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Agenda ID # 6082(Rev. 1)

Quasi-Legislative

11/9/2006 Item 30

Decision PROPOSED DECISION OF ALJ WALKER (Mailed 10/10/2006)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Revise
Commission General Order Number 95 pursuant
to D.05-01-030.

Rulemaking 05-02-023
(Filed February 24, 2005)

(See Appendix A for list of appearances)

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**OPINION ADOPTING PROPOSED RULE 94 IN
GENERAL ORDER 95 DEALING WITH INSTALLATION
OF WIRELESS ANTENNAS ON UTILITY POLES**

1. Summary

The Commission on February 24, 2005 issued this Order Instituting Rulemaking (R.) 05-02-023 to consider uniform rules for attaching wireless antennas to jointly used utility poles. Following seven days of workshops in San Francisco and Los Angeles, the parties jointly presented a workshop report containing three alternative proposals for a new Rule 94 to General Order (GO) 95. Evidentiary hearings were conducted in February 2006, to take testimony on which provisions of the three proposed rules should be adopted by the Commission. A Proposed Decision that was issued in April 2006 adopted in its entirety the Rule 94 sponsored by the Commission's Consumer Protection and Safety Division (CPSD), the International Brotherhood of Electrical Workers Local 1245 (IBEW), the Communication Workers of America-Ninth District (Communication Workers), Pacific Gas and Electric Company (PG&E) and San Diego Gas & Electric Company (SDG&E).

Before the Commission acted on that Proposed Decision, 16 parties moved to set aside submission so that the parties might consider a settlement agreement. The motion was granted and, on August 23, 2006, the parties filed a settlement agreement that would delete two provisions of the new Rule 94 (additional signage for certain antennas and methods of de-energizing antennas when necessary) and require the signing parties to meet essentially the same requirements in private agreements between joint pole owners and wireless antenna owners. The proposed settlement is endorsed by virtually all parties, including the union parties and CPSD, and no party opposes it. This decision adopts the amended Rule 94 and approves and adopts the settlement agreement.

The new Rule 94 and the settlement agreement are attached to this decision as appendices. The decision also imposes an annual reporting requirement on all public utilities subject to Commission jurisdiction that have poles upon which wireless carrier RF antennas may be installed. This proceeding is closed.

2. Procedural Background

On October 2, 2001, the Commission issued R.01-10-001 to revise GO 95 and GO 128, which govern, respectively, the construction of overhead and underground electric supply and communications systems. Commission staff, industry representatives, labor organizations and the public conducted 16 months of twice-monthly two- to three-day public workshops throughout California. A total of 63 proposed changes to existing rules were considered. Of these, 40 were supported by consensus of the workshop participants, 15 were withdrawn, and eight were in dispute.

On January 13, 2005, the Commission issued Decision (D.) 05-01-030. The Commission adopted the 40 proposed rule changes supported by consensus, noted the 15 withdrawn proposed rule changes, and discussed and resolved seven of the eight disputed proposed rule changes. The Commission, however, was unable to resolve all issues surrounding the proposal to add a new rule to GO 95 to establish uniform construction standards for attaching wireless antennas to jointly used poles. Thus, in D.05-01-030, the Commission directed staff to further investigate the issues raised by the wireless antenna rules in this new rulemaking proceeding.

A prehearing conference (PHC) in this proceeding was conducted on May 24, 2005, and the parties agreed to hire a facilitator, as they had done in the earlier proceeding, and to conduct workshops aimed at achieving consensus on wireless antenna rules.

On June 7, 2005, a Scoping Memo and Ruling of the Assigned Commissioner determined that this is a quasi-legislative proceeding and set the evidentiary hearing schedule.

Seven days of workshops were held in San Francisco and Los Angeles. Approximately 40 to 70 participants representing 20 parties attended each workshop. While there was substantial agreement on the majority of rules governing wireless antennas, the parties were unable to reach consensus on all issues.

Accordingly, on September 12, 2005, the parties submitted a joint workshop report that included three alternative proposals for a new Rule 94, along with position statements of the parties. At a second PHC on November 14, 2005, the parties scheduled evidentiary hearings that were conducted on February 7-9, 2006. At hearing, the Commission heard from nine witnesses and received 22 exhibits into evidence. Briefs were filed on March 13, 2006, and reply briefs were filed on March 28, 2006, at which time the rulemaking was deemed submitted for Commission decision. A Proposed Decision was issued on April 25, 2006.

Before the Commission acted on the Proposed Decision, several parties on July 18, 2006, filed a joint petition to set aside submission pursuant to Rule 84 of the Rules of Practice and Procedure to allow the parties to pursue settlement discussions. The petition was granted on July 20, 2006. On August 23, 2006, a

settlement agreement was proposed by 16 of the parties, including CPSD and the two union parties.¹ A settlement hearing to consider the proposal was conducted on September 12, 2006, at the conclusion of which this matter was re-submitted for Commission consideration.

3. Commission Jurisdiction

GO 95 rules concern the safety of the general public, utilities' customers and utilities' employees. As required by the Public Utilities Code, "[e]very public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities ... as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public." (Pub. Util. Code § 451.) As part of the Commission's jurisdiction over public utilities in California, we are authorized to "do all things, whether specifically designated in [the Public Utilities Code] or in addition thereto, which are necessary and convenient" in the supervision and regulation of every public utility in California. (*Consumers Lobby Against Monopolies* (1979) 25 Cal.3d 891.) The Commission's authority has been liberally construed. (*See, e.g., People v. Superior Court* (1965) 62 Cal.2d 515; *People v. Western Air Lines, Inc.* (1954) 42 Cal.2d 651; *see also* Pub. Util. Code § 701.)

¹ Sponsors of the settlement agreement are CPSD, IBEW, the Communication Workers, PG&E, AT&T California, California Cable & Telecommunications Association, Clearlinx Network Corporation, Crown Castle USA, Inc., New Cingular Wireless PCS, LLC, NextGNetworks of California Inc., Omnipoint Communications, Inc., dba T-Mobile, Southern California Edison Company, Sprint Nextel, Verizon California Inc., Verizon Wireless and William Adams. SDG&E, which owns its own poles and has consistently enforced a higher standard, declined to join the Settlement. It does not, however, oppose it. Similarly, the California Municipal Utilities Association is not a signatory but does not oppose the settlement.

This Commission has comprehensive jurisdiction over questions of public health and safety arising from utility operations. (*San Diego Gas & Electric v. Superior Court* (“Covalt”) (1996) 13 Cal.4th 893, 923-924.) Our jurisdiction to regulate these entities is set forth in the California Constitution and in the Public Utilities Code. (Cal. Const., Art. 12 §§ 3, 6; Pub. Util. Code §§ 216, 701, 1001; *see also, Order Instituting Investigation Into the Power Outage Which Occurred on December 8, 1998 on Pacific Gas & Electric System*, Investigation 98-12-013 resulting in D.99-09-028, at 7-8.) Such utilities are required to “obey and comply with every order, decision, direction, or rule made or prescribed by the [C]ommission” (Pub. Util. Code § 702; *see also, §§ 761, 762, 767.5, 768, 770.*) The Commission is obligated to see that the provisions of the Constitution and state statutes affecting public utilities are enforced and obeyed. (Pub. Util. Code § 2101.)

4. Rule 94 Alternatives

All parties agree that GO 95 does not today contain specific rules for the installation of wireless antennas on utility poles that bear overhead lines. This is because, until recently, relatively few antennas had been installed on these utility poles. All parties agreed that uniform rules governing the installation of wireless antennas on jointly owned utility poles should be part of GO 95. As a result of their workshops, the parties presented us with three alternative proposals, which we briefly discuss below.²

² Another rule labeled Proposal 2A was offered by the California Municipal Utilities Association (CMUA) in its reply brief on March 28, 2006. Proposal 2A was a composite of sections from Proposals 1 and 2, most of which were unopposed.

4.1 Proposal 1 for Rule 94

Proposal 1, which was adopted in its entirety in the Proposed Decision that was issued on April 25, 2006, was sponsored by CPSD, IBEW, the Communication Workers, PG&E and SDG&E. It added a definition of antennas to Rule 20 of GO 95 (“a device for emitting and/or receiving radio frequency signals”) and proposed a new Rule 94 requiring that antennas meet standards applicable to Class C communications equipment; maintain a vertical clearance of 6 feet from supply (electrical) conductors operating at 0-50 kilovolts and clearances of 2 feet (vertical) from communications conductors and (horizontal) from the centerline of the pole; provide a sign identifying the antenna and providing information if the antenna exceeds certain Federal Communications Commission (FCC) exposure limits, and provided a means of controlling or shutting down wireless antennas if necessary. Antennas used by utilities for monitoring their supply system and antennas attached to communication cables would be exempt from Rule 94, although they must comply with other GO 95 requirements.

4.2 Proposal 2 for Rule 94

Proposal 2 was sponsored by Southern California Edison Company (SCE). It was supported by Crown Castle USA, Inc.; Cingular Wireless; NextG Networks; Sprint Nextel; Omnipoint Communications, Inc. dba T-Mobile; and Verizon Wireless (collectively, the Wireless Group). Its definition of “antenna” and its requirement that antennas meet the circuit requirements of Class C equipment mirrored the requirements of Proposal 1. It made optional the installation of a power-reduction or disconnect device; provided for a vertical separation of 2 feet from communication conductors and a 2-foot horizontal clearance from the face of the pole when supported by a cross arm, and a

clearance from supply conductors of 4 to 6 feet as specified in GO 95 tables. At hearing, all parties stipulated that Proposal 2 could be amended to include provision 94.5 of Proposal 1 (a sign identifying the type of antenna and providing a 24-hour contact number), but not provision 94.6 of Proposal 1 (signage identifying the FCC's calculated minimum approach distance when applicable).

4.3 Proposal 3 for Rule 94

Proposal 3 was sponsored by William P. Adams, an intervenor in this proceeding. Adams is an electrical engineer who retired in 1990 after 22 years with the Commission. His proposal essentially mirrored Proposal 1 as to clearances between wireless antennas and power and communications conductors, and was similar to Proposal 2 in requiring that the antenna operator be responsible for powering down or shutting down a wireless antenna. Proposal 3 was the only proposal to provide for wireless antennas on the top of a utility pole, although at hearing Adams recommended that pole-top provisions be deferred. In his reply brief, Adams essentially withdrew his Proposal 3, instead supporting Proposal 2.³

5. Disputed Provisions

The parties had few disputes remaining about the provisions of new Rule 94, and even those disputes were narrowed at hearing. The following issues were unresolved:

- Should pole-top antenna requirements be made part of Rule 94 in this proceeding?

³ Adams proposes one addition to Proposal 2, stating that if a disconnect device is installed, it "be protected from unauthorized operation by suitable means." (Adams Reply Brief, at 2.)

- Should Rule 94 make provision for a method of disconnecting or powering down the emission levels of RF antennas?
- Should a wireless carrier be required to post signage identifying the FCC exposure limits when applicable for its installed antennas?
- Should a uniform six-foot vertical clearance level between wireless antennas and supply conductors be expressly required?
- Should there be express exceptions for utility supply antennas and cable-embedded antennas?

5.1 Pole-Top Antennas

A proposed rule addressing the potential issues surrounding pole-top installations is not before the Commission, since the provision suggested by intervenor Adams has been withdrawn. Adams earlier asked that his recommendation on this subject be deferred. His comment followed testimony by SCE witness Samuel B. Stonerock, who is also chairman of the GO 95/128 Rules Committee (Rules Committee). The Rules Committee is comprised of California supply and communications professionals knowledgeable in the application of GO 95 and GO 128. It meets regularly to consider and make recommendations on these technical rules. Stonerock testified that the Rules Committee “engaged in lengthy and often vigorous discussions” on pole-top issues at its meeting held December 6-8, 2005, and was to begin voting on a draft pole-top rule at its Northern California meeting in April 2006. A further consensus vote was planned for later in the year in Southern California. He added that the proposed rule, if adopted by the Rules Committee, would involve changes to several provisions of GO 95 and would be brought before the Commission in a separate proceeding.

The proposed rules on pole-top installations of RF antennas are complex, involving such technical concerns as pole strength, coaxial cable provisions, clearances, and the location above electrical equipment. One concern is that antenna installers must pass through or near high-voltage equipment to reach the pole top, since supply (electric) facilities are located in the upper part of a pole, while communications facilities are located lower on the pole. Only qualified electrical workers are permitted to enter the upper area of the pole. Because of these considerations, all parties (with one exception) urge that the Commission defer consideration of pole-top antennas and await the guidance of the Rules Committee later this year.⁴ Since we have no record before us on this issue, we agree that deferral is prudent and necessary.

5.2 Powering Down Wireless Antennas

The FCC in 1985 adopted guidelines to be used in evaluating human exposure to RF emissions, and these guidelines were revised and updated in 1996.⁵ The guidelines incorporate limits for Maximum Permissible Exposure (MPE) for two categories of persons: general population/uncontrolled (*i.e.*, “[f]or FCC purposes, applies to human exposure to RF fields when the general public is exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure”)⁶ and occupational/controlled

⁴ ClearLinx Network Corporation urges the Commission to “mandate that wireless antennas may be placed at the top of utility poles and that (to the extent it is technically feasible) all ancillary equipment may be attached to utility poles.” (ClearLinx Opening Brief, at 16.)

⁵ *See Report and Order*, ET Docket 93-62, FCC 96-326, 61 Federal Register 41,006 (1996).

⁶ FCC OET Bulletin 65, Definition and Glossary of Terms, at 3.

(*i.e.*, “[f]or FCC purposes, applies to human exposure to RF fields when persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure”).⁷ If a wireless antenna complies with the FCC’s general population/uncontrolled MPE limit, the FCC does not require a wireless operator to take any action to limit potential exposure. If the potential for RF exposure exceeds the limit applicable to workers who risk exposure in the course of their employment, the FCC proposes alternative methods to ensure that no individual is exposed to RF beyond such limits. In its OET Bulletin 65, issued in 1997 by the FCC’s Office of Engineering and Technology (OET), the FCC suggests a number of ways to control RF exposure.

These include restricting access to the RF-emitting devices (often with fences), limiting access on a time-averaging basis to a few minutes at a time, wearing RF protective clothing, and “reducing or shutting off power when work is required in a high RF area.” (Exhibit 3, OET Bulletin 65, at 56.)

Prior to the settlement agreement (which resolved the de-energizing issue for those entities that are signatories), Proposal 1 in this proceeding required a means of reducing or shutting off antenna power (such as a disconnect switch) on or near the utility pole on which a wireless antenna is located if the antenna exceeded the general population/uncontrolled MPE limits. (The majority of RF antennas do not exceed the MPE limits, and thus a disconnect switch would not be required for most RF antennas.) Proposal 2 would make a disconnect switch optional, but it specified a location outside the

⁷ FCC OET Bulletin 65, Definition and Glossary of Terms, at 4.

climbing space and no less than 6 feet from the ground if such a device is installed.

In his opening testimony, CPSD witness Raymond Fugere testified that a jointly used pole presents a unique working environment because workers are unable to move freely away from the sources of RF exposure. He added:

Supply and communication workers need to be able to either power down or turn off an antenna that is exposing the workers to higher RF radiation, as specified by the FCC. Since it is not practical under many circumstances for workers to use other methods of lessening exposure to harmful RF radiation levels, such as time averaging, this is the best means of protecting workers from a potentially harmful situation. (Exhibit 1, at 9.)

Fugere testified that an immediate means of reducing power is particularly important in emergency situations, such as a car-pole accident, downed power lines, or fire, where a pole worker must have sufficient working space to quickly accomplish a repair. He noted that crews today have the ability to shut down high-voltage lines at critical locations when required in an emergency.

By contrast, the Wireless Group's RF expert, Dale Hatfield, testified that in his opinion the FCC rules give authority to reduce or turn off the power for an RF antenna only to the antenna owners and precluded state action that would alter that authority. On cross-examination, however, he agreed that if a pole worker is unable to leave an area where there is RF exposure above the general population/uncontrolled limits, a means of actually controlling the exposure level, such as reducing the power or shutting down, would be necessary. He also agreed that OET Bulletin 65 states that reducing or shutting off power is an

engineering control preferred over RF protective clothing. He suggested that antenna owners and utilities work together to establish power-down procedures.

Marc Brock, a PG&E technical support specialist, testified that PG&E has procedures in place that require a power shutoff device in a lockbox on or near the pole when wireless antennas are installed. In emergency situations, he said, crews will first try to contact the antenna owner and, if that effort is unsuccessful, the crew is authorized to go into the lockbox and shut down the antenna power if the antenna would intrude on the crew's ability to work on the pole. IBEW in its reply comments stated that wireless antennas in Northern California are constructed primarily on towers and have a de-energizing switch by agreement with tower owners.

The evidence presented at hearing supports the need for a locally controllable means of reducing or shutting off antenna power when that is necessary to enable pole workers to work on the pole, just as there are power-off devices in place today for shutting down high-voltage power in the event of an emergency. The purpose of such a rule is not to interfere with RF transmissions but, rather, to quickly enable a pole worker to have sufficient working space between pieces of equipment to do a job safely. The Wireless Group based its opposition to this provision of Proposal 1 solely on jurisdictional grounds. We discuss the jurisdictional issue in Section 6 of this decision.

5.2.1 Power-Down Procedure

Wireless carriers reasonably argue that antenna owners should be called before antenna power is reduced or shut down in all but the most serious emergencies. They note that a loss of power can interfere with cell phone use, including emergency calls to police, fire, and other emergency personnel. They add that antenna owners, if notified before power is reduced, can increase power

in adjacent antennas, effectively re-routing the cell phone signal so that interruption is avoided or minimized. A major concern of cellular carriers throughout the proceeding has been avoiding unplanned disruptions in service.

As noted, a locally verifiable means of reducing or shutting off antenna power is only required on those antennas for which the FCC requires protective measures, since only these RF antennas present a climbing obstacle that can force a lineman to climb too close to high-voltage equipment. The record suggests that most RF antennas are below that exposure level, presenting no significant climbing obstruction. Nevertheless, at least some RF antennas are affected by the rule and, with anticipated growth of call coverage in less populated areas, more could be in the future.

We agree that utility pole owners should develop procedures by which antenna owners would be called before power to an RF antenna is reduced or disconnected to remove the climbing hazard. Normally, such disconnect procedures are negotiated in the contracts between pole owners and antenna owners. PG&E, for example, requires its line crews to call an antenna owner before opening a power-down lockbox and reducing or cutting power except in exigent circumstances. Other utilities adopt similar procedures in their contracts with antenna owners. As discussed below, the settlement agreement addresses and resolves this issue as to its signatories.

5.3 Signage Identifying RF Exposure Limits

After a long period of opposition, the Wireless Group announced at hearing that it no longer opposed the requirement in Proposal 1 that each antenna installation be marked with a sign that identifies the antenna operator, provides a 24-hour contact number of the antenna operator for emergency or information, and provides a unique identifier for the type of antenna installed.

However, the Wireless Group continued to oppose Section 94.6 (Identifying Exposure) of Proposal 1. That provision stated:

Antennas that comply with the FCC's General Population/Uncontrolled maximum permissible exposure limits shall have a sign that provides information on such compliance.

Antennas that exceed the FCC's General Population/Uncontrolled maximum permissible exposure limits shall have a sign that provides the calculated minimum approach distance.

The antenna operator shall locate the sign prominently in areas below the antenna that are visible from the climbing space and the bottom of the sign shall not be lower than nine feet above ground line.

CPSD witness Fugere testified that the additional signage is necessary because a worker cannot tell simply by looking at an antenna whether it is emitting RF radiation under the general population/uncontrolled limit or the more restrictive occupational/controlled limit. If an antenna's emissions are within the lower general population/uncontrolled level, then only that statement would be required on the sign. If the emission level exceeds the general population/uncontrolled exposure limits (*i.e.*, falls into the occupational/controlled limits), then the sign would provide the calculated minimum approach distance designated by the FCC.

Fugere stated that "[i]n regard to worker safety, it's important for workers to be aware of how far away from the antenna they need to be when the antenna is operating under normal conditions in order to not be exposed to RF radiation exposure levels that exceed the FCC guidelines." (Exhibit 1, at 8.) The Wireless Group's FCC expert agreed that if a "piece of equipment forced the

worker to move within a distance that would exceed the allowable standard, whichever it is, that could be a problem.” (Transcript, at 254.)

The veteran linemen who testified all agreed that a sign with information about an antenna’s RF exposure levels would give them a way to determine whether they need to be concerned about their exposure level and how to proceed. They added that if such a sign was not present (because it had fallen off due to weather, vandalism or other causes), they could decide whether to seek further information before climbing the pole. The Wireless Group’s RF expert acknowledged that the FCC’s OET Bulletin 65 states that warning signs can be used to establish awareness as long as they provide information in a prominent manner on the risk of potential exposure. (Transcript, at 260.)

Witness Hatfield on behalf of the Wireless Group testified that the FCC rules leave it up to the wireless operator to determine the best practical means to comply with the FCC’s regulations and do not mandate particular methods in all circumstances. He added that the FCC rules do not mandate signs, but rather allow the wireless operators or employers to use various methods to provide awareness of and control RF exposure, based on the particular circumstances of the given exposure. On brief, the Wireless Group maintained that this Commission is preempted “from adopting the irreconcilable and significantly different approach of Proposal No. 1’s RF rules.” (Wireless Group Opening Brief, at 13.) The Wireless Group’s jurisdictional argument is addressed in Section 6 below.

There can be no question that the signage requirement in Proposal 1 would be a useful safety measure for workers who climb utility poles that support high-voltage distribution lines. The linemen who testified admitted to little knowledge of wireless antennas or RF exposure. One commented that a

colleague on one occasion simply threw a rubber blanket over a piece of equipment that may have been an antenna, even though such a blanket is intended to prevent electrical shock rather than protect against RF exposure. Another lineman, asked how he would identify a piece of equipment that might be an antenna, said that he would show it to his supervisor, who then would “walk out in the hallway and hold it up and say, ‘Has anybody ever seen one of these?’” (Transcript, at 152.)

Obviously, safety is served if pole workers are able to read a sign and, if warned that occupational/controlled limits of exposure applied, learn immediately how far they should position themselves from an antenna when they do their work on the pole. Since the Wireless Group has agreed to a requirement to post a sign identifying the antenna and providing a 24-hour contact number, it would not appear unduly burdensome to also identify the FCC standard by which RF radiation exposure is measured and, if necessary, the calculated minimum approach distance for the particular type of antenna. We conclude that the evidence supports the need for signage identifying exposure information. As discussed below, the settlement agreement adopts these procedures as part of the contracts between joint pole owners and antenna owners. No such requirement would obtain for those few utilities that are not signatories to the settlement agreement.

5.4 Vertical Clearance Level

Proposal 1 and Proposal 2 take different approaches to establishing vertical clearance requirements. Proposal 1 specifies a 6-foot vertical clearance requirement between antennas and supply conductors, including supporting elements of the equipment. (A supply conductor is one that carries electricity for the purpose of electric consumption, while a communication conductor carries

electricity for the purpose of sending a communications signal.) Proposal 2 relied on existing GO 95 requirements for Class C equipment, specifically Rule 92.1-F(2) and its references to Rule 38, Table 2, Column C, Cases 8-13. These provisions appear to require a 6-foot vertical clearance when high-voltage conductors are involved, but would permit a clearance of as little as 4 feet for lesser-voltage conductors, particularly when the antenna is mounted on a cross-arm.

The need for a uniform 6-foot vertical clearance was supported by the testimony of CPSD witness Fugere and three experienced linemen, Greg Walters of SDG&E, George Lindsey of IBEW, and PG&E witness Marc Brock. Fugere testified that a wireless antenna with a vertical clearance of 4 feet or less from supply conductors would create a physical obstruction for one working on a pole and would expose the worker to potential electrical shock. Walters cited a number of examples of when a 6-foot clearance would be necessary: (1) when maneuvering with an 8-foot “hot stick” to apply temporary grounds on energized conductors from a safe distance; (2) when climbing on a pole with a complicated configuration of supply conductors; (3) when installing permanent primary jumpers to tie related electric circuits, and (4) when working with other linemen, each about 6 feet tall, on energized primary conductors. In each case, Walters said, the pole worker “needs the 6 feet to be able to actually and comfortably and safely do his work.” (Transcript, at 134.) Lindsey and Brock similarly urged a 6-foot vertical clearance, commenting that anything substantially less would make it more likely that a lineman could come into contact with a supply conductor, causing an electric shock that could be fatal.

Testifying in support of Proposal 2, SCE witness Stonerock contended that a careful reading of GO 95’s Rule 92.1-F(2) and the referenced clearances in

Table 2, Column C, Cases 8-13, makes it clear that 6-foot vertical clearances are required under all conditions when a supply conductor is 7,500 to 75,000 volts or when it is less than 8 inches from the centerline of the pole, permitting 4-foot clearance only if the conductor is 0 to 7,500 volts and located 8 inches or more from the centerline of the pole. He added that this conforms to current requirements for Class C equipment. The Wireless Group, supporting Proposal 2, argued on brief that the proposal “continues GO 95’s tradition of developing consistent construction rules for similar types of equipment,” in this case, Class C communications equipment. (Wireless Group Opening Brief, at 16.)

As noted earlier, Stonerock is chairman of the GO 95/128 Rules Committee, and on the stand he displayed an almost encyclopedic knowledge of the relevant sections of the 556 highly technical pages of GO 95. There is no question that his interpretation of Rule 92.1-F(2) and its associated tables is correct. However, unless there is some way to graft his knowledge and experience onto the new antenna rule, it seems likely that others reading this provision of Proposal 2 could interpret it in a different and perhaps more flexible manner. Indeed, in its reply brief, SCE proposed to “clarify” the clearances provisions of Proposal 2, “(g)iven the dispute between the parties regarding clearances.” (SCE Reply Brief, at 4.) The clarification would have added a new subsection to specifically state vertical clearance distances between unprotected supply conductors and “all” antenna parts.

While we understand the desire of Proposal 2 proponents to apply vertical clearance requirements less rigidly in situations where there is little or no safety risk, we find that the clearance requirements of Proposal 1 better safeguard employees and provide clearer guidance to antenna installers, many of

whom are probably not thoroughly familiar with GO 95. As discussed below, the settlement agreement endorses the clearance requirements of Proposal 1.

5.5 Antenna Exceptions

Proposal 1 states that antennas utilized solely for the operation and maintenance of utility supply systems, along with certain antennas mounted on cables, are not subject to the provisions of new Rule 94 because they are specifically governed by other provisions of GO 95. Witnesses testified that supply antennas, such as SCADA antennas,⁸ are typically installed within the electric supply space of a distribution pole and therefore cannot meet the clearance requirements of Class C equipment. Moreover, according to PG&E witness Brock, supply antennas do not raise the same RF exposure concerns of wireless antennas since the RF exposure level from supply and cable-mounted antennas is usually less than the FCC's general population/uncontrolled levels. Electrical workers have the ability to turn off the supply antenna's power, if necessary.

SCE witness Stonerock testified that supply antennas are governed by specific provisions of GO 95, such as Rules 54.4-G and 58.6, and he did not include these antennas as exempt from Proposal 2 because such an exemption was unnecessary. To eliminate any doubt, he said that he would have no objection to including the exemption clause of Proposal 1 in Proposal 2.

The Wireless Group disagreed. It argued on brief that treating supply and strand-mounted antennas differently than wireless antennas is discriminatory. We find little merit in this contention. Strand-mounted antennas

⁸ SCADA antennas are Supervisory Control and Data Acquisition antennas that monitor the performance of electrical circuits.

by definition are antennas that are mounted on the cable strand, not on the poles, and thus create no climbing impediment. As to SCADA antennas, the discrimination provision of the Telecommunications Act of 1996 provides that a state or local government “shall not unreasonably discriminate among providers of functionally equivalent services.” (47 U.S.C. § 332(c)(7)(B)(i)(I).) SCADA antennas are used to monitor and control the operation of the electric utilities’ own supply systems and thus are not functionally equivalent to wireless service antennas, which are used to provide voice and other telecommunication services to the wireless companies’ customers.⁹ The evidence shows that wireless antennas are distinguishable from other Class C communications equipment in that they may present RF exposure levels that the FCC has found could be harmful to line crews. An exception for Class C antennas that have little or no RF exposure risk is not discrimination; it is a recognition of the different attributes of the antennas. The testimony of SCE’s witness confirms that there is no other objection to the exception provision in Proposal 1. We agree with proponents of Proposal 1 and with SCE’s expert that providing an exception for supply and strand-mounted antennas from the requirements of proposed Rule 94 is appropriate. The settlement agreement, discussed below, endorses this approach.

6. Jurisdictional Challenge

The Wireless Group recognized and praised the Commission’s workshop approach to forging agreement on antenna rules. It noted the “significant degree

⁹ See *Bay Area Cellular Telephone Company v. San Francisco* (N.D. Cal. 2005, 2005 U.S. Dist. LEXIS 31927 (“functional equivalence” relates to the telecommunications services that the actual competing entities provide)).

of overlap” between Proposal 1 and Proposal 2. Both proposals (1) define antennas similarly; (2) treat antennas as Class C equipment, thereby maintaining many working and climbing space requirements; (3) provide additional vertical clearances from other conductors and equipment; (4) maintain vertical clearances from the ground; and (5) include a “marking rule” that provides contact information for each antenna installation.

The Wireless Group argued, however, that this Commission was preempted from adopting two of the earlier provisions of Proposal 1: first, the rule requiring a sign that deals with an antenna’s RF exposure limits (Rule 94.6) and, second, the rule requiring a locally verifiable method of powering down or disconnecting wireless antennas (Rule 94.7). The wireless carriers point out that federal law preempts state law under the Supremacy Clause (U.S. Constitution, Art. VI, § 2) when the federal statute expresses a clear intent to preempt state law, when federal and state laws conflict, or when state law stands as an obstacle to a federal policy. (*See, e.g., Capital Cities Cable, Inc. v. Crisp* (1984) 467 U.S. 691.) Specifically, the Wireless Group states, Congress enacted 47 U.S.C. § 332(c)(7)(B)(iv) to provide that:

No state or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the [Federal Communication] Commission’s regulations concerning such emissions.

The Wireless Group cites cases upholding the FCC position that “a local government may not require a facility to comply with RF emissions or exposure limits that are stricter than those set forth in the Commission’s rules,” and that state and local governments are forbidden from “restrict[ing] how a facility

authorized by the Commission may operate based on RF emissions or any other cause.”¹⁰

The Wireless Group relies in particular on an FCC ruling in 2003 called the *Anne Arundel* opinion.¹¹ In *Anne Arundel*, a county enacted an ordinance requiring, among other things, that wireless operators demonstrate that their systems would not interfere with or degrade the county’s public safety radio system. One result of any such interference could be revocation of the carrier’s zoning permit. The county argued that it was not attempting to substitute its own technical standards or to regulate beyond the federal guidelines. The FCC rejected this argument and found preemption, stating:

[T]he fact remains that by asserting authority to prohibit operation that it determines causes public safety interference, the County is effectively regulating federally-licensed operation...Such regulation of operation is different in kind from traditional zoning regulation of the physical facility such as height limitations, setback requirements, screening or painting guidelines, structural safety standards, and the like. Therefore, we find that the County’s Ordinance regulates beyond traditional zoning functions and impermissibly extends into the regulation of [RF interference].¹²

¹⁰ See *Cellular Phone Taskforce v. FCC* (2d Cir. 2000) 205 F.3d 82 (where the court found that FCC rules preempted state regulation of the operation of wireless facilities based on RF); *Cal RSA No. 4 v. Madera County* (E.D. Cal. 2003) 332 F.Supp. 2d 1291, 1302 (local governments’ decisions regarding construction of wireless facilities must not be based on environmental effects of RF if the facilities comply with the FCC regulations).

¹¹ *Petition of Cingular Wireless L.L.C. for a Declaratory Ruling that Provisions of the Anne Arundel County Zoning Ordinance Are Preempted as Impermissible Regulation of Radio Frequency Interference Reserved Exclusively to the Federal Communications Commission*, WT-Docket No. 02-100, Memorandum Opinion and Order, July 7, 2003.

¹² *Anne Arundel* at ¶ 19.

The Wireless Group argued that a requirement to post a sign stating the applicable MPE limit on wireless antennas where necessary and a requirement that a disconnect switch of some kind be installed nearby constitute the same type of interference with RF operations that was ruled improper in the *Anne Arundel* opinion.

Supporters of Proposal 1 argued that the Wireless Group takes the FCC exemption to an unreasonable extreme, suggesting that this Commission cannot even take note of the FCC rules on RF exposure in establishing wireless antenna construction rules on utility poles. They state:

The Commission cannot regulate in a vacuum. When considering a rule that will regulate the placement of wireless antennas on joint use poles, the Commission must consider the FCC regulations in regard to RF emissions and exposure levels; to not do so would be remiss. The federal law, 47 USC § 332(c)(7)(A) first reserves to states and local governments the right to regulate the placement, construction, and modification of personal wireless service facilities. The preemptive language that follows in Section 332(c)(7)(B) prohibits states and local governments from regulating these facilities based on the environmental effects of RF emissions to the extent such facilities comply with the FCC. Case law indicates that this is a narrow area of preemption that prohibits states or local governments from imposing more stringent RF emission standards. The statute certainly does not prohibit the Commission from considering the FCC's regulations when adopting a rule regulating the construction and placement of wireless antennas on joint use poles in the interests of worker safety.

Supporters of Proposal 1 cited the cases of *Sprint Spectrum L.P. v. Township of Warren Planning Board* (1999) 737 A.2d 715, and *MetroPCS, Inc. v. City & County of San Francisco* (2004) 400 F.3d 715, in support of the proposition that the federal preemption here is narrowly drawn.

In *Sprint Spectrum*, the antenna operator asserted that the local Board of Health was prohibited by federal law from review of the operator's compliance with RF emissions. The Board of Health maintained that it had the right to verify that the emissions complied with relevant federal standards. The New Jersey Superior Court dismissed the suit, finding that the intent of Congress in 47 USC § 332 was for a limited preemption and not an expansive one. It ruled:

The Board had made no effort to impose its own view of RF levels on the application nor to substitute its judgment for that of the FCC, but has merely sought a demonstration of compliance. Nothing in the statutory language is so broadly preemptive as to excuse the applicant from having to demonstrate compliance with FCC regulations regarding RF emissions. (325 N.J. Super 61, 74-75.)

In *Metro PCS*, the 9th Circuit Court of Appeals affirmed the ruling of the district court that the city's rejection of an application to place a wireless antenna on the roof of a parking garage was not improperly based on environmental concerns about RF emissions. Despite public protests about RF emissions, the Court of Appeals agreed that the denial itself was based on zoning standards unrelated to environmental concerns and RF emissions. Moreover, the Court found that substantial evidence supported the city's decision and that judicial review under this standard should be "deferential" to the decision-making government body. It added:

[T]his Court may not overturn the Board's decision on "substantial evidence" grounds if that decision is authorized by applicable local regulations and supported by a reasonable amount of evidence (*i.e.*, more than a "scintilla" but not necessarily a preponderance.) (400 F.3d at 725.)

Proposal 1 supporters argued that the FCC itself has acknowledged that state and local governments have a role to play in devising efficient procedures for ensuring that the antenna facilities located in their communities comply with

the FCC's limits for human exposure to RF electromagnetic fields. FCC guidelines comment that "state and local governments may wish to verify compliance with the FCC's exposure limits in order to protect their own citizens."¹³ (See also, *National Assn of State Utility Consumer Advocates and National Association of Utility Commissioners v. FCC, et al.*, No. 05-11682, FCC No. 98-00170 (11th Cir., July 31, 2006) (FCC exceeded its authority in preempting state requirement for line item regulation in customer billings for cellular wireless services.)

6.1 Discussion

Because of the settlement agreement, we need not rule on the jurisdictional issues raised by the Wireless Group. Nevertheless, the record shows that the FCC encourages both signage and power-down capability as means of protecting workers from impermissible RF exposure. The Wireless Group's FCC expert testified that these are reasonable safeguards for a unique and potentially dangerous workplace - the working space on a distribution pole. The danger inherent in this workplace is uncontested. As SDG&E lineman Gregory Walters testified,

[A] lineman's place of employment is unique - a distribution pole ranging in height from 30 to 150 feet. It is a unique and treacherous work environment heightened by the ultra-hazardous nature of working with high-voltage electric conductors. (Exhibit 4, at 7.)

¹³ FCC Local and State Government Advisory Committee Publication, "A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, procedures, and Practical Guidance," June 2000, at 1.

When asked what would happen if a worker without extensive electrical training climbed a distribution pole, Walters replied simply: “He would probably die.” (Transcript, at 95.)

The testimony of the linemen was compelling. Line crews are required to climb utility poles on a daily basis, frequently to make emergency repairs. Often, a lineman must spend an hour or more working in a single location on the pole. If his work is near an antenna with RF emissions that exceed the FCC’s maximum exposure limit, then the lineman must maintain a distance (as recommended by the FCC) from the antenna. The lineman cannot step away from the utility pole, since he is strapped to it. He cannot climb down the pole to maintain the FCC-recommended distance, since that would put him well below the area in which he must work. His only choice is to climb up the pole. That of course takes him closer to the high-voltage equipment installed in the upper portion of a utility pole.

Using a model of a typically configured utility pole, lineman Greg Walters demonstrated the contortions a lineman can go through in trying to maintain the FCC’s recommended distance from an antenna below him and at the same time avoiding high-voltage equipment above him. During this time, the lineman is likely to be maneuvering a “hot stick” to apply a temporary ground on energized conductors.

The testimony suggests that emission levels of most wireless antennas are low enough so that working near the antenna requires no FCC-mandated precautions. But for antennas that *do* trigger the FCC precautions, the lineman on a utility pole has only two choices – stay the FCC-recommended distance away from the antenna or find a way that he can be certain will temporarily reduce power to the antenna. If the lineman must work within the RF approach

distance identified by the FCC, then powering down or disconnecting the antenna is the only precaution available to him.¹⁴

As discussed below, the settlement agreement provides protocols for de-energizing an RF antenna and requires their inclusion in contracts between signatory joint pole owners and antenna owners.

7. The Proposed Settlement

The proposed settlement would retain all of the provisions of Proposal 1 except for Section 94.6 (Identifying Exposure) and Section 94.7 (Controlling Exposure). Essentially the same requirements of those two sections (additional signage on the utility pole for each RF antenna and a method for reducing or shutting off power to RF antennas) would be required in the contractual requirements between the utilities that operate jointly owned poles and the wireless carriers that seek to mount antennas on those poles.

The settlement agreement requires signatory antenna owners to provide signage on jointly owned utility poles regarding compliance with the FCC exposure limits for each antenna installation and specifying the minimum approach distance if necessary. It also requires protocols for de-energizing antennas with RF emissions that exceed the FCC's general population maximum permissible exposure limits. In the protocols for de-energizing antennas in non-emergency or routine situations, the antenna owner would be responsible for de-energizing an antenna upon request of the joint pole owners. In the protocols for

¹⁴ All parties appeared to have agreed that three of the FCC's recommendations for controlling RF exposure – distancing, power cutoff, and warning signs – can be applicable to a utility pole; two of the FCC's recommendations – fencing/shielding and protective clothing – are not practical as to utility poles or to those who must climb the poles. (See FCC OET Bulletin 65.)

de-energizing antennas in emergency situations, utility line crews would be authorized to de-energize the antenna if the antenna owner cannot be reached in time to deal with the emergency.

At the settlement hearing, in response to questions by the ALJ and by the Assigned Commissioner, representatives of two union parties – the IBEW and the Communication Workers – stated that in their judgment the settlement provisions regarding additional signage and de-energizing antennas will provide the same level of protection for the line crews covered by the agreement as would Sections 94.6 and 94.7 of the original Proposal 1. The advantage of the settlement, they said, was that these provisions could be put into place soon without the likelihood of jurisdictional challenge over state enforcement of these requirements.

The Commission's CPSD, which was a principal author of the original Proposal 1, stated that it supported the proposed settlement for much the same reasons as the unions, emphasizing the importance of putting procedures in place to better protect line crews.

Questioned about settlement language on enforceability of the settlement terms, counsel for the Wireless Group stated that any signatory party alleging breach of the settlement agreement can seek redress both in civil courts and before this Commission, and that nothing in the agreement is intended to restrict the jurisdiction of the Commission. We understand that to mean that, pursuant to Pub. Util. Code § 451, the Commission would be free in an action alleging breach of the settlement terms or protocols to consider appropriate action on any safety concerns raised by the dispute.

The settlement agreement deals only with joint use distribution poles owned by the settling parties. Poles owned exclusively by PG&E and SCE would

be covered by licensing agreements that, according to those utilities, incorporate signage and de-energizing requirements along with the other requirements of new Rule 94. SDG&E, which is not a signatory to the settlement agreement, explained that it has no jointly owned distribution poles and that RF antennas on its solely owned poles are governed by a licensing agreement that imposes even more rigid restrictions than those adopted in this proceeding. The SDG&E license agreement requires a power shut-off device on site accessible to SDG&E line crews, and line crews are directed to work no less than 3 feet away from any RF-emitting antenna. Counsel for SDG&E stated that the utility prefers to continue its licensing restrictions but it nevertheless supports the settlement agreement in this proceeding.

8. Conclusion

Since the settlement agreement appears to provide as much if not more safeguards for most line crews working on distribution poles, and since the settlement has no opposition by any party to this proceeding, we conclude that it should be approved. We have reviewed the agreement pursuant to the Commission's settlement rules and we find that the settlement is reasonable in light of the whole record, consistent with law, and in the public interest. (Rule 12.1(d) of the Rules of Practice and Procedure.) The settlement agreement is attached to this decision as Appendix 2.

Parties at the settlement hearing stated that they believed that virtually all wireless carriers that install antennas now operating in California are signatories to and bound by the additional signage and de-energizing requirements of the settlement agreement with PG&E and SCE (or by the substantially similar requirements of the SDG&E licenses). Nevertheless we are concerned that new wireless carriers may enter this fast-growing market in this state. We are also

concerned about the safety of the line crews employed by the small rural utilities who are not signatories to the settlement. Accordingly, our ordering paragraphs today impose reporting requirements on wireless carriers intended to permit CPSD to monitor RF antenna installations and to make recommendations to the Commission as necessary to ensure that appropriate signage and de-energizing procedures are in place.

Our order today also authorizes the addition of the amended new Rule 94 to GO 95 (deleting Rules 94.6 and 94.7) to set forth minimum construction requirements for attaching wireless antennas to jointly owned utility poles. Rule 94 is set forth in its entirety and attached to this decision as Appendix 1. We note that these rules clearly define antennas; treat antennas as Class C equipment, thereby maintaining many working and climbing space requirements; provide additional vertical clearances from other conductors and equipment; maintain vertical clearances from the ground; and include a “marking rule” that provides contact information for each antenna installation. These are essential minimum requirements on which the utilities, unions, Commission staff and wireless operators now agree.

In its utility ROW decision in D.98-10-058, the Commission concluded that there was a need for safety requirements for wireless attachments to utility poles, and it instructed incumbent utilities to establish standards. The incumbent utilities have chosen this proceeding in which to establish minimum construction standards for wireless antenna attachments. CPSD, which helped develop new Rule 94, states that the drafters were careful not to intrude on RF clearance standards established by the FCC. Instead, RF clearance standards were in all cases retained, but additional safeguards were imposed where necessary to permit utility employees and other authorized persons to climb the poles and

work on particular attachments and still be protected by the FCC-mandated clearances from RF exposure.

9. Implementation of Rule Changes

The adoption of the rule at issue in this proceeding will require utilities to change their company standards, communicate the changes to field personnel, and conduct varying degrees of training prior to full implementation of the rule. The rule is not retroactive and does not affect wireless antennas already installed on utility poles through private agreements between antenna owners and joint pole operators. The effective date for implementation of Rule 94 shall be no later than 180 days after issuance of the final decision in this proceeding. Our order today so provides.

10. Annual Reporting Requirement

We recognize that the private agreements requiring additional FCC information and de-energizing protocols will not apply to all public utilities with jointly owned poles upon which wireless carrier RF antennas may be installed, such as small electric utilities like Mountain Utilities, Inc., Bear Valley Electric Service, Sierra Pacific Power Company, and Pacific Power and Light Company. Similarly, a wireless carrier that is not a signatory to the settlement agreement would not be bound by terms of the settlement, and even a signatory utility would not be required by the settlement to replicate its terms with a non-party seeking to install an antenna.

While the great majority of line crews are protected by the new Rule 94 and the settlement agreement set forth in this decision (or, in the case of SDG&E, by equivalent or greater requirements), we want to be prepared to act further, if necessary, to ensure the safety of all line crews required to work on jointly owned poles subject to our jurisdiction.

Accordingly, as part of this GO 95 rulemaking proceeding, and in response to comments by the parties, our order today directs all wireless carriers subject to Commission safety jurisdiction to submit an annual written report to CPSD in a format to be prescribed by CPSD, beginning January 1, 2008.¹⁵ Each such annual report shall set forth the following information:

1. Location of RF antennas installed / removed / reconstructed on jointly used transmission poles in California in the last 12 months.
2. Date of installation / removal / reconstruction of each such RF antenna described above.
3. The entity with which the antenna owner has leased or purchased the joint pole space for the RF antenna described above.

This information will enable CPSD to create an effective GO 95 audit program for RF-emitting devices located on jointly used transmission poles. Additionally, by knowing the entity from which pole space has been purchased or leased, CPSD will be able to determine that the provisions of the contract or

¹⁵ The Proposed Decision distributed October 10, 2006, initially imposed this reporting requirement on all public utilities subject to Commission jurisdiction that have poles upon which wireless carrier RF antennas are mounted. In joint opening comments, PG&E and SCE objected to the requirement, stating that antenna installations generally are handled by joint pole associations rather than directly by the utilities, and that “the best sources for the requested information are the companies actually installing the RF antennas – *i.e.*, the wireless carriers.” (Joint Comments, at 3.) In reply comments, PG&E and SCE changed their position, concluding that annual reporting requirements are unnecessary in this decision. Wireless carriers also commented on the annual reporting requirement, arguing that such a requirement was outside the scope of this proceeding. Upon due consideration, we conclude that the annual reporting requirement is necessary and is most effective and least burdensome when imposed upon the wireless carriers. As discussed in Section 10, we believe that such a requirement is within the scope of this rulemaking proceeding, and that parties have had ample opportunity to comment upon this requirement.

lease agreement meet or exceed the requirements of the settlement agreement. With this information in hand, CPSD shall make recommendations to the Commission on any action CPSD deems necessary to ensure that the additional FCC information and de-energizing protocols are available for all line crews in their work on distribution poles subject to our jurisdiction.

We take official notice that the FCC requires RF antenna owners to file more extensive information (including the information required here) for each of its antenna installations, using FCC Form 854. (*See* 47 C.F.R. Chapter 1, Part 17.) Since the information required by this Commission already exists and is in the possession of wireless carriers pursuant to the FCC requirement, the burden of preparing this annual PUC report should be minimal.

11. Comments on Proposed Decision

The Proposed Decision of the ALJ in this matter was mailed to the parties in accordance with Pub. Util. Code § 311 and Rule 14.2(a) of the Rules of Practice and Procedure. Comments were filed on October 30, 2006, and reply comments were filed on November 6, 2006.

In response to the comments, we have revised the annual reporting requirement to apply to wireless carriers subject to our safety jurisdiction rather than to electric utilities. This is because the wireless carriers have more accurate information on their RF antenna installations and they already possess and routinely furnish such information to the FCC. (*See* FCC Form 854.)

The wireless carriers urge that the Commission limit the Proposed Decision to assessing only the reasonableness of the settlement proposal under Commission Rule 12.1(d) (“the settlement is reasonable in light of the whole record, consistent with law, and in the public interest”). The flaw in that position is that this is a rulemaking proceeding dealing with important

worker safety rules, not an application for particular ratemaking or service authority with limited disputes that the parties propose to settle.

In this rulemaking proceeding, the Commission has been asked by the parties to enact a new rule as part of GO 95 to enhance the safety of the public and – in particular – utility line crews on a statewide basis. The parties proposed three alternative versions of the new rule, and the Proposed Decision properly explains why it favored a rule (Proposal 1) that required, among other things, signage notifying line crews of the FAA warnings applicable to each installed RF antenna and a procedure for reducing power on certain high-intensity RF antennas so that emergency work could be safely performed.

Wireless carriers opposed inclusion of those two elements of the proposed new Rule 94, urging instead that those provisions be removed from Rule 94 and included instead in private agreements between antenna owners and joint pole owners.

For the reasons discussed, the Proposed Decision approves the settlement agreement. Nevertheless, as acknowledged by all of the parties, the additional signage and power-down provisions under the settlement would not apply to small electric utilities (*e.g.*, Mountain Utilities, Inc., Bear Valley Electric Service, Sierra Pacific Power Company, and Pacific Power and Light Company) or to wireless carriers and others not signatories to the settlement agreement. Line crews climbing jointly owned poles on behalf of those entities not bound by the settlement would do so without required rules that warn them of FCC restrictions on RF antennas or that provide a power-down procedure on high-intensity antennas in cases of emergency.

Recognizing this gap in worker safety protection, the Proposed Decision imposed an annual reporting requirement that would alert the Commission to

any RF antenna installation that did not provide the full range of worker safety provisions envisioned by the original Proposal 1 or by the amended Proposal 1 as augmented by the settlement agreement. More importantly, the reporting requirement would encourage wireless carriers and joint pole owners to include these important safety features for RF antennas even in those limited instances where the settlement requirements did not apply. After years of discussing the critical safety risks of climbing obstacles on distribution poles, the parties knew or should have known that the Proposed Decision would seek to address this gap in worker safety coverage, and parties have had ample opportunity in their comments to address a reporting requirement. In view of the worker safety implications, it is surprising and disappointing that so minimal a reporting requirement (the FCC estimates it will take 10 minutes to comply with its similar reporting requirement) is resisted by any party.

We have carefully considered the parties' other comments and reply comments, and we have made minor changes to the Proposed Decision where warranted.

12. Assignment of Proceeding

Geoffrey F. Brown is the Assigned Commissioner and Glen Walker is the assigned ALJ in this proceeding.

Findings of Fact

1. GO 95 governs the construction of overhead electrical supply and communications systems.
2. The Commission on February 24, 2005, issued this Order Instituting Rulemaking to consider a GO 95 rule for attaching wireless antennas to jointly used utility poles and towers.

3. Commission staff, industry representatives, labor representatives and the public conducted seven days of public workshops to develop a proposed new Rule 94 dealing with wireless antennas.

4. On September 12, 2005, the parties submitted a joint workshop report that included three alternative proposals for a new Rule 94.

5. Rule 94 would add minimum construction requirements for attaching wireless antennas to poles.

6. Proposal 1 for Rule 94 was sponsored by CPSD, IBEW, the Communication Workers, PG&E and SDG&E.

7. Proposal 2 for Rule 94 was sponsored by SCE and is supported by the Wireless Group and intervenor William Adams.

8. Proposal 3 for Rule 94 has been withdrawn.

9. A motion to set aside submission of the Proposed Decision in this matter was granted on July 20, 2006, so that parties could consider a settlement proposal.

10. An unopposed settlement agreement by the parties was presented to the Commission on August 23, 2006.

11. The settlement agreement removes Rule 94.6 and 94.7 from Rule 94 for which the now withdrawn proposed decision formed an evidentiary basis but incorporates essentially those same provisions in private agreements between signatory utilities and antenna owners.

12. The settlement agreement is supported by PG&E, SCE, the union parties, CPSD and the Wireless Group.

13. Public safety requires the provisions of Rule 94, as amended by the settlement agreement, be promulgated.

Conclusions of Law

1. The Commission has comprehensive jurisdiction over questions of public health and safety arising from utility operations. Pub. Util. Code § 761, *inter alia*, instructs this Commission to promulgate rules for utilities when safety so requires.

2. GO 95 rules concern the safety of the general public, utilities' customers and utilities' employees.

3. Rule 94 as set forth in Appendix 1 of this decision should be approved and adopted because public and worker safety so requires.

4. The settlement agreement set forth in Appendix 2 of this decision should be approved as in the public interest for those utility workers covered thereby.

5. Rule 94 should become effective prospectively 180 days after issuance of the final decision in this proceeding.

6. Wireless carriers subject to Commission safety jurisdiction should be directed to file an annual written report to CPSD in a format to be prescribed by CPSD, beginning January 1, 2008, identifying for the last 12 months the location and date of installation or removal of RF antennas installed on joint use distribution poles and the entity from which the antenna owner has leased or purchased joint pole space.

ORDER

IT IS ORDERED that:

1. General Order (GO) 95 is amended to incorporate Rule 94 and the amendment to Rule 20.0, as set forth in Appendix 1 attached hereto and made part hereof.

2. The revisions to GO 95 authorized today will become effective prospectively 180 days after the date of today's decision.

3. The settlement agreement attached hereto as Appendix 2 is approved as in the public interest.

4. All wireless carriers subject to Commission safety jurisdiction are directed to submit an annual written report to the Commission's Consumer Protection and Safety Division (CPSD), in a form to be prescribed by CPSD, beginning January 1, 2008. Each such annual report shall set forth the following information:

- * Location of RF antennas installed / removed / reconstructed on jointly used transmission poles in California in the last 12 months.
- * Date of installation / removal / reconstruction of each such RF antenna described above.
- * The entity with which the antenna owner has leased or purchased the joint pole space for the RF antenna described above.

5. CPSD is directed to review the annual reports described in Ordering Paragraph 4 and report to the Commission, with recommendations, on any wireless carrier RF antenna installations that have taken place since the effective date of this decision that do not contain additional FCC information and de-energizing protocols at least as substantial as those set forth in Appendix 2 of this decision.

6. Rulemaking 05-02-023 is closed.

This order is effective today.

Dated _____, at San Francisco, California.

APPENDIX 1

New GO 95, Rule 20 (Definition)

20.0 Antenna means a device for emitting and/or receiving radio frequency signals.

New GO 95, Rule 94 – Antennas

94 Antennas

94.1 Definition (See Rule 20.0)

94.2 Maintenance and Inspection (See Rules 31.1 and 31.2)

94.3 General Requirements

On joint use poles supporting Class T, C, L or H Circuits (up to 50 kV), the following shall apply:

- A. Antennas shall meet the requirements of Class C equipment, unless otherwise specified in this rule.
- B. All associated elements of the antenna (e.g. associated cables, messengers, and pole line hardware) shall meet the requirements of Class C circuits.

94.4 Clearances

- A. Antennas and supporting elements (e.g. crossarms, brackets) shall maintain a vertical clearance of 6 feet from Supply Conductors operating at 0 – 50kV. (See Figure 94-1)
- B. Antennas and supporting elements (e.g. crossarms, brackets) shall maintain a 2 ft. vertical separation from communication conductors and equipment. (See Figure 94-2)
- C. Antennas shall maintain a 2 ft. horizontal clearance from centerline of pole. (See Figures 94-1 and 94-2)
- D. Antennas shall have a vertical clearance above ground as specified in Table 1, Column B, Cases 1 to 6a.

94.5 Marking

- A.** Joint use poles shall be marked with a sign for each antenna installation as follows:
 - (1)** Identification of the antenna operator
 - (2)** A 24-hour contact number of antenna operator for Emergency or Information
 - (3)** Unique identifier of the antenna installation.

Exceptions:

Antennas utilized by utilities for the sole purpose of operating and monitoring their supply system are exempt from this rule and shall only meet the construction and clearance requirements of supply equipment.

Antennas embedded in or attached to communication cables and messengers are exempt from this rule and shall only meet the construction requirements for Class C circuits.

Rules 94.4-A & C

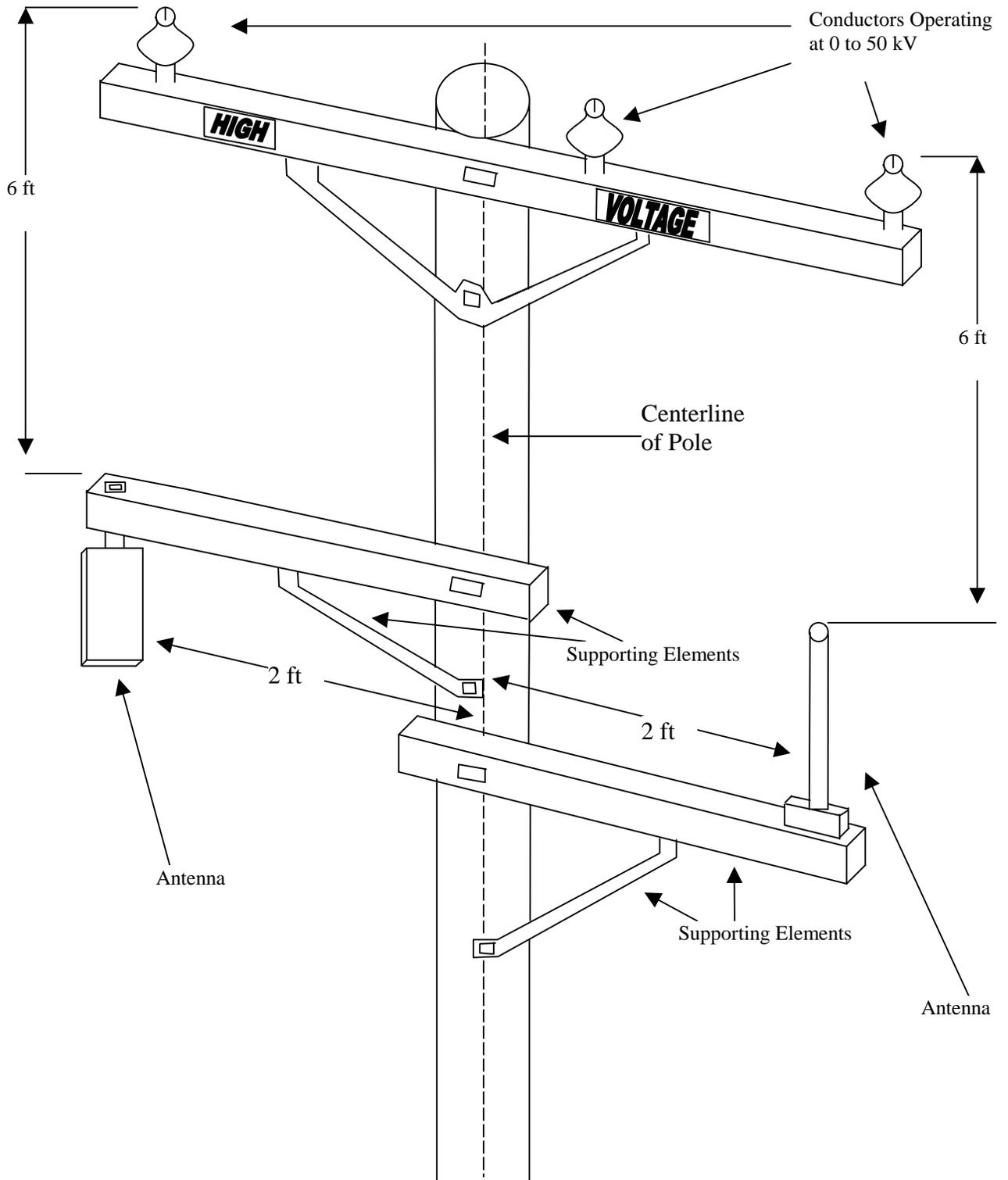


Figure 94-1

Rules 94.4 B & C

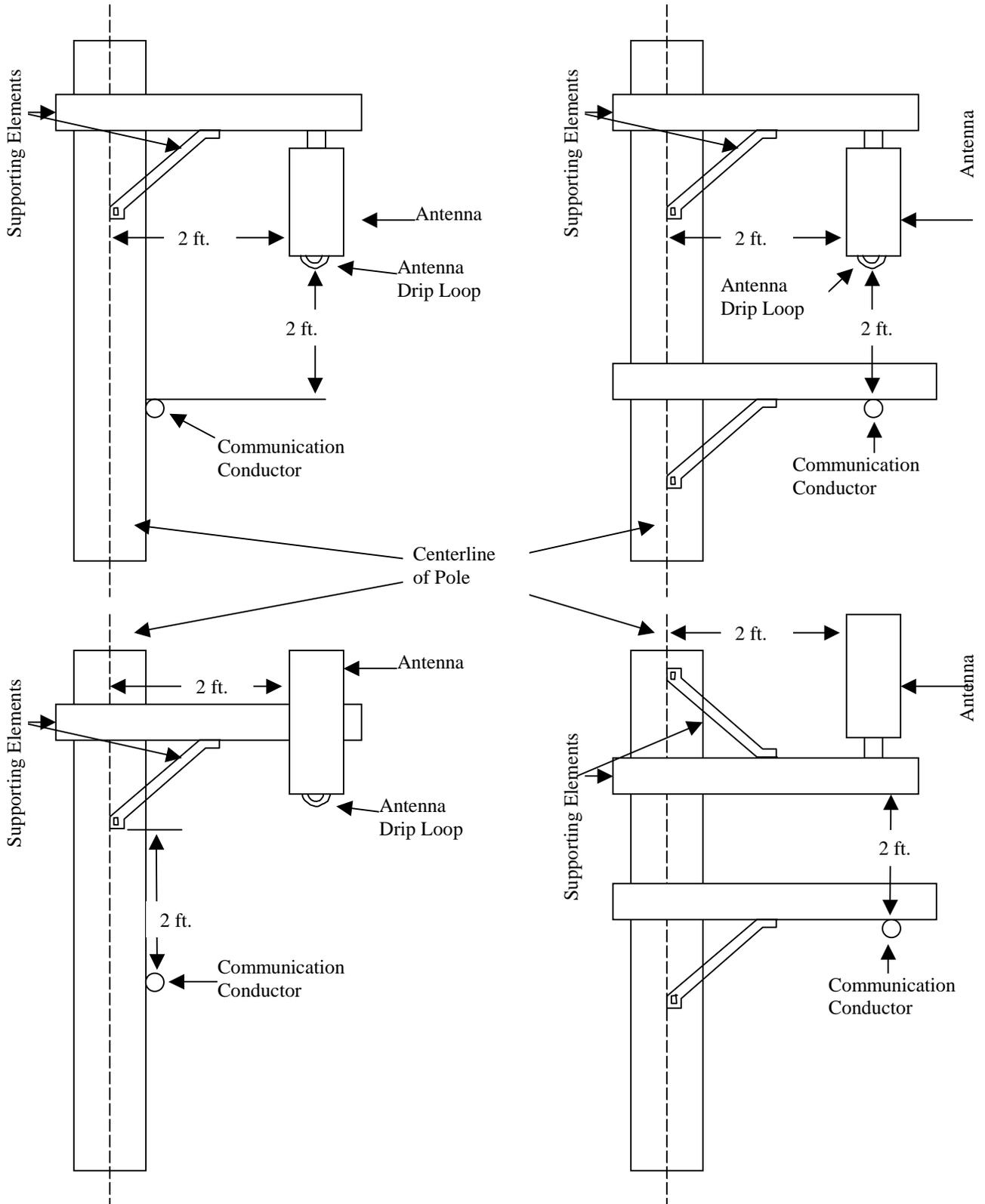


Figure 94-2
(END OF APPENDIX 1)

APPENDIX 2**SETTLEMENT AGREEMENT AMONG AT&T CALIFORNIA, CALIFORNIA CABLE & TELECOMMUNICATIONS ASSOCIATION, CLEARLINX NETWORK CORPORATION, COMMUNICATIONS WORKERS OF AMERICA DISTRICT 9, CONSUMER PROTECTION AND SAFETY DIVISION, CROWN CASTLE USA INC., INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL 1245, NEW CINGULAR WIRELESS PCS, LLC, NEXTG NETWORKS OF CALIFORNIA INC., OMNIPOINT COMMUNICATIONS, INC., dba T-MOBILE, PACIFIC GAS AND ELECTRIC COMPANY, SOUTHERN CALIFORNIA EDISON COMPANY, SPRINT NEXTEL, VERIZON CALIFORNIA INC., VERIZON WIRELESS AND WILLIAM ADAMS**

In accordance with Rule 51.1 of the California Public Utilities Commission's (Commission) Rules of Practice and Procedure, AT&T California, California Cable & Telecommunications Association, Clearlinx Network Corporation, Communications Workers of America District 9, Consumer Protection and Safety Division, Crown Castle USA, Inc., International Brotherhood of Electrical Workers Local 1245, New Cingular Wireless PCS, LLC, NextG Networks of California Inc., Omnipoint Communications, Inc., dba T-Mobile, Pacific Gas and Electric Company, Southern California Edison Company, Sprint Nextel, Verizon California Inc., Verizon Wireless and William Adams (collectively, the "Settling Parties") hereby enter into this Settlement Agreement (Agreement) to resolve all issues among the Settling Parties in Rulemaking (R.) 05-02-023, Order Investigation Rulemaking to consider uniform rules for attaching wireless antennas to jointly used poles.

RECITALS

1. On February 24, 2005, the Commission issued an Order Instituting Rulemaking in R.05-02-023 to consider a new rule to GO 95 to establish uniform construction standards for attaching wireless antennas to jointly used utility poles.

2. Evidentiary hearings were conducted in the proceeding on February 7-9, 2006, during which the Commission heard testimony from nine witnesses and received 22 exhibits into evidence.

3. Opening and reply briefs were filed on March 13 and 28, 2006, respectively, at which time the matter was submitted for Commission decision.

4. On April 25, 2006, the Assigned Administrative Law Judge, ALJ Walker, issued his Proposed Decision (“the PD”). Opening and Reply Comments on the PD were filed on May 15 and 22, 2006, respectively. ALJ Walker has issued two revised versions of his Proposed Decision, which adopted Proposal 1 in its entirety, including the provisions of Rule 94.6 and 94.7.

5. On July 18, 2006, several parties in the proceeding submitted a joint petition to set aside submission of the proceeding pursuant to Rule 84 of the Commission’s Rules of Practice and Procedure. The petition requested the Commission set aside the submission of the proceeding temporarily to allow the parties to pursue settlement discussions. On July 20, 2006, Assigned Commissioner Geoffrey F. Brown and Administrative Law Judge Michelle Cooke ruled that the parties shall submit any settlement on or before August 10, 2006.

6. Pursuant to Rule 51.1(b) of the Commission’s Rules of Practice and Procedure, on July 28, 2006, the Settling Parties served notice of a settlement conference to be held telephonically on August 4, 2006.

7. On August 4, 2006, the settlement conference was held as scheduled. Following the settlement conference, the Settling Parties continued settlement discussions, resulting in this Agreement.

SETTLEMENT AGREEMENT

In order to resolve disputed issues of fact and law and settle on a mutually acceptable outcome to the proceeding with due regard for public and worker safety concerns, and subject to the Recitals and reservations set forth in this Agreement, the Settling Parties hereby agree that this Agreement resolves all disputed issues relating to Rule 94.6 and Rule 94.7 raised in this proceeding.

The Agreement is presented to the Commission pursuant to Rule 51 of the Commission's Rules of Practice and Procedure.

The Settling Parties agree that, in the event any party, as a joint owner, lessee or licensee ("Antenna Owner/Operator") seeks to install or causes the installation of an Antenna (as defined in General Order (GO) 95 Rule 20.0) on a joint use utility pole, it is agreed that:

1. Markings Related to the FCC's MPE Limits.

The Antenna Owner/Operator shall provide, and update as necessary, accurate information regarding compliance with the Federal Communications Commission's Maximum Permissible Exposure (MPE) limits as set forth in Title 47 of the Code of Federal Regulations (CFR) for each particular Antenna installation. The Antenna Owner/Operator shall communicate such information through the use of a pole mounted marking as described in Exhibit A

(Additional Marking Requirements) and in writing to the other utilities and/or companies with facilities affixed to the pole in accordance with Paragraph 4 of this Agreement.

2. Means of De-energizing Antennas.

The Antenna Owner/Operator shall not install an Antenna on a joint use pole that emits RF energy in excess of the FCC's General Population/Uncontrolled maximum permissible exposure limits as set forth in 47 C.F.R. or effect a change to an existing Antenna site that will cause that Antenna to emit RF energy in excess of the FCC's General Population/Uncontrolled maximum permissible exposure limits as set forth in 47 C.F.R. except by providing to any other utility or company with facilities attached to the affected pole, a locally verifiable means to de-energize said Antenna. The protocols set forth in Exhibit B shall apply to non-emergency or routine working conditions. The protocols set forth in Exhibit C shall apply to emergency working conditions.

3. Exemption.

The provisions of this Agreement shall not apply to Antennas that are exempt from the provisions of General Order 95, Rule 94.

4. Adoption of Operating Procedures.

The Settling Parties further agree to memorialize the agreements set forth in Section 1 and 2 of this Agreement (including the procedures and protocols to be adopted thereunder) in separate, private agreements with affected utilities, companies or municipalities or in the Northern California Joint Pole Association's Operating Routine. Such agreements and procedures shall be adopted in a timely manner and Settling Parties agree to execute any and all

supplementary documents and take all actions which may be necessary or appropriate to give full force and effect to the terms and intent of this Agreement.

5. Commission Approval of Settlement and Modification of Rule 94.

The Settling Parties shall jointly request Commission approval of this Agreement and that the Commission adopt Rule 94, as that rule is set forth in Exhibit 1 of the Proposed Decision of ALJ Walker (mailed April 25, 2006), with the exception of provisions 94.6 and 94.7, which the parties stipulate should be removed from the rule. The Settling Parties additionally agree to actively support prompt approval of the Agreement and adoption of the modified Rule 94. Active support may include briefing, comments on the proposed decision, written and oral testimony, if testimony is required, appearance at hearings, and other means as needed to obtain the approvals sought. The Settling Parties further agree to participate jointly in briefings to Commissioners and their advisors, either in-person or by telephone, as needed regarding the Agreement and the issues compromised and resolved by it.

6. This Agreement is contingent upon (1) the Commission approving the terms and conditions herein as reasonable, and adopting it unconditionally and without modification, and (2) the Commission adopting the modified Rule 94 as provided in Paragraph 5, above. Upon satisfaction of these contingencies, the Settling Parties agree to waive any and all rights to challenge and/or appeal in any state or federal forum the Commission's decision in this proceeding.

7. The Settling Parties agree to negotiate in good faith to resolve any dispute arising out of the implementation, interpretation or alleged breach of this Agreement. In the event such negotiations are unsuccessful, the Settling Parties may seek appropriate relief from the

Commission. Such proceeding before the Commission will be limited to determining whether there has been a breach of this Agreement and ordering appropriate relief. In the event any of the Settling Parties do not reach agreement on the protocols described in this Agreement, the Commission may mediate a resolution between those Settling Parties. Nothing herein is intended to expand or restrict the jurisdiction of the Commission and the Settling Parties retain all of their rights with respect thereto.

8. The Settling Parties agree that this Agreement represents a compromise of positions, without agreement or endorsement of disputed facts and law presented by the Settling Parties in the proceeding.

9. This Agreement and the covenants and agreements contained herein shall be binding on, and inure to the benefit of, the parties hereto and their respective heirs, successors and assigns. The Settling Parties further agree and acknowledge that this Agreement and the covenants and agreements contained herein shall remain binding on the Settling Parties, notwithstanding the expiration of the term of any contract, lease or license relating to the use of a joint use pole.

10. This Agreement embodies the entire understanding and agreement of the Settling Parties with respect to the matters described herein, and, except as described herein, supersedes and cancels any and all prior oral or written agreements, principles, negotiations, statements, representations or understandings among the Settling Parties relating to the use of joint use poles.

11. The Settling Parties have bargained earnestly and in good faith to achieve this Agreement. The Settling Parties intend the Agreement to be interpreted and treated as a unified, interrelated agreement.

12. Each of the Settling Parties hereto and their respective counsel and advocates have contributed to the preparation of this Agreement. Accordingly, the Settling Parties agree that no provision of this Agreement shall be construed against any Party because that Party or its counsel or advocate drafted the provision.

13. Each of the Settling Parties represents that it is duly authorized to enter into this Agreement, and each person signing on behalf of an entity represents that he or she is duly authorized to sign on behalf of that entity.

14. This document may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

15. This Agreement shall become effective among the Settling Parties on the date the last Party executes the Agreement as indicated below.

16. In witness whereof, intending to be legally bound, the Settling Parties hereto have duly executed this Agreement on behalf of the Settling Parties they represent:

AT&T California

By: _____
Its: _____

California Cable & Telecommunications Association

By: _____
Its: _____

Clearlinx Network Corporation

By: _____
Its: _____

Communications Workers of America District 9

By: _____
Its: _____

Consumer Protection and Safety Division

By: _____
Its: _____

Crown Castle USA Inc.

By: _____
Its: _____

International Brotherhood of Electrical Workers Local 1245

By: _____
Its: _____

New Cingular Wireless PCS, LLC

By: _____
Its: _____

NextG Networks of California, Inc.

By: _____
Its: _____

Omnipoint Communications, Inc., dba T-Mobile

By: _____
Its: _____

Pacific Gas and Electric Company

By: _____
Its: _____

Southern California Edison Company

By: _____
Its: _____

Sprint Nextel

By: _____
Its: _____

Verizon California Inc.

By: _____
Its: _____

Verizon Wireless

By: _____
Its: _____

William Adams

By: _____

EXHIBIT A**ADDITIONAL MARKING REQUIREMENTS**

Antenna Owner/Operators are responsible for the installation and upkeep of their sign or signs at each joint use site.

- a. In addition to the requirements of GO 95, Rule 94.5 (Marking), at a minimum, each Antenna Owner/Operator will also affix a sign that:
 - (i) identifies the applicable FCC exposure category (General Population/Uncontrolled or Occupational/Controlled);
 - (ii) identifies the FCC's recommended minimum approach distance as set forth in 47 C.F.R.; and
 - (iii) is of weather and corrosion resistant material.

- b. The Antenna Owner/Operator will place the sign so that it is clearly visible to workers who otherwise climb the pole or ascend by mechanical means and affix said sign:
 - (i) no less than three (3) feet below the Antenna (measured from the top of the sign); and
 - (ii) no less than nine (9) feet above the ground line (measured from the bottom of the sign).

- c. The Antenna Owner/Operator may install a single sign that contains the information required by GO 95, Rule 94 and section (a) above, or separate signs. In the event one or more Antennas are affixed to a pole, each Antenna Owner/Operator shall provide a sign with sufficient information to allow workers to identify its Antennas.

EXHIBIT B**PROTOCOL FOR DE-ENERGIZING ANTENNAS IN NON-EMERGENCY OR
ROUTINE WORKING CONDITIONS**

In the event an Antenna subject to Section 2 needs to be de-energized to perform non-emergency work, e.g., routine maintenance and/or repairs, on a joint use distribution pole, the following shall apply:

- a. The utility or company shall contact the Antenna Owner/Operator (in the case of a wireless carrier they shall contact the carrier's Network Operations Center) with a minimum of twenty-four (24) hours advance notice. The following information shall be provided:
 - i) identity of the utility/company representative and call back number
 - ii) the unique identifier of the Antenna
 - iii) the site address and/or location, if available
- b. The Antenna Owner/Operator shall de-energize the Antenna at the requested time or at a time otherwise mutually agreed upon with the utility.
- c. The procedures for de-energizing the subject Antenna shall provide the requesting utility or company with a satisfactory on-site means to verify the Antenna is de-energized.
- d. Upon completion of the work on the site, the utility or company shall contact the Antenna Owner/Operator (in the case of a wireless carrier, its Network Operations Center shall be contacted) to inform them that the Antenna may be re-energized.
- e. The Antenna shall not be re-energized by the Antenna Owner/Operator without confirmation from the utility or company.
- f. The requesting utility or company will only re-energize the Antenna with the Antenna Owner/Operator's prior written consent.

EXHIBIT C**PROTOCOL FOR DE-ENERGIZING ANTENNAS IN EMERGENCY WORKING CONDITIONS**

In the event an Antenna subject to Section 2 needs to be de-energized in emergency working conditions, i.e., in a situation where there is an imminent or actual danger to public or worker safety necessitating immediate and non-routine work on the pole, for example in direct response to a fire, explosion, lightning, storm, earthquake, vehicular accident, terrorism, or some other unanticipated and catastrophic event, the following shall apply:

- a. The utility or company shall make a good faith effort to contact the Antenna Owner/Operator (in the case of a wireless carrier they shall contact the carrier's Network Operations Center). The following information shall be provided:
 - i) identity of the utility/company representative and call back number
 - ii) the unique identifier of the Antenna
 - iii) the site address and/or location, if available
 - iv) state nature of the emergency and/or site condition.
- b. The Antenna Owner/Operator shall de-energize the Antenna upon request in emergency working conditions.
- c. If the requesting utility or company is unable to contact the Antenna Owner/Operator, the requesting utility or company shall de-energize the subject antenna pursuant to mutually agreed upon procedures for that particular type of equipment or by using any necessary means available. The procedures for de-energizing the subject Antenna referred to above shall provide the requesting utility or company with a satisfactory on-site means to de-energize the Antenna that is verifiable.
- d. Upon the completion of any necessary work to address the emergency, the utility or company shall notify the Antenna Owner/Operator (in the case of a wireless carrier, its Network Operations Center shall be contacted) that all work has been completed so that the Antenna Owner/Operator can take any necessary actions to re-energize the site.
- e. The Antenna shall not be re-energized by the Antenna Owner/Operator without confirmation from the utility or company.
- f. The requesting utility or company will only re-energize the Antenna with the Antenna Owner/Operator's prior written consent.

(END OF APPENDIX 2)

APPENDIX A

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