



licensed and otherwise protected radio services.

Over the time period during which commentary has been solicited there have been several notable examples of utilities or their partners refusing to cooperate in the resolution of interference produced by their systems. All with seemingly no consequences under long-existing, Part 15 FCC rules requiring such perpetrators to either cease generating the interference through corrective means, or to cease operation of the device or devices generating such interference. Inaction by the Commission to enforce its Part 15 regulations on ABPL utilities and operators is exemplified on one hand, yet on the other the Commission continues to actively prosecute individuals under Part 15 who create similar, wideband appliance-generated interference to licensed services. If this is a sample of what we can expect from the Commission, in its own words, by expediting the release of the Report and Order, and rushing to judgement, what's next? That is to say, are we to expect more intentional dereliction of its duty to properly enforce its own regulations, laws passed by the Congress and international treaty agreements with greater adverse consequences than experienced thus far? Will entire services, such as the Amateur Radio Service, International Shortwave Broadcasting, the Citizens Band, and Time and Frequency services offered by the National Institute for Standards and Testing (NIST) disappear under a curtain of noise, never to be heard again? Will provisions included in the Report and Order implying retribution for filing allegedly frivolous complaints chill what would otherwise be legitimate and valid complaints?

It is my intent to point out in this document what I have noted above, and to suggest in several areas what could and should be changed to make the regulation of ABPL sound,

fair and effective. And, especially to reduce the impact and burden on small public safety entities and the communities they serve, that cannot afford the resources needed to consult with well-heeled ABPL operators seeking to implement coverage in their utility service territories.

My petition is filed based upon my education and experience as an Electrical Engineer in electric power systems, and on my pre-professional experience while attending college as a radio technician and public safety dispatcher for Kern County, CA., and as chief engineer for several radio broadcasting stations in central California. Professionally, my experience includes over 29 years in design, maintenance, operations and management of electric utility systems. My employment has been with the Pacific Gas and Electric Company, San Francisco, CA, and with the University of California as contractor to the United States Department of Energy's Lawrence Livermore National Laboratory, Livermore, CA. I hold Bachelors and Masters degrees in Electrical Engineering. I am a Senior Member of the Institute of Electrical and Electronic Engineers, and am a Registered Professional Engineer in California and Florida. I have held a First Class Radiotelephone/General Radiotelephone license since 1964 and have been an amateur radio operator since December 29, 1961. I have testified as an expert witness on matters involving power systems in two cases before the California Superior Court in connection with my employment.

I wish to thank the Commission for the recognition given and the interference protections already in the Report and Order for public safety and government communications services operating in the high frequency and low VHF spectrum. Although, as I will

attempt to point out, more work on the Report and Order is needed to more effectively prevent and mitigate interference to licensed communications.

**I. Medium Voltage Distribution System Configurations Are Not Invariant and Would Require Continuous ABPL Signal Level Monitoring and Adjustment Capability to Avoid Interference**

Medium voltage, distribution lines are not like a typical antenna system in that their length frequently changes and distribution line equipment such as line reclosers, switches, capacitors and regulators can vastly change the characteristics of line sections literally minute by minute, hour by hour, and week by week. This occurs as part of line overcurrent protection function or control of voltage or system power factor. Reclosers act like switches. That is to say, can open automatically very quickly to separate faulted line sections, or can be opened manually as are switches, as part of decisions to transfer sections of distribution line to another medium voltage source. Thus, ABPL zone lengths and settings would need immediate attention to prevent interference from elevated signal levels. Especially if a line and its ABPL zone were shortened. Capacitors are usually connected line-to-ungrounded wye and can be expected to be switched on and off automatically on the basis of line voltage, power factor, line load, or time of day. As such, BPL zones would likely be affected, especially if signal levels were established based on the capacitors being on line. Regulators step the voltage up or down, depending upon voltage and line loading. Operation is continuous, meaning that internal regulator tap settings are constantly being analyzed, and will step up or down, changing automatically according to system conditions. The effect would likely be the addition or deletion of net series inductance on a given section of line. Again, likely affecting BPL

signal levels in a continuous and dynamic fashion.

As I have attempted to bring to the Commission's attention, to this point unsuccessfully in submitted comments, ABPL levels within multiple zones cannot be "set and forget" criteria as the Commission has required of ABPL hardware in the instant Report and Order. Distribution lines are a totally different media than static, unchanging fixed antenna systems. ABPL systems and equipment must employ continuous monitoring and feedback schemes to ensure that signal emission levels to not exceed values within zones that would cause interference. In my opinion, to not require such means would mean interference conundrums literally happening again and again, minute by minute.

## **II. Advance Consultation Will Not Adequately Assure Satisfactory Public Safety Agency Communications During an Emergency**

The 30-day advance notification of public safety agencies and subsequent consultation in a proposed ABPL application area will not ensure non-interference. And, it is not realistic or event competent, given the radio engineering expertise of its staff, for the Commission to expect a vaguely defined term such as "consultation" to cover more than elementary activities for identifying, preventing or correcting interference. Especially, when left to the discretion of ABPL operators to characterize what is meant by "consultation." Actions such as sharing of operating frequencies for notching purposes are feeble, at best, when compared to what the commission normally expects of radio license applicants such as field strength surveys throughout a proposed coverage area. Especially roadside ABPL signal strengths in what would be fringe areas for public safety agency mobile stations. Also, there will always be the possibility that through

accident, line reconfiguration or equipment replacement that notching or signal level settings may not always be as desired. Since public safety agencies frequently deal with life threatening incidents and severe property damage scenarios, the simple means proposed of a required contact telephone number for ABPL operators begs revision. If someone's life is at stake at a given moment, would it be possible, as currently proposed, for a public safety dispatcher to reach an ABPL operator to shut off the system in a crisis, if it took place at 3:00AM on a Sunday? Since the Commission proposes that ABPL operations be staffed by control operators only during normal business hours, it would not be possible. Further, even if personnel were on duty at the ABPL control point, would the time it would take to dial up the ABPL operator and explain the situation be sufficient to prevent aggravated injury or even death(s) due to no radio contact with mobile units? I sincerely doubt it. Instead, the Commission should require the placement of deactivation switches in all public safety dispatch offices, enabling dispatchers to immediately, on their decision only, interrupt and stop ABPL system operation if thought necessary to establish or re-establish public safety communications in an emergency.

### **III. Unavailability of ABPL Operators During Non-Business Hours Fails to Meet 24 Hour Resolution of Public Safety System Interference Complaints**

The Commission apparently is of the opinion that continuous, 24 hour, 7-day control of ABPL systems isn't warranted or perhaps, would be an economic hardship to ABPL operators. So much so, in fact, that it is apparently willing to breach its own requirement that interference complaints from public safety agencies must be resolved within 24 hours or the ABPL systems shut down. How can it be possible to resolve such a complaint

within the prescribed time limits if the interference manifests itself on a Saturday morning?

Electric utility operators, by virtue of the nature of power system equipment and systems, must and do have dispatchers and operators on duty on a continuous basis. So it follows that it would not be unreasonable to expect such personnel to be trained in ABPL system operation as well. Or, at least to have shut down capability on their control consoles. Even if they would not expected to be in control of ABPL systems during normal business hours.

ABPL operators must be able to be reached on a 24 hour, 7-day basis, or the intended public safety interference resolution requirement makes no sense whatsoever, unless it only applies during the day, during the week.

#### **IV. Consultation Requirement Places an Unfair Burden on Small Public Safety Agencies**

Many public safety licensees operating in the 30 to 50MHz public safety allocation are small and many are volunteer organizations. To expect such organizations to expend sparse resources to retain competent consultants to help avoid radio interference from ABPL is absolutely incredulous. Especially so, with only 30 days notice required before ABPL spectrum pollution begins. To obtain relief from such an unfair, unrealistic, and undeserved burden, the Commission itself should supply radio engineering expertise to public safety agencies to make what appear to be necessary, fringe area signal strength surveys with ABPL operators prior to ABPL full operation, to mitigate any areas of interference. Such consultation should be paid for, in total, either by the ABPL operator,

or the Commission itself.

**V. ABPL Operators Have Demonstrated Lack of Cooperation in Mitigating Interference in Trial Areas**

The ABPL trial installations in Cottonwood, Arizona, and in the Briarcliff Manor Subdivision of Westchester, New York, have demonstrated unwillingness to cooperate with complainants to resolve interference complaints. The Commission has yet to intervene at a level other than issuing a requirement that the Arizona operator must cooperate with complainants. Both locations are experiencing egregious interference, based on published accounts of the American Radio Relay League (ARRL). Inaction by the Commission's Enforcement Branch to either cite these operators or require shut down of their operations demonstrates an apparent purposeful disregard for serious interference caused by ABPL operators. Yet, during the same time interval, the Commission's Enforcement Bureau has cited or warned several individuals under Part 15, for interference to neighboring amateur radio stations caused by their household appliances.

The Report and Order should address the serious and ubiquitous nature of uncooperative and otherwise irresponsible ABPL operations, including not responding to requests nor participating in cooperative interference investigation. Language should be added to Part 15, such that if an ABPL operator fails to cooperate with complainants in the mitigation of interference after a reasonable length of time, such interference shall no longer be considered incidental, but instead be considered willful, deliberate, and malicious, with application of substantial civil and criminal penalties for such violations as allowed under the Communications Act of 1934, as amended.

Also, some form of sanctions should be included to ensure that the ABPL industry entity responsible for ABPL database management makes certain that such records are timely updated, available and accessible to not only licensed service entities or individuals, but to those seeking such information that are consumers of NIST services, Citizens Band operators, or short wave listeners that are unable to receive broadcasts satisfactorily due to alleged ABPL interference. A third party contractor administered database, or one administered by the Commission itself would have the benefit of not having a pecuniary interest in reducing the number of complaints encourage laxative dissemination and delivery of such information.

**VI. Threats of Sanctions for Filing False or Frivolous Complaints Have No Place in Regulations That Require Evidence of Preliminary Investigation for Acceptance**

The Report and Order contains language which threatens sanctions by the Commission against persons or entities filing what may deemed to be false or frivolous complaints of ABPL interference. Such statements have no place in the instant proceeding, since evidence of at least attempting cooperative contact with the alleged offending unlicensed ABPL operator would be a required precondition of any such filing. And, would offer the opportunity to clarify, substantiate, or if proper, reject the assumed ABPL interference on its face. On the surface, such language carries with it a veiled desire to suppress or chill would-be, valid complainants from stepping forward. Especially when no specifics are included with which to judge what could or would be considered a false or frivolous complaint by Commission staff. A so-called false complaint could even be

one, in the Commission staff's opinion, that has not progressed long and far enough to yet cause sufficient damage to the complainant or some innocent victim. Is that a realistic and lawful purpose of such regulations? Are they intended to chill complainants to reduce the workload of the Commission? What would be the penalties alluded to in such sanctions?

### **Statement and Certification**

The above is submitted as permitted by section 47CFR1.106 of the Commission's rules and is within the 30 days allotted for the submittal of Petitions for Reconsideration, subsequent to publication of the Report and Order in the Federal Register on January 7, 2005. I hereby certify, under penalty of Perjury, that the above statements are true and correct to the best of my knowledge and were submitted without the presence of any personal pecuniary interest concomitant in their material acceptance or adoption.

Respectfully Submitted,

/s/

W. Lee McVey, P.E.  
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