DIRS.⁴⁷ The most immediate goal is to get *some* functioning disaster reporting system launched, and the CPUC acknowledges that the most immediate way of doing this would be to use the “Wireless Cell Site by County” metrics already embedded in the DIRS database.⁴⁸

But counties can be very large. In general, California would prefer a more granular approach, such as communities of interest, if not zip codes, census tracts, census block groups, or census blocks. Communities of interest reporting would report on areas where people live together, which may not correspond to the statistical center of a zip code, census tract or block group. Whatever metric is chosen, the point is to move geographic reporting to a level of granularity where meaningful correspondence to population groups can be drawn.

The Commission seeks comment on the “appropriateness of the proposed metric” (per-county percentage of sites operational), whether there might be confusion between percentage of operational cell sites and percentage of coverage,⁴⁹ and whether “the proposed metric (could) unintentionally mislead consumers?”⁵⁰ While consumers might confuse the percent of operational cells with the percent of coverage, at some point of granularity these two ratios converge. The question from an individual consumer’s point

⁴⁶ NPRM at ¶ 33.

⁴⁷ *Id.*

⁴⁸ DIRS User Manual, *supra*, at 38 *ff.*

⁴⁹ NPRM ¶ 42. As noted below, this may not matter for most consumers.

⁵⁰ NPRM at ¶ 39.

of view boils down to whether the consumer's handset will work at a given location or locations. From a disaster planner's point of view, the most important question might be how many people are affected by a given outage. In both cases, the key to minimizing confusion is the granularity of the data. The Commission receives the total information now per county; there may be reason to depart from those practices toward a more granular metric in the future.⁵¹

As a general matter, the CPUC desires clear information to consumers without confusion.⁵² The CPUC agrees that words can confuse, transitions are underway, and complexity exists; however we also note that consumers learned very quickly, for instance, about how WIFI offload works when presented with a simple icon for that connectivity, similar to the familiar icon of cellular 'bars' of coverage.⁵³ In regard to presentation, the CPUC recommends that the Commission use percentage of operational sites (for whatever geographic unit is chosen) as the initial reporting method, and move to more nuanced and intuitive outage maps ("as many electrical utilities already do") over time.⁵⁴

⁵¹ DIRS User Manual, Version 4, June 2013 referenced from <http://transition.fcc.gov/pshs/services/cip/dirs/dirs.html>, visited January 3, 2014.

⁵² NPRM § 39.

⁵³ WIFI offload is a technique which allows a cellular handset/device to send and receive data via WIFI when a network is available and accessible, thereby not using the macro cellular network. This technique releases carrier licensed spectrum resources for users – for some services -- who can connect to a WIFI network. While WIFI offload is not at issue here, the point is that complex data can be made easily understandable to consumers. For signal strength, cellular icons show some variation of 'bars' such as , and WIFI coverage icons show some variation of the now almost equally familiar  icon.

⁵⁴ NPRM at ¶ 58.

As noted above, the wireless carriers use data at very fine levels of granularity in their day to day network management. Data reviewed by the CPUC suggests there are no operational or technical barriers to requiring carriers to report data at a level more granular than county-by-county, and at increments more frequent than 24 hours (during a declared DIRS event).⁵⁵

The Commission asks if mobile wireless providers should provide their “underlying calculation basis” to the Commission.⁵⁶ California believes that carriers should at least be required to retain and make available to the Commission on request such supporting and backup data.⁵⁷ It is critical that the Commission have access to information sufficient to fully analyze, understand and verify reported outage information.

2. Definition of “Operational”

The Commission asks whether there is “a need to clarify with greater precision what it means for a site to be considered ‘operational’,” and whether there are “ambiguous or borderline cases.”⁵⁸ The answer to both questions is “yes.”

Data that the CPUC has seen in prior investigations strongly suggests that there are varying degrees of “operational.” A cell site may be partially operational. Rather than merely reporting whether or not a given cell or CMRS site is working, the

⁵⁵ CPUC staff refers here to data reviewed in the *Cingular Wireless* and *California Firestorm* investigations. *Compare* NPRM at ¶ 46 (CTIA notes that “a provider's service restoration practices ... can make the information outdated in a matter of hours”).

⁵⁶ NPRM ¶ 34.

⁵⁷ Such data should also be made available to state agencies on request.

⁵⁸ NPRM at ¶ 32.

Commission could require that carriers report cell sites that are partially operational, based on metrics such as dropped calls, system busy, or other data which the carriers routinely collect and monitor for their own engineering purposes.

“Operational” should thus be defined from the perspective of the consumer, which is the stated purpose of the proposal in the NPRM.⁵⁹ Wireless networks’ cell sites are engineered for a specific capacity – for spectrum, backhaul, signaling, and a host of other parameters – that enables a number of devices to simultaneously make telephone calls, send texts, send and receive pictures and videos, and other communications. It is this threshold that should define operational: the functioning capacity for which the cell site was engineered and built. If the cell site is delivering less than the designed capacity during or after a major disaster, or with regularity during normal operation, these are material facts driving consumer choice and should be made available.

The Commission seeks comment on the practice of counting “as a single ‘site’ for purposes of tabulating site outage percentages” those sites where successive generations of technology from one provider are collocated.⁶⁰ This is a standard practice which the CPUC accepts, provided that the collocation site is hosting successive generations of technology operated by the same provider. Where different carriers’ technologies are collocated at one site (towers, etc.), each carrier should report its own outage and

⁵⁹ “Ultimately, our objective is to ensure that any disclosure rules adopted in this area are tailored to the needs of consumers, do not impose undue burdens on service providers, and provide incentives that are most likely to lead to improvements in network reliability during emergencies.” NPRM ¶ 9.

⁶⁰ NPRM ¶ 32 and footnote 59.

operational status. For example, if one tower is blown down and shared by two carriers, both carriers' reporting would reflect that its cell site on the tower is out of operation.

3. How to Present COWs, COLTs, and Other Temporary Coverage Entities

The Commission seeks comment on the proposed treatment of temporarily deployed sites, such as Cells on Wheels (COWs) and Cells on Light Trucks (COLTs).⁶¹ Carriers use these temporary facilities not only when disasters strike, but also during other occasional departures from their operational baseline, such as rock concerts, large sporting events, or other large public gatherings.

The CPUC again considers that the purpose of insuring cell site resiliency before, during, and after, disasters is for people to be able to communicate using carrier wireless networks. To the extent that COWs and COLTs enable this, then their use in reporting should be allowed; indeed, it should be required. The CPUC recommends that use of COWs and COLTs be reported separately, however, and should not be allowed to mask the failure of CMRS providers' permanent facilities.⁶²

4. Frequency of Reporting

The Commission seeks comment about the frequency of reporting, while noting that DIRS activations require a daily reporting cycle.⁶³ The CPUC accepts outage reporting at DIRS' current 24-hour interval at this time, while noting – in consonance with CTIA – that disaster reporting can shift quickly over time, which suggests that more

⁶¹ NPRM at ¶ 38.

⁶² See Section G1 Definition of Operational. e.g. the capacity for which the cell site was engineered and built.

⁶³ *Cf.* NPRM § 46.

frequent reporting during disasters might be appropriate.⁶⁴ The frequency of reporting hangs on its uses. If the DIRS system is to be used for real-time response *during* a disaster or emergency, then increased reporting frequency is desirable. If the system's primary use is to be *post hoc* analytics and comparison, then the 24-hour period seems acceptable.

G. Objections that the Data is Confidential, Trade Secret, Would Compromise National Security, or Would Somehow Violate Carriers' First Amendment Rights, Should Not Prevent Meaningful Disclosure of the DIRS/NORS Data.

The NPRM raises the specter that publication of DIRS data could enable terrorism.⁶⁵ There are several responses to this. First, much of the cell-site location data is already public, in that cell-siting is – as widely acknowledged – the subject of open public proceedings at the municipal level.⁶⁶ Secondly, systemic risk may lie further upstream than the individual cell site. Disclosure of information at levels more granular than “county-wide” would not appear to pose significant *additional* danger for carriers or the sites themselves. The risk appears *de minimis* at a county-wide level of aggregation.

Confidentiality is a related issue.⁶⁷ As a threshold matter, can a service provider claim that essential information about the characteristics of its service is confidential? It

⁶⁴ NPRM at ¶ 46 (“a provider's service restoration practices that can make the information outdated in a matter of hours”)

⁶⁵ NPRM at ¶ 50, fns. 74 and 75, citing DIRS Public Notice at 2, and at ¶ 56.

⁶⁶ See, e.g., *Petition for Declaratory Ruling (Shot Clock Order)*, 24 F.C.C. Rcd. 13994 (2009), *aff'd sub nom. City of Arlington, Tex. v. FCC*, 668 F.3d 229 (5th Cir. 2012), *aff'd*, 133 S. Ct. 1863, 185 L. Ed. 2d 941 (2013); see also www.antennasearch.com/, www.cellreception.com/towers/, www.findcellsites.com/find.shtml; all sites visited 3 January 2014. Moreover, cell sites are often highly visible and commonly known in the community.

⁶⁷ NPRM at ¶¶ 50-52.

seems appropriate to draw a line between what the consumer needs to know about the service he or she is purchasing, and what the carrier can legitimately claim as a trade secret. The facts of service coverage and service reliability are not legitimate trade secrets. The particular technology and algorithms used to deliver and measure coverage and reliability may be.

Consumers want disclosure. When the scales tip toward confidentiality, however, a legal framework is in place in California. In reporting to the CPUC in compliance with the CPUC's General Order 133-C regarding service quality, for instance, carriers routinely assert that responsive data, of the same kind as targeted by the current proposal, is "proprietary and confidential information to be handled in accordance with Public Utilities Code Section 583 and G.O 66-C."⁶⁸ The CPUC routinely honors such designations, to the extent that the public interest does not require disclosure.⁶⁹ The argument that the CPUC, or any other state agency, is incapable of securely handling carrier data is belied by this long-standing practice.⁷⁰

The problem can also be described as one of ministerial efficiency. By providing the CPUC the information that is input into NORS, but only in emails, sent one at time

⁶⁸ P.U. Code 583: "no information furnished to the commission by a public utility, or any business which is a subsidiary or affiliate of a public utility, or a corporation which holds a controlling interest in a public utility, except those matters specifically required to be open to public inspection by this part, shall be open to public inspection or made public except on order of the commission, or by the commission or a commissioner in the course of a hearing or proceeding. Any present or former officer or employee of the commission who divulges any such information is guilty of a misdemeanor."

⁶⁹ CPUC General Order 66C, at § 2.4, requires the Commission, with regard to certain records and communications, to balance "the public interest in withholding such records" with "the public interest in disclosure."

⁷⁰ California provided evidence of its statutory provisions protecting carrier confidentiality" and was granted access to the NANPA database in 2002 for the purposes of monitoring numbering resources. *California NORS Petition*, page 14, Fn 50.

for each outage, the carriers insure the CPUC's maximum inefficiency in collating and making the data useful. The Commission is surely aware that many state agencies are strapped for resources, and California again asks the Commission to help the states more efficiently monitor and verify network outages and disruptions. The CPUC is ready and willing to negotiate security protocols with the Commission, and the carriers to the extent necessary, to address legitimate confidentiality concerns, while assuring that the public is provided the information it needs.

Regarding the potential First Amendment claims of carriers, the CPUC considers these to be specious.⁷¹ It is long established that reasonable consumer disclosures do not violate a vendor's First Amendment rights.⁷² Indeed, the question can be asked whether requiring an accurate description of services sold in the marketplace should be viewed as regulation of speech or as regulation of a commercial transaction.⁷³ In any event, the required disclosures easily pass the intermediate scrutiny *Central Hudson* test, as there is a substantial government interest "in ensuring that consumers are able to make intelligent and well-informed commercial decisions."⁷⁴ Disclosure requirements necessary for

⁷¹ NPRM at ¶ 68 ("whether the reporting requirements proposed in this *NPRM* ... could withstand scrutiny under the First Amendment").

⁷² See, e.g., *Milavetz, Gallop, & Milavetz v. U.S.*, 559 U.S. 229, 250 (2010), citing *Zauderer v. Office of Disciplinary Counsel of Supreme Court of Ohio*, 471 U.S. 626, 651, (noting in a case involving attorney disclosures that "First Amendment protection for commercial speech is justified in large part by the information's value to consumers, the Court [therefore] concluded that an attorney's constitutionally protected interest in *not* providing the required factual information is 'minimal'").

⁷³ See generally Symposium, *First Amendment Lochnerism? Emerging Constitutional Limitations on Government Regulation of Non-Speech Economic Activity*, 33 N. KY. L. REV. 365 (2006); compare Wittman, *Information Freedom*, 36:1 *Hastings Int'l & Comp. Law Rev* 145, 227-28, generally at 203-211 (2013) (available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2218076).

⁷⁴ NPRM at ¶ 69, citing Notice of Inquiry, *In re Consumer Information and Disclosure et al.*, CG Docket 09-158 et al., 24 FCC Rcd 11380, 11389-90 P 21 (2009) (in what the Commission believed at the time was "an increasingly competitive marketplace") (citing First Report and Order and FNPRM, in *Truth-in-*

consumer protection face an even lower hurdle, and pass First Amendment muster more easily, than speech prohibitions.⁷⁵ Here, the Commission also has a substantial interest in ensuring “the safety of the public through the use of radio communications.”⁷⁶ Finally, consumers themselves have a First Amendment right to receive information about services and products in the marketplace.⁷⁷ This is particularly true regarding the public communications network, which is vital for public safety.

The industry’s intimations that the required disclosures might lead to a reduction in cooperation between carriers, if not a reduction in facilities investment, should not be given any credence.⁷⁸ Given the high-level of cooperation and *de facto* information sharing in the industry today, evidenced by collocated facilities, “cell motels,” CTIA

Billing and Billing Format, CC Docket No. 98-170, 14 FCC Rcd 7492, 7531 P 61 (1999)). See also Cal. Pub. Utils. Code § 2896 (requiring disclosure of sufficient information to enable informed market choices).

⁷⁵ See *Empowering Consumers to Prevent and Detect Billing for Unauthorized Charges, et al.*, Report & Order & FNPRM in CG Docket No. 11-116, et 27 FCC Rcd 4436 (2012) (Anti-Cramming Order): at ¶ 130:

Where the required disclosure involves “only factual and uncontroversial information,” the required disclosure “does not offend the core First Amendment values of promoting efficient exchange of information or protecting individual liberty interests.” To the contrary, because “the extension of First Amendment protection to commercial speech is justified principally by the value to consumers of the information such speech provides,” a person’s “constitutionally protected interest in *not* providing any particular [noncontroversial] factual information . . . is minimal.” The Supreme Court thus has held that the *Zauderer* standard [*supra*], and not the intermediate *Central Hudson* standard, applies to the required disclosure of purely factual, non-controversial information that does not suppress speech.

⁷⁶ NPRM at ¶ 69, citing 47 U.S.C. § 151. Indeed, public safety has become task number one at the CPUC, following the 1989 and subsequent earthquakes, the Malibu firestorms, and the San Bruno explosion in 2010, among other natural and man-made disasters which have befallen this nation-like State with 38 million inhabitants.

⁷⁷ See *Red Lion v. FCC*, 395 U.S. 367, 371 (1969); *Richmond Newspapers, Inc. v. Virginia*, 448 U.S. 555, 575-76 (1980) (“In a variety of contexts this Court has referred to a First Amendment right to ‘receive information and ideas’”)

⁷⁸ *Id.* at ¶ 27.

codes of conduct, and industry data-gathering services,⁷⁹ there is every reason to think this concern is entirely speculative.

III. CONCLUSION

The CPUC supports the Commission’s proposal for DIRS reporting and also recommends similar disclosure of NORS data. California has a long tradition of demanding full carrier disclosure.⁸⁰ So does the Commission.⁸¹ There is no reason to depart from that practice here.

Respectfully submitted,

FRANK R. LINDH
HELEN M. MICKIEWICZ
CHRISTOPHER WITTEMAN

By: /s/ CHRISTOPHER WITTEMAN

CHRISTOPHER WITTEMAN

Attorneys for the People of the
State of California and the
California Public Utilities Commission

⁷⁹ See, e.g., “Nielsen Completes Acquisition of Telephia,” available at http://www.nielsen.com/us/en/press-room/2007/Nielsen_Completes_Acquisition_of_Telephia_Inc_.html.

⁸⁰ See Cal. Pub Utils. Code section 2896 (“consumers should have “Sufficient information upon which to make informed choices among telecommunications services and providers”); D.04-09-062, Slip Op. at ___ (citing 2896), and at fn. 31, citing *Higginbotham v. Pacific Bell*, D.02-08-069, 2002 Cal. PUC LEXIS 487 (ceasing publication of local call pricing information, including toll call prefixes, unreasonable under § 451); *UCAN v. Pacific Bell*, D.01-09-058, 2001 Cal. PUC LEXIS 914, ltd rehrg D.02-02-027 (misleading or potentially misleading marketing tactics unreasonable under § 451); *First Financial v. Pacific Bell*, D.98-06-014, 1998 Cal. PUC LEXIS 489 (§ 451 requires utility to disclose to business customers all service options that meet customers’ needs); *National Communications Center Corp. v. PT&T Co.*, D.91784, (1980) 3 CPUC2d 672 (utility owes customers responsibility to provide all available and accurate information customers require to make intelligent choice between similar services where choice exists); *H.V.Welker Inc. v. PT&T Co.*, D.75807, (1969) 69 CPUC 579 (utility has duty to ensure its representatives inform business customers of options available to meet customers’ needs).

⁸¹ See, e.g., Anti-Cramming Order, *supra*, note 75.