Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of:	)	
	)	
International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act	)	GN Docket No. 09-47
	)	GN Docket No. 09-51
A National Broadband Plan for Our Future	)	
	)	
Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act	)	GN Docket No. 09-137

REPLY COMMENTS – NBP PUBLIC NOTICE # 30
THE NAMED STATE BROADCASTERS ASSOCIATIONS

Alabama Broadcasters Association, Alaska Broadcasters Association, Arizona Broadcasters Association, Arkansas Broadcasters Association, California Broadcasters Association, Colorado Broadcasters Association, Connecticut Broadcasters Association, Florida Association of Broadcasters, Georgia Association of Broadcasters, Hawaii Association of Broadcasters, Idaho State Broadcasters Association, Illinois Broadcasters Association, Indiana Broadcasters Association, Iowa Broadcasters Association, Kansas Association of Broadcasters, Kentucky Broadcasters Association, Louisiana Association of Broadcasters, Maine Association of Broadcasters, MD/DC/DE Broadcasters Association, Massachusetts Broadcasters Association, Michigan Association of Broadcasters, Minnesota Broadcasters Association, Mississippi Association of Broadcasters, Missouri Broadcasters Association, Montana Broadcasters Association, Nebraska Broadcasters Association, Nevada Broadcasters Association, New

Hampshire Association of Broadcasters, New Jersey Broadcasters Association, New Mexico Broadcasters Association, The New York State Broadcasters Association, Inc., North Dakota Broadcasters Association, Ohio Association of Broadcasters, Oklahoma Association of Broadcasters, Oregon Association of Broadcasters, Pennsylvania Association of Broadcasters, Rhode Island Broadcasters Association, South Carolina Broadcasters Association, South Dakota Broadcasters Association, Tennessee Association of Broadcasters, Texas Association of Broadcasters, Utah Broadcasters Association, Vermont Association of Broadcasters, Virginia Association of Broadcasters, Washington State Association of Broadcasters, Wisconsin Broadcasters Association, and Wyoming Association of Broadcasters (collectively, the "State Associations"), hereby jointly comment in reply to the FCC's NBP Public Notice #30, released on January 13, 2010 in the above-referenced proceedings.[1] The *Public Notice* invites parties to reply to comments submitted in response to prior public notices issued in connection with the Commission's development of a National Broadband Plan pursuant to the American Recovery and Reinvestment Act of 2009.[2]

The State Associations' Reply Comments address comments filed in response to National Broadband Plan Public Notice #26,[3] with a particular focus on the proposal advanced by CTIA, the Wireless Association® ("CTIA") and the Consumer Electronics Association ("CEA") in their jointly filed comments.[4] The CTIA-CEA Comments provide the broad outlines of a plan that they claim could allow 100 to 180 MHz of television broadcast spectrum to be taken for wireless

---

1 *Public Notice, Reply Comments Sought in Support of National Broadband Plan, NBP Public Notice #30,* GN Docket Nos. 09-47, 51 and 137, DA 10-61 (rel. Jan, 13, 2010) ("*Public Notice*").

2 Pub. L. No. 111-5, 123 Stat. 115 (2009).

3 *Public Notice, Comment Sought on Spectrum for Broadband, NBP Public Notice # 26,* GN Docket Nos. 09-47, 51 and 137, DA 09-2100 (rel. Sept. 23, 2009) (*"Broadcast Spectrum Public Notice*").

4 *See* Comments of CTIA and CEA on NBP Public Notice #26, Uses of Spectrum, GN Dockets 09-47, 09-51 and 09-137, dated December 22, 2009 ("CTIA-CEA Comments").

broadband use, while leaving each existing full power broadcaster with a full 6 MHz and providing a full 19.4 Mbps ATSC signal. According to CTIA and CEA, the recaptured spectrum could be auctioned subject to the condition that the auction winner pay the costs of transitioning all broadcast stations to an Single Frequency Network ("SFN") architecture. A certain amount of service interruption and other disruptions would be unavoidable, but at some point, according to CTIA and CEA, consumers would simply have to re-scan their receivers to resume reception broadcast television service.

The State Associations appreciate the opportunity to file Reply Comments, although they remain concerned with the Broadband Task Force's decision to raise questions about a radical re-engineering of the television broadcast service late in the process of developing its National Broadband Plan. Although this opportunity to reply to the CTIA-CEA proposal is welcome, broadcasters had far too little time to respond to the sweeping questions raised in NBP Public Notice #26. And while the CTIA-CEA Comments provide slightly more information about one reallocation scenario, their proposal is only a general one. The CTIA-CEA Comments offer projections of transition costs and spectrum yield, but include absolutely no supporting technical or financial information. While there may be some positive aspects to the CTIA-CEA proposal as compared to their prior extreme positions, the proposals are useful only to the extent it can be shown that they can provide the claimed benefits at roughly the costs estimated.

Because CTIA and CEA did not include any explanation of their cost estimates or of their technical assumptions, the State Associations cannot provide detailed responses. As a result, the State Associations present only an initial reaction to the generalized proposals provided by CTIA-CEA.

The CTIA-CEA Comments envision replacing the nation's deployment of high power-tall tower broadcast transmitters with distributed transmission system ("DTS") architecture that would use a larger number of lower powered transmitters with antennas mounted much lower to provide over-the-air television service. As CTIA and CEA note, the FCC has authorized broadcasters to use a DTS architecture under some conditions. However, DTS is intended to provide "fill-in" service, and broadcasters today do not see DTS as a practical alternative to extend service to an entire market. The CTIA-CEA proposal is a network-centric one that is as heavy on construction and ongoing operational costs as it is light on details. The proposal amounts to replacing each broadcast station with a market-wide communications network. CTIA and CEA speculate that such a transition could make much spectrum available for mobile broadband while leaving each broadcaster with a full 6 MHz assignment. As noted, the record does not include any supporting engineering or financial explanation or exhibits to support their speculation. However, many practical obstacles are apparent.

First, local broadcasters are small enterprises compared to mobile wireless providers. Broadcasters have 6 or 12 MHz in each market and provide their services over-the-air to the public for free. Wireless providers often have 50 or 100 MHz in each market and, in some cases, coast to coast, and they charge consumers $40-$100 per month or more for service. The scale of these businesses and the billions consumers pay for them support deployment and operation of large and expensive multiple-site networks.

Second, as CTIA has argued in this proceeding, limits on tower siting and loading already pose major obstacles to providing coverage and capacity in multiple-site networks, even for mobile wireless operators that have large, dedicated divisions of personnel to manage the

process. For example, CTIA has explained that adding new equipment to existing sites to increase capacity, and constructing new sites, can be impractical or nearly impossible:

> Not only may the tower not support [the] type of weight loading [needed for additional hardware], changes of this nature may require renegotiating leases with the tower owner and may, in certain cases, require revisiting tower authorizations. More importantly, in the case of adding new towers, a host of new approvals is required. The idea, for example, of doubling the number of cells in a major urban center verges on the impossible.[5]

If the limited ability to deploy more towers or add more equipment to existing towers is one of the primary constraints on more efficient use of wireless spectrum is, it is reasonable to ask how the entire television broadcast industry could be accommodated with those same scarce tower resources, especially considering the additional wireless infrastructure that would also be needed to make use of any reallocated broadcast spectrum. According to the very study CTIA relies on to argue that the nation faces a severe shortage of spectrum for mobile services, requiring broadcasters to compete with wireless providers for scarce tower resources could materially reduce the degree of spectrum efficiency wireless providers might otherwise achieve. According to that study by Rysavy Research:

> There are three ways of increasing network capacity: increased efficiency (e.g., spectral efficiency) of new wireless technologies, more cell sites and deployment of additional spectrum. * * * Increasing the number of cell sites can also dramatically increase overall network capacity and has been the tool operators have used most frequently to expand capacity since the inception of cellular networks. [6]

If increasing the number of cell sites can dramatically improve network capacity and if that is the most frequently used tool for doing so, and if limits on the number of available sites and the physical capacity of towers to accommodate equipment are primary reasons mobile

---

[5] *See* Comments of CTIA on NBP Public Notice #6, GN Dockets 09-47, 09-51 and 09-137, dated October 23, 2009 at 15.

[6] *See, e.g.*, Rysavy Research, *Mobile Broadband Spectrum Demand* at 19, appended to CTIA Written *Ex Parte* Communication, GN Docket 09-51, dated September 29, 2009.

service providers claim they need more spectrum, the Broadband Task Force should be careful in assessing how much net mobile capacity gain, if any, would accrue if the television broadcast industry also adopts a lower power architecture. Re-engineering the broadcast infrastructure to make broadcasters compete for the same scarce tower resources could either degrade broadcast services or further hinder mobile operators' ability to optimize their own networks for maximum capacity, or both.

Third, although CTIA and CEA propose that the costs of transition could be paid by auction winners, they have greatly underestimated the costs of transitioning every television station to a SFN architecture, perhaps by a factor of ten or more. If tower capacity is as constrained as CTIA asserts, the costs could be higher still. CTIA and CEA's projections extrapolate from a single figure in a securities filing by a satellite radio operator to estimate the costs of a second and far more radical and disruptive television transition for the entire industry.[7] The SIRIUS-XM repeater network was designed for different purposes, operates at very different frequencies, and excites a fraction of the bandwidth necessary to provide a 6 MHz channel to every broadcaster. CTIA and CEA appear to assume that only one television transmitter will be needed per site, and that all stations in each market will share the same sites. With these self-favorable (if improbable) assumptions CTIA and CEA conclude that a DTS transition could be accomplished for less than $1 million per station, a cost far less than what stations recently spent to effectuate the far less radical transition from analog to digital operations. The actual costs of a transition to a DTS architecture for the entire television broadcast industry across the nation are likely to be at least ten times greater than CTIA and CEA estimate, and could be far more.

[7] CTIA-CEA Comments at 23-24.

Fourth, the operating costs of a market-wide SFN will be substantially greater than the cost of operating today's broadcast infrastructure. Without a mechanism to reimburse broadcasters for substantially increased operating costs, the proposal would not be workable even if the technical issues could be resolved.

Fifth, ATSC was not designed to be deployed in a SFN environment, and necessary adjustments to make ATSC work in an SFN environment add significant costs and can degrade performance. SFN architectures do have certain advantages for some purposes, but ATSC was not designed to exploit those advantages. In fact, ATSC was optimized for a very different operating environment – high power and tall towers.

Sixth, the CTIA-CEA Comments state that there would "inevitably be some disruption as operational control is shifted from a single transmitter to a network of transmitters . . . "[8] If the Commission gives further consideration to the CTIA-CEA proposal it should explore the likely extent of service interruption as it considers the many other issues that must be resolved before determining whether the CTIA-CEA Comments outline a workable proposal. For example, if implementing the CTIA-CEA proposal would result in a material or even complete disruption of television broadcast service for a significant period of time, the risks and costs of the disruption may outweigh any perceived benefits. Among other things, interrupting or degrading television broadcast service would severely compromise the Emergency Alert System. As the Commission has recently acknowledged, "it is vital that the EAS operate as designed."[9] A coordinated transition that requires advance notice that critical links in the nation's emergency

---

[8] CTIA-CEA Comments at 5.

[9] *See Review of the Emergency Alert System, Second Further Notice of Proposed Rulemaking*, EB Docket No. 04-296, FCC 10-11 at ¶ 3 (rel. Jan. 14, 2010).

communications infrastructure will be disabled for a period of time would pose substantial public safety risks.

The State Associations support FCC efforts to initiate a constructive dialog about how regulatory changes can improve local broadcasting service. Alternative technical approaches should be an important element of any debate. However, the debate should proceed in a deliberate way, and decisions should be based on thorough examination of financial, logistical, practical, technical, and other issues. The CTIA-CEA Comments may deserve more consideration. However, their proposal, lacking detail and provided just weeks before the National Broadband Plan is due to be delivered to Congress, should be recognized for what it is: constructive in intent with a high level of speculation. Consequently, it should not be used as any part of the basis for framing national broadband policy.

Respectfully submitted,

THE NAMED STATE BROADCASTERS ASSOCIATIONS

By: */s/ John K. Hane*
Richard R. Zaragoza
John K. Hane
Paul A. Cicelski

Their Attorneys in this matter

Pillsbury Winthrop Shaw Pittman LLP
2300 N Street, N.W.
Washington, DC 20037
202.663.8000

Dated: January 27, 2010