

**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of )  
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Expanding the Economic and Innovation ) GN Docket No. 12-268  
Opportunities of Spectrum Through Incentive )  
Auctions )  
 )

**REPLY COMMENTS OF COMPETITIVE CARRIERS ASSOCIATION**

Competitive Carriers Association (“CCA”) submits these reply comments in response to the Public Notice (“*Commencement PN*”) in the above-captioned docket.<sup>1</sup> In that Public Notice, the Federal Communications Commission (“Commission”) sought comment on defining the term “commence operations” in the context of the procedures governing the transition of broadcast television services and other operations out of the 600 MHz Band.<sup>2</sup>

The post-auction procedures the Commission previously adopted permit certain operations to continue in the 600 MHz Band until a 600 MHz Band wireless licensee “commences operations” in its licensed spectrum.<sup>3</sup> The Commission proposed that a 600 MHz Band licensee be deemed to “commence operations” in an area “when it begins site activation and commissioning tests, using permanent base station equipment and permanent antenna or tower locations . . . .”<sup>4</sup> CCA respectfully requests that the Commission modify its proposal to provide that operations commence as soon as a 600 MHz Band licensee initiates RF

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<sup>1</sup> *Comment Sought on Defining Commencement of Operations in the 600 MHz Band*, Public Notice, 30 FCC Rcd 3200 (2015) (“*Commencement PN*”).

<sup>2</sup> *Id.* at 3200, ¶ 1.

<sup>3</sup> *Id.*

<sup>4</sup> *Id.* ¶ 2.

transmissions. To permit timely deployment of broadband services, the Commission also should deem operations to have commenced in the entire licensed area, or Partial Economic Area (“PEA”), that the 600 MHz Band licensee won at auction rather than limit operations on a site-by-site basis.

CCA agrees with AT&T and CTIA that “[b]efore licensees can launch commercial service in a particular market, ‘they must engage in extensive construction and testing of equipment and services.’”<sup>5</sup> The Commission’s proposal must therefore be modified to account for the three to four months of testing that occurs before deploying. We detail the nature and specifics of testing here. After installing a base station, the operator generally conducts a series of conformance tests to ensure the base station performs as expected. These tests analyze multiple factors, including but not limited to signal generation, power measurement, frequency error, unwanted emissions, occupied bandwidth, adjacent-channel leakage, and spurious emissions. Once technicians have configured the base station, which can require a week or more, drive tests are conducted to verify base station performance. These drive tests, which typically require an additional week for each base station, measure base station performance in the field to ensure the coverage area corresponds with the system settings and verify no wiring or other errors have led to system settings at odds with expectations. Following drive tests, technicians must make further modifications to the base station system hardware and software.

Once one base station configuration is complete, the technicians will begin work on the next base station in a geographic cluster of stations. This station cluster turn-up and testing activity frequently occurs on a station-by-station basis because each station must be tested

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<sup>5</sup> Comments of AT&T, Docket No. 12-268 at 8 (filed May 1, 2015) (“AT&T Comments”) (*quoting* Comments of CTIA—The Wireless Association, Docket No. 12-268 at 40 (filed Jan. 25, 2013)).

individually for operation in conformance with its system settings. Once station-by-station testing has been completed for each of the stations in a cluster, then all of the stations in a cluster are simultaneously tested. So-called “cluster optimization testing” is different from station-by-station testing because it verifies multi-station operation procedures, such as handoff, are working as expected. Drive tests across the entire cluster are then used to verify and optimize performance for all of the stations involved. Testing, modifying and re-testing stations in the cluster requires an additional six to eight weeks on average for the base stations that comprise the relevant cluster, in addition to the two weeks of configurations and testing for each base station. Further testing involves drive tests among multiple clusters. All told, the process of bringing up a site – or, more properly, a cluster of sites – for a given location requires approximately three to four months of testing across a license area that, depending on the PEA, could cover a large and diverse geographic area.

Considering all that has to be done before deploying, the Commission should provide that operations commence at the time of initial radiofrequency transmission by the 600 MHz Band licensee to enable providers—especially small and greenfield providers—ample time to test and refine their network deployments.<sup>6</sup> Although the Commission suggests that site commissioning tests ordinarily take place in the late stages of a deployment,<sup>7</sup> providers must conduct multiple facility tests before starting operations, which must be repeated to ensure error- and interference-free deployment – a process that could readily consume 120 days or more. Winning bidders in the incentive auction will have paid billions of dollars for exclusive license rights in the 600 MHz Band, and to deploy quickly on this spectrum will need to be able to operate tests without

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<sup>6</sup> AT&T Comments at 3; Comments of CTIA—The Wireless Association, Docket No. 12-268 at 7 (filed May 1, 2015) (“CTIA Comments”).

<sup>7</sup> *Commencement PN* at 3202, ¶ 5.

interference from secondary users. As AT&T observes, if a third party wishes to continue to use licensed spectrum in a PEA where a licensee has given notice that it intends to commence service, the Commission's secondary market licensing regime allows parties to negotiate terms and conditions to allow continued spectrum usage.<sup>8</sup>

In addition, as several commenters noted, the area of operations for which service should be deemed "commenced" should encompass the entire PEA, not just a limited geographic area.<sup>9</sup> Providers need to be able to build out over the entire geographic area encompassed by their license because they cannot necessarily know which base stations will be effective, or should be prioritized, for their initial deployments. In addition to technological challenges posed by infrastructure deployment, some locations will have zoning or local approval issues, require historic preservation and environmental review, or will present other challenges that will give rise to unanticipated delay. These issues can pose special problems for small carriers, who run thin margins and depend on making effective use of technical teams in any given market, even if one base station site is temporarily blocked. Providers therefore need flexibility to build base stations and other infrastructure at different times across their entire service market. Limiting the commencement of service to a narrow geographic component of a 600 MHz Band license would significantly slow the deployment of broadband to consumers, especially in rural areas and areas where topographical considerations give rise to unique deployment challenges.

Investment is the key to broadband deployment, and investors crave certainty to ensure that they will receive their anticipated return. Wireless broadband providers, and especially

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<sup>8</sup> AT&T Comments at 5.

<sup>9</sup> *See, e.g.*, AT&T Comments at 10; CTIA Comments at 7-8.

competitive carriers, need regulatory certainty to be able to develop deployment plans, including coordinating with contractors such as tower construction entities and environmental consultants.

To accomplish the Commission's goals of increasing and expediting broadband deployment, especially in rural areas, the Commission must ensure that 600 MHz Band licensees have at least 120 days prior to commencement of commercial operations to test their new network deployments and allow providers to deploy fully in the entire PEA for which they are licensed.

Respectfully submitted,

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