

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

In the Matter of)
)
Partitioning, Disaggregation, and) WT Docket No. 19-38
Leasing of Spectrum)

**COMMENTS OF
NEW AMERICA’S OPEN TECHNOLOGY INSTITUTE AND
PUBLIC KNOWLEDGE**

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I. Introduction & Summary

New America’s Open Technology Institute and Public Knowledge (“OTI and PK”) hereby provide comments responding to the Commission’s Further Notice of Proposed Rulemaking (“FNPRM”).¹ OTI and PK commend the Commission for its efforts to improve competition in the wireless market. We agree the proposed enhanced competition incentive program (ECIP) will be of some benefit in opening the vast warehouse of fallow mobile carrier spectrum to smaller operators in some rural, tribal and underserved areas. However, we also believe the proposal is woefully insufficient to achieve the proceeding’s broader goals. The proposed incentives are likely inadequate to prompt most large providers to partition or lease excess and unused spectrum to smaller carriers rather than simply hoarding it as many have done for decades. Spectrum warehousing is an entrenched behavior shaped by the spectrum market—and the Commission’s auction rules—that therefore requires a more holistic approach to

¹ Further Notice of Proposed Rulemaking, WT Docket No. 19-38 (rel. Nov. 19, 2021) (“FNPRM”).

fundamentally shift the incentive structures that exist in the spectrum market. A program that offers marginal benefits to carriers to participate will likely only yield results on the margin.

OTI and PK urge the Commission to take a proactive approach to catalyze spectrum use in areas licensees have not deployed service through “use it or share it” rules. Through such rules, competitive providers, community anchor institutions, and other entities seeking to improve broadband access in unserved and underserved areas such as local governments could—through an automated spectrum database coordinator—utilize spectrum in areas where a licensee has failed to deploy service. The authorization would be secondary and contingent, the same as current General Authorized Access to vacant Priority Access License (PAL) channels in the Citizens Broadband Radio Service (CBRS) band is today. The licensee could opt to deploy service on the band whenever it chooses—but up until such time, consumers and the public interest would benefit by the spectrum being put to full use to connect communities.

There are extensive precedents for use it or share it rules and a wide range of public interest benefits in addition to the stimulation of secondary markets that the Commission should consider. These benefits include improving the coverage and capacity of broadband in rural, Tribal, and other underserved areas to reduce the digital divide; There is ample support in the record for use it or share it rules as well, noting the consensus among competitive wireless providers, public interest groups, and the technology industry that such rules promote strong competition in the wireless market and widespread societal benefits.

Given the prime opportunity this proceeding represents, and the Commission’s directive from the White House Executive Order on Competition to improve competitive access to spectrum, the Commission should adopt a more proactive and holistic strategy through the adoption of use-it-or-share-it or use-it-to-keep-it rules.

II. The Commission's Limited Proposal is Useful But Should be Broadened to Better Catalyze Secondary Market Transactions and Efficient Use of Spectrum

OTI and PK commend the Commission for this proposal to enhance incentives for secondary market transactions and thereby improve spectrum use and competition in the wireless market. While our groups agree that the proposed enhanced competition incentive program (ECIP) will be of some benefit in opening the vast warehouse of fallow mobile carrier spectrum to smaller operators in some rural, tribal and underserved areas, the proposal is woefully insufficient to achieve the proceeding's broader goals. The Commission proposes a series of incentives to licensees sitting on fallow spectrum in the hope they will deign to unlock this wasting public asset to facilitate deployments and improve quality of service by (typically) smaller and local internet service providers (ISPs) in rural, tribal and other less profitable areas. Since the Commission has had little success in adopting or enforcing strict buildout requirements, a modest extension of license terms by five years and the extension of construction deadlines by one year for licensees that undertake partition/disaggregation or leasing arrangements is reasonable. However, the Commission should also be clear that these steps are ultimately insufficient absent further proactive measures that can more directly supply needed spectrum to competitive in underserved areas.²

First, these incentives are unlikely to motivate most large providers to partition or lease excess and unused spectrum to smaller carriers rather than simply warehousing it as many have done for decades. Spectrum warehousing is an entrenched behavior shaped by the spectrum market—and by the Commission's auction rules—that will requires a more holistic approach to fundamentally shift the incentive structures that exist in the spectrum market. In particular, the

² See *Id.* at ¶ 30.

Commission needs to recognize the problem of transaction costs—both internal and external—for large carriers that hold the bulk of large-area licenses. These carriers would need to create an internal spectrum leasing unit that would engage with a wide range of small carriers for relatively small amounts of spectrum – and therefore modest revenue. This requires overcoming the internal transaction costs of large corporations exploring a new and innovative business model. While this does happen, the potential pay-off must be sufficient to grab the attention of C-Suite executives and overcome the organizational issues within the company. Once these internal costs are overcome, the company must then face the external transaction costs of marketing and supporting the program. At any stage, it is easier to say “no” rather than “yes.”

In addition to these economic factors is a psychological one: The carrier mentality is to hold spectrum as an asset. They do not, generally, share it. Even when they do, they are careful to do so only in situations that will not create potential competitors or cannibalize existing lines of business. There are also considerations of optionality: A rural area that is insufficiently profitable to deploy today—and for many years—*might* be desirable for new or enhanced service in the future. For these reasons, the Commission should expect carriers to lease spectrum only in geographic areas they absolutely know they do not wish to serve and to operators they do not see as a potential competitor.

For these reasons, a program that offers marginal benefits that are consequential only to licensees in imminent danger of not meeting buildout requirements is likely to yield a modest improvement in secondary market transactions, particularly with smaller ISPs. Instead, the Commission should seek systemic change to ensure smaller and Tribal carriers have the ability to routinely challenge for spectrum licenses that they would *actually use* rather than the largest carriers that opt to warehouse them for a “maybe” scenario in the future.

The proposed ECIP, while notable progress, would do little to change the existential problem at the heart of this proceeding, which is that relying on secondary market transactions in a distorted spectrum access market is unlikely to make today's vast warehouse of vacant prime spectrum available to smaller entities that genuinely intend on using it for deployment in rural and other less densely-populated areas. Accordingly, the ECIP proposal to extend buildout and construction deadlines to entice partitioning and leasing activity, although helpful in catalyzing some secondary market transactions, fails to go far enough in changing the market conditions and lay a firmer foundation for a competitive wireless space. The largest licensees that have failed to adhere to population-based buildout requirements, or to deploy adequate service in rural and Tribal areas—often for periods that extend far beyond their original license period—are unlikely to change their behavior.

The largest carriers have traditionally hoarded spectrum and declined to deploy service in the less profitable portions of their enormous licensing areas, rarely making it available for lease to smaller ISPs or other uses.³ Potential buyers often find it difficult to secure information about available spectrum in the areas where it is needed, in part because the Commission does not require deployment reporting. Due to the fact that performance requirements are assessed based on the share of the license area's overall population, milestones are satisfied by availability to primarily cities and suburbs, while the Commission and communities remain in the dark about how much licensed spectrum is still unused in a particular small town, rural or tribal areas.⁴

³ Comments of Ruckus Wireless, GN Docket No. 12-354 (July 24, 2017), at 5 (“Further, the changes would greatly impair the formation of a dynamic secondary trading market for PAL licenses or access, due to the concentration of a smaller number of PAL licenses into the hands of a few very large companies that are not well known for making fallow licensed spectrum available to others.”).

⁴ Comments of New America's Open Technology Institute and Public Knowledge, WT Docket No. 19-38 (June 3, 2019), at 6.

These are the market factors the Commission must shift to stimulate competitive carriers' access to spectrum. However, incentives doled out to the largest carriers will likely prove insufficient. OTI and PK are not the only participants to reach this conclusion. As the Rural Wireless Association noted in their 2019 comments:

Extending built-out deadlines, whether interim or end-of-term, for licensees will not benefit consumers of wireless services in rural markets. Nor will it increase access to spectrum by small carriers. Instead, such a proposed policy will only encourage the country's largest carriers to warehouse spectrum for years after acquisition... Relaxing the current rules to accommodate spectrum speculators, spectrum "warehouseers", and large carriers whose eyes are bigger than their stomachs sends the wrong message.⁵

The Commission should view this proceeding as an opportunity to *shift* the incentive structure of the spectrum market instead of instituting a program that simply lavishes more benefits on the largest carriers to encourage change at the margins. For the reasons discussed above, efforts to work within the existing market structure can only serve to reinforce the structure overall, without guaranteeing sufficient change to ensure service to all rural and Tribal lands. OTI and PK agree with the Wireless Internet Service Providers Association's (WISPA) argument that "a significant aspect of the problem being addressed is the reluctance of these licensees to engage in secondary market transactions at all, thereby limiting opportunities for smaller rural providers," and that therefore, "spectrum licensees engaging in secondary market transactions with eligible rural providers should be subject to both a 'carrot' and a 'stick.'"⁶

⁵ Comments of the Rural Wireless Association, WT Docket No. 19-38, at 4-5 (June 3, 2019) ("Comments of RWA").

⁶ Comments of the Wireless Internet Service Providers Association, WT Docket No. 19-38, at 7 (June 3, 2019) ("Comments of WISPA").

III. Adopting ‘Use it or Share it’ Rules Authorizing Opportunistic Local Use of Fallow Spectrum Would Incent Secondary Market Transactions and Promote Spectrum Use in Underserved Communities

In the *FNPRM*, the Commission seeks comment on whether a “use or share” approach that authorizes opportunistic access to vacant spectrum in local areas “could increase spectrum access and/or promote competition, and how these mechanisms could be implemented.”⁷ OTI and PK urge the Commission to adopt “use it or share it” licensing conditions as a proactive approach to encourage spectrum use in local areas where licensees have not put spectrum to use. OTI and PK agree with WISPA that adding “use or share” and/or “keep what you use” conditions alongside incentives to partition and lease spectrum—such as those proposed by the Commission—would “enhance the incentives for license holders to monetize unused spectrum through the secondary market option rather than risk losing spectrum that remains fallow at the end of a license term.”⁸

Through such rules, competitive providers, community anchor institutions, and other entities seeking to improve broadband access in unserved and underserved areas such as local governments could—through an automated spectrum database coordinator—utilize spectrum in areas where a licensee has failed to deploy service. This will create a needed “stick” to accompany the “carrot” of incentives. The knowledge that local providers willing to serve the community have access to unused spectrum if the licensee does not deploy would further prod licensees to either deploy themselves or to lease or sell the spectrum on reasonable terms so as to realize the additional profit. Alternatively, if even this does not overcome the internal and external transaction costs associated with leasing or partitioning, the public will have access to

⁷ *FNPRM* at ¶ 65.

⁸ Comments of WISPA at 7-8.

valuable public airwaves. Nor would use or share perpetually deprive the licensee of the spectrum. The licensee could opt to deploy service on (or partition or lease) the band whenever it chooses to do so—but up until such time, consumers and the public interest would benefit by the spectrum being put to full use to connect communities.

There are now multiple, successful precedents for use it or share it rules that include the Citizens Broadband Radio Service (CBRS) band in the 3.5 GHz band, the sharing framework for the 6 GHz band adopted in 2019, the open access sharing facilitated by database coordination in the E-band (70/80/90 GHz), and the TV White Spaces. Such rules offer a wide range of public interest benefits over and above the stimulation of secondary markets that the Commission should consider as magnifying the public interest value of this approach. There is ample support in the record for use it or share it rules as well that suggest a consensus among competitive wireless providers, public interest groups, and the technology industry that such rules promote strong competition in the wireless market and widespread societal benefits.

Additionally, OTI and PK submit that a strong complement or alternative to use or share rules would be a “keep what you use” condition providing that at the end of each licensing period, a license would be renewed only for the areas where the provider is actually using the spectrum to provide service. A more limited and location-specific variation of this, in tandem with the use or share concept, would provide that an opportunistic user providing service on a licensee’s fallow spectrum could at that point acquire a type of “adverse possession” of licensing rights in the area where it is making productive use of the band.

A. The Commission Should Adopt Use or Share Rules to Boost Competition and Improve Connectivity

There are wide-ranging benefits to adopting a use it or share it policy. The current market structure, which leaves small and rural ISPs, individual enterprises (e.g., industrial IoT), large venues, community networks, university campuses, hotels and resorts, and individual consumers at a disadvantage to purchase or lease spectrum licenses. As the country moves into the 5G and Wi-Fi 6-enabled future—and IoT networks, AR/VR services, and other emerging wireless technologies proliferate—a diverse and competitive wireless ecosystem will be crucial. The ability to access and aggregate wide channels of spectrum locally on an inexpensive and speedy basis will be particularly essential “in a 5G/IoT economy where wireless data connectivity will be associated with virtually every system, venue and device – and where many thousands of firms and service providers will have needs and demands for customized local networks.”⁹

A use or share condition creates a visible incentive for any licensee warehousing vacant spectrum, not just those that are in danger of not meeting their buildout requirements. Use or share makes the opportunity cost of unused spectrum more visible and tangible. Opportunistic access to unused spectrum illustrates that competitive carriers find value in the unused portions of license areas. This “demand discovery” puts market-based pressure on licensees to engage in secondary market transactions.¹⁰ Indeed, the WISP or other opportunistic user is the most likely to negotiate a payment and upgrade to the certainty of a lease or partitioned license if their contingent use of the vacant spectrum is proving productive. Recent advances in the ability of

⁹ Michael Calabrese, “Automated Frequency Coordination: An Established Tool for Modern Spectrum Management,” Dynamic Spectrum Alliance, (March 2019) at 32 (“DSA Database Management Report”).

¹⁰ Michael Calabrese, “Use It or Share It: A New Default Policy for Spectrum Management,” New America Report (March 2021, at 23) (“New America Use It or Share It Report”), available at https://d1y8sb8igg2f8e.cloudfront.net/documents/Use_It_or_Share_It.pdf.

operators to aggregation spectrum across bands to enhance capacity will make opportunistic use of vacant spectrum – and the demand discovery scenario described above – more likely going forward.

OTI and PK urge the Commission to consider the widespread benefits that use or share rules can contribute to fostering a thriving and accessible wireless broadband market. As the Dynamic Spectrum Alliance notes, use or share rules would deter spectrum warehousing, “lower barriers to entry for innovative new use cases by parties that at least initially either cannot afford or do not believe they need to pay for exclusive use and interference protection,” allow businesses to tap into fallow spectrum to improve networks deployed on campuses, venues, factories, and school buildings, and reduce the costs of secondary market transactions thanks to the adoption of an automated database.¹¹

As OTI detailed in an indepth *Use It or Share It* report last year, the benefits of widespread adoption of the policy include: (1) Expanding spectrum capacity and efficiency to match skyrocketing demand; (2) promoting diverse access to spectrum to facilitate innovation, competition, and consumer choice; (3) protecting incumbent and primary services in the bands where the policy is adopted; (4) disincentivizing spectrum warehousing and rewarding secondary market transactions; (5) improving connectivity in rural, Tribal, and other underserved areas to reduce the digital divide; and (6) providing regulators with a beneficial automated and transparent enforcement resource that can be expanded at scale.¹²

With respect to implementation, the Commission has several precedents and significant coordination infrastructure that make an opportunistic “use or share” policy feasible today in a

¹¹ Comments of the Dynamic Spectrum Alliance, WT Docket No. 19-38 (June 3, 2019), at 9-11 (“Comments of DSA”).

¹² *New America Use It or Share It Report* at 20-26.

way it wasn't even five years ago. The CBRS Spectrum Access Systems certified to manage opportunistic GAA use of licensed (PAL) spectrum in the 3.5 GHz band; the automated frequency coordination (AFC) systems that will soon be certified to manage opportunistic sharing in the 6 GHz band; the database-managed coordination of open access sharing in the E-band (70/80/90 GHz); and the TV White Space Database rules that allow deployment on vacant broadcast television channels all represent innovative spectrum sharing frameworks that put *unused and shared* spectrum to work to connect communities.¹³ The Commission has experience overseeing such frameworks and is familiar with the benefits and pitfalls that must be addressed in the facilitation of successful sharing initiatives.

The Commission now has the opportunity to leverage these proven spectrum database management technologies, which the agency pioneered, to facilitate use of vacant spectrum in additional bands. These Commission-certified database coordination mechanisms are proven ways to at once protect incumbents and promote efficient use of unused spectrum to promote competition and more efficient use of spectrum. Any of the certified SAS operators (for CBRS) or soon-to-be-certified AFCs (for 6 GHz) could readily be extended to serve this purpose—an expanded role that could also improve the economics of authorizing competing spectrum database coordinators that also provide value-added services (of which this could be one).

While the certification of an AFC mechanism for this purpose would be most cost-effective, the authorization of database coordination is not even necessary to extend the use it or share it condition to a new band, particularly one with substantial unused capacity in rural and tribal areas. Manual coordination is also well proven and can be implemented rapidly, as the Commission has done recently in response to the COVID-19 pandemic. The experience of

¹³ New America Use It or Share It Report at 11-20.

WISPs during the pandemic reflects how use it or share it rules can play a key role in bolstering networks in rural and hard-to-serve areas through added capacity and bandwidth. Shortly after the pandemic pushed school and workplace closures online in March 2020, the Commission granted Special Temporary Authority licenses (STAs) to deploy fixed wireless service in 330 counties across 29 states using unused 5850-5895 MHz band spectrum, in what ostensibly equated to a use it or share it framework.

The Commission provided these STAs “to help [WISPs] serve rural communities facing an increase in broadband needs during the COVID-19 pandemic,” and the results of which illustrate the monumental benefits to broadband connectivity that come with immediate availability of unused spectrum.¹⁴ During stay-at-home orders, WISPs in most states experienced up to 40 percent increase in bandwidth demand.¹⁵ Some WISPs were empowered by the STAs to expand capacity up to 75 percent thanks to the quick access to unused 5.9 GHz band spectrum.¹⁶ Claude Aiken of WISPA highlighted that after the auto industry “sat on its hands for two decades, yielding little innovation and leaving the band grossly underutilized,” WISPs were able to, in the space of mere weeks, “quickly put the spectrum into service where there was none.”¹⁷ The Commission should extend the logic that guided this public policy success in the 5.9 GHz band to allow competitive carriers, community anchor institutions, and other industrial entities to

¹⁴ FCC News Release, “FCC Grants Wireless ISPs Temporary Access to Spectrum in 5.9 GHz Band to Meet Increase in Rural Broadband Demand During Pandemic; Authority Granted to Dozens of Fixed Wireless Broadband Providers to Support Rural Telework, Remote Learning, and Telehealth” (rel. March 27, 2020) (“5.9 GHz STA”).

¹⁵ See Letter from Stephen E. Coran, Counsel to 33 WISPs, to Donald Stockdale, Chief, Wireless Telecommunications Bureau, FCC, “Request for Emergency Special Temporary Authority” (filed March 20, 2020), at 1.

¹⁶ Joan Engebretson, “WISPs See Speed Bandwidth Boosts as High as 75% Using 5.9 GHz Spectrum,” Telecompetitor (May 5, 2020), <https://www.telecompetitor.com/wisps-see-speedbandwidth-boosts-as-high-as-75-using-5-9-ghz-spectrum/>.

¹⁷ “Claude's Blog: FCC 5.9 GHz STA Helps WISPs Serve Through COVID-19 Pandemic,” WISPA Blog (May 12, 2020), http://wispa.org/news_manager.php?page=21979.

put unused spectrum across frequencies to work to connect unserved and underserved households and innovate next-generation uses of wireless services.

B. The Record Shows Strong Support for Use It Or Share It Rules

The proceeding already details the widespread benefits that use it or share it rules would bring to catalyzing broadband deployment, access, and secondary market transactions. Commenters from a variety of backgrounds, including OTI and PK, detailed how use it or share it rules are feasible due to modern-day spectrum database management, would improve efficient use of spectrum that was previously remaining fallow, and promote partitioning and leasing of unused spectrum.

Use it or share it rules would boost connectivity in rural, Tribal, and other hard-to-serve areas previously ignored by the incumbent carriers. OTI and PK agree with Google that use it or share it rules “could yield particularly meaningful results in rural and other underserved areas” where spectrum licensees fail to “productively” use their licenses and could decline to ever deploy service due to a lack of perceived economic incentives.¹⁸ WISPA further argues that use it or share it rules would provide some “opportunistic, unlicensed use that may encourage the licensee to extend service more quickly, in addition to encouraging transactions permitting exclusive use.”¹⁹ OTI and PK agree with the Dynamic Spectrum Alliance (DSA) that the “option to deploy, at least initially, without committing to the cost of a long-term lease or license could be particularly useful for small rural ISPs, such as WISPs that currently rely on unlicensed spectrum,” at the very least to increase capacity and bandwidth.²⁰

¹⁸ Comments of Google, WT Docket No. 19-38 (June 3, 2019) at 17-18 (“Comments of Google”).

¹⁹ Comments of WISPA at 7-8.

²⁰ Comments of DSA at 8-9.

The record further reflects that use it or share it rules would further the goals of this proceeding by increasing secondary market transactions. As Google explains, use it or share it rules would result in “both employment of otherwise unused frequencies and potential new business opportunities for market stakeholders.”²¹ OTI and PK further agree with DSA:

... [O]pportunistic access further encourages secondary market transactions by facilitating price discovery on both the supply and demand side. For licensees, it will both identify users interested in a potential lease or partition and provide information on the potential value (i.e., how much is my spectrum worth?). For users, opportunistic use is an opportunity to test the local market and to determine the value of a more secure, longer-term lease or partition agreement (i.e., how much am I willing to pay for spectrum?).²²

C. The Commission Should Consider ‘Keep What You Use’ Rules as a Viable Alternative

Although OTI and PK strongly urge the Commission to adopt use it or share it rules – which have no adverse impact at all on licensees – we also acknowledge that a viable alternative (or potential complement) would be a “keep only what you use” condition. This could be a license modification that applies to licenses that lacked strict buildout requirements; or to long held licenses that may have satisfied the original population-based buildout requirements, but that remain fallow in certain areas. This would effectively be a more modest and practical version of the sue-it-or-lose-it requirement that buildout requirements imply (but rarely deliver). Under such a condition, at renewal (or some other interval specified by rule), the Commission would require an accounting of significant geographies where the licensee has not deployed or commenced service. At that point, in the geographic areas where the spectrum remains fallow, one of two consequences could be triggered: Either the licensee’s rights under the license would not be renewed for those particular areas or, alternatively, ‘keep what you use’ could

²¹ Comments of Google at 19.

²² Comments of DSA at 10.

complement ‘use it or share it’ by allowing any current or subsequent opportunistic user to deploy, commence service, and acquire the lost licensing rights. The Commission could of course also decide to re-auction areas that are very substantial in size, particularly if there is de minimus opportunistic use.

OTI and PK agree with WISPA that a keep what you use rule, along with use it or share it, would “enhance the incentives for license holders to monetize unused spectrum through the secondary market option rather than risk losing spectrum that remains fallow at the end of a license term.”²³ However, we also agree with WISPA’s caution that keep what you use rules could “counterproductive as standards based on population coverage encourage licensees to satisfy the requirement for a large-footprint license by covering only the most populated areas – the ‘donut holes.’”²⁴

²³ Comments of WISPA at 7.

²⁴ *Id.* at 3.

IV. Conclusion

The Commission should build on its proposal to catalyze partitioning and leasing to promote competition in the wireless market. To combat the structural dominance the nationwide carriers have in spectrum holdings, the Commission should adopt use it or share it rules. Opportunistic sharing is feasible, has precedent, would promote efficient use of fallow spectrum, would catalyze rural and Tribal broadband access, and has support from competitive wireless providers, the public interest, and technology companies.

Respectfully submitted,

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