

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of )  
 )  
Recommendations of the Independent Panel ) EB Docket No. 06-119  
Reviewing the Impact of Hurricane Katrina on ) WC Docket No. 06-63  
Communications Networks )

To: The Commission

**REPLY COMMENTS**

Pursuant to 47 C.F.R. § 1.429(g) of the Commission's rules, PCIA – the Wireless Infrastructure Association (“PCIA”)<sup>1</sup> hereby submits this reply concerning comments filed in response to the petitions of PCIA and others<sup>2</sup> seeking reconsideration of the Commission's new emergency back-up power rule.<sup>3</sup> PCIA agrees with the majority of commenters who overwhelmingly support reconsideration of the rule.<sup>4</sup>

---

<sup>1</sup> PCIA is the trade association representing the wireless telecommunications infrastructure industry. PCIA seeks to facilitate the deployment of widespread dependable communications networks across the country, consistent with the mandate of the Telecommunications Act of 1996.

<sup>2</sup> See PCIA – The Wireless Infrastructure Ass'n, Petition for Reconsideration, EB Docket No. 06-119, WC Docket No. 06-63 (filed Aug. 10, 2007) (“PCIA Petition”); see also CTIA – The Wireless Ass'n, Petition for Reconsideration, EB Docket No. 06-119, WC Docket No. 06-63 (filed Aug. 10, 2007) (“CTIA Petition”); Am. Ass'n of Paging Carriers, Petition for Reconsideration, EB Docket No. 06-119, WC Docket No. 06-63 (filed Aug. 10, 2007); MetroPCS Comm., Inc, Petition for Reconsideration, EB Docket No. 06-119, WC Docket No. 06-63 (filed Aug. 10, 2007); United States Telecom Ass'n, Petition for Reconsideration, EB Docket No. 06-119, WC Docket No. 06-63 (filed Aug. 10, 2007); NextG Networks, Inc., Petition for Reconsideration, EB Docket No. 06-119, WC Docket No. 06-63 (filed Aug. 10, 2007).

<sup>3</sup> See *Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks*, Order, FCC 07-107, ¶ 77 (rel. June 8, 2007) (“Order”); 47 C.F.R. § 12.2.

<sup>4</sup> See Comments of T-Mobile, EB Docket No. 06-119, WC Docket No. 06-63 (filed Sept. 4, 2007); Comments of Bridgecom Int'l Inc. et al., Comments of Sprint Nextel, EB Docket No. 06-

In its petition, PCIA highlighted several unintended consequences and challenges presented by the emergency back-up power rule. First, the diversity of wireless infrastructure configurations does not support a “one-size-fits-all” emergency back-up power rule.<sup>5</sup> Second, the rule will require additional space at cell sites to house back-up power sources which may be unavailable due to set-back requirements or lease prohibitions.<sup>6</sup> Third, the rule may conflict with other laws including fire codes, environmental regulation, permitting laws, and state and local building codes.<sup>7</sup> Finally, the rule may force some carriers to shut down cell sites to achieve compliance, thereby harming service to the public and public safety.<sup>8</sup>

While many commenters and other petitioners agree with PCIA that reconsideration is warranted for similar reasons, the National Hydrogen Association (“NHA”) submitted comments advocating the use of hydrogen fuel cells as a “solution” to achieve compliance with new Section 12.2.<sup>9</sup> Although hydrogen fuel technologies may be worthy of further development and

---

119, WC Docket No. 06-63 (filed Sept. 4, 2007); Comments of the Independent Tel. and Telecomm. Alliance, EB Docket No. 06-119, WC Docket No. 06-63 (filed Sept. 4, 2007); *see also* Notice of Ex Parte Presentation of Verizon Wireless, EB Docket No. 06-119, WC Docket No. 06-63 (filed Sept. 4, 2007).

<sup>5</sup> *See* PCIA Petition at 6-9.

<sup>6</sup> *See id.* at 9-10.

<sup>7</sup> *See id.* at 10-11.

<sup>8</sup> *See id.* at 12.

<sup>9</sup> *See* Letter from F. Jerome Hinkle, Vice President, Policy and Government Affairs, National Hydrogen Association to Chairman Kevin Martin, Federal Communications Commission, at 2 (Aug. 29, 2007) (“NHA Letter”). Although the NHA Letter focuses on the CTIA Petition, its assertions are applicable to points also raised by PCIA and others in their petitions. PCIA notes that the purpose of the National Hydrogen Association is “to foster the development of hydrogen technologies *and their utilization* in industrial, commercial, and consumer applications and promote the role of hydrogen in the energy field.” *See* <<http://www.hydrogenassociation.org/about/index.asp>>, visited Sept. 12, 2007 (emphasis added).

investigation, they are not the panacea NHA suggests, and do not alter the need for the Commission to act expeditiously to reconsider the rule.<sup>10</sup>

The NHA describes hydrogen fuel cell technology as a “commercially available backup power solution for the nation’s telecommunication’s networks.”<sup>11</sup> While various back-up power solutions, including hydrogen fuel technology, can be deployed at *some* cell sites, it is far from the sweeping solution NHA suggests. Indeed, the experience of PCIA members who do utilize hydrogen fuel cells at select sites shows that their utility is limited, for a number of reasons discussed below. Foremost, NHA fails to address the set-back requirements applicable to hydrogen fuel cells. In its Petition for Reconsideration, PCIA explained the critical lack of adequate ground or “set-back” space at many sites to accommodate back-up batteries and generators.<sup>12</sup> Yet, both the (1) National Fire Protection Association (“NFPA”) Standards relating to the Storage, Use and Handling of Compressed Gases and (2) Occupational Safety and Health Standards Regulations for Hazardous Materials prescribe safeguards for gaseous hydrogen systems,<sup>13</sup> and included among these safeguards are minimum outdoor set back distances between hydrogen systems and sources of external exposure. A sample of such distances is presented in Table 1.

---

<sup>10</sup> The new rule is currently scheduled to take effect October 9, 2007. *Recommendations of the Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks*, Order, FCC 07-139, EB Docket No. 06-119, WC Docket No. 06-63 (rel. Aug. 2, 2007).

<sup>11</sup> See NHA Letter at 2.

<sup>12</sup> See *Petition* at 9-10.

<sup>13</sup> See NFPA 55, *Standard for the Storage, Use and Handling of Gases and Cryogenic in Portable and Stationary Containers, Cylinders, and Tanks*, Ch. 10 (2005 ed.); 29 C.F.R. § 1910.103.

**Table 1: Sample of Hydrogen Fuel Cell Minimum Setbacks<sup>14</sup>**

Type of Outdoor Exposure	Set-Back Distance
Public sidewalks and parked vehicles	15 feet
Fuel tanks and back-up power generators	15 feet
Air compressor, air conditioners, or ventilation intakes	50 feet
Open flames, sparks or smoking	25 feet
Places of public assembly	25 feet
Fast burning solids such as lumber, excelsior or paper	50 feet
Building or structure (wood frame construction)	10 feet

As a result, in many cases, the placement of hydrogen fuel cells is strictly circumscribed to provide safety boundaries around pre-existing structures or objects. For example, hydrogen fuel cells have to be set back at least 15 feet from public sidewalks and parked vehicles.<sup>15</sup> In many cases, particularly in urban settings, these setback requirements simply preclude the use of hydrogen fuel as a backup power source at cell sites given the lack of adequate space.

In addition to these stringent set-back requirements, hydrogen fuel cells face other placement restrictions. For example, Occupational Safety and Health Administration (“OSHA”) regulations (29 C.F.R. Part 1910) expressly prohibit the placement of hydrogen systems “beneath electric power lines.”<sup>16</sup> Moreover, OSHA regulations require that a hydrogen system “be located so that it is readily accessible to delivery equipment and to authorized personnel.”<sup>17</sup> The placement restrictions facing hydrogen fuel cells exemplify the difficulties that arise from the emergency back-up power requirement. Some sites are simply incapable of providing the extra space necessary to locate back-up power sources. At other sites, it may be impossible to renegotiate with landlords who have no incentive to expand the scope of current site leases.

---

<sup>14</sup> See NFPA 55, Table 10.3.2.2.1 (Assumes Hydrogen System < 3500 scf); 29 C.F.R. § 1910.103(b)(2)(ii)(b) Table H-2 (Assumes Hydrogen System < 3000 scf).

<sup>15</sup> See NFPA 55, Table 10.3.2.2.1(13).

<sup>16</sup> 29 C.F.R. § 1910.103(b)(2)(i)(c).

<sup>17</sup> 29 C.F.R. § 1910.103(b)(2)(i)(a).

Even if leaseholders and localities would be amenable to changing current agreements and/or site authorizations, the renegotiation process to obtain additional space to comply will be difficult, time-consuming, and costly.

NHA also points out that the weight of hydrogen systems may, in some cases, be less than the weight of lead acid batteries.<sup>18</sup> In spite of this, however, hydrogen systems may still trigger many of the same placement obstacles faced by other power sources that make the back-up power rule untenable. For instance, by NHA's own admission, the weight of a hydrogen fuel cell may still be up to 1,000 lbs for 50kWh.<sup>19</sup> This amount of additional weight may not be supported by the weight-bearing configuration of many roof-top structures and other specialized sites like Distributed Antenna Systems ("DAS"). At the same time, at these and other sites, the addition of the extra weight provided by a hazardous substance may implicate state and local building codes, local permitting laws and fire codes, thereby making compliance challenging at best.

Finally, hydrogen is neither more nor less inherently hazardous than gasoline, propane, or methane.<sup>20</sup> Thus, hydrogen fuel presents many of the same safety concerns as other fuel sources.<sup>21</sup> Moreover, the expertise and equipment needed to safely pursue alternative technologies like hydrogen fuel, even where otherwise practicable, is not readily available to be implemented rapidly on a wide scale.

---

<sup>18</sup> See NHA Letter at 3.

<sup>19</sup> See *id.*

<sup>20</sup> See <<http://www.hydrogenassociation.org/general/faqs.asp>>, visited Sept. 12, 2007 ("Most fuels have high energy content and must be handled properly to be safe. Hydrogen is no different. In general, hydrogen is neither more nor less inherently hazardous than gasoline, propane, or methane.")

<sup>21</sup> See CTIA Petition at 18-19.

\* \* \*

Accordingly, PCIA reiterates that the Commission should reconsider the eight hour back-up power rule, 47 C.F.R. § 12.2, and take the steps recommended in PCIA's petition to encourage continued best practices and engage in further fact finding to determine whether any new rules are needed or appropriate concerning back-up power at cell sites.

Respectfully submitted,

PCIA – THE WIRELESS  
INFRASTRUCTURE ASSOCIATION

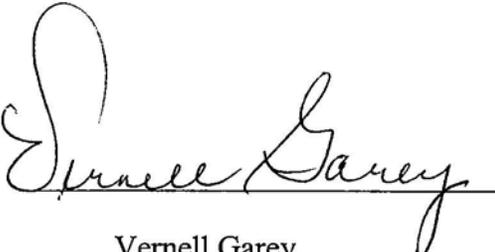
By: /s/ Michael Fitch  
Michael Fitch  
President and CEO  
Connie Durcsak  
Senior Director, Industry Services  
500 Montgomery Street, Suite 700  
Alexandria, VA 22314  
Tel: (800) 759-0300  
Fax: (703) 836-1608  
[www.pcia.com](http://www.pcia.com)

September 14, 2007

**CERTIFICATE OF SERVICE**

I, Vernell Garey, hereby certify that on this 14<sup>th</sup> day of September 2007, a copy of the foregoing Reply Comments were served by first-class mail on the following:

F. Jerome Hinkle  
National Hydrogen Association  
1211 Connecticut Ave N.W.  
Suite 600  
Washington, DC 20036-2701



Vernell Garey