

Perspectives on the Current State of Make Ready and the Potential Impact of a One-Touch Make-Ready Policy

To evaluate the potential impact of one-touch make-ready (“OTMR”) policy on the deployment of next generation fiber networks, CMA Strategy Consulting (“CMA”)¹ conducted a series of detailed interviews with construction vendors, fiber network operators, and utilities. Interviewed parties included fiber network providers operating at varying scales with diverse scopes of services across different regions of the United States, as well as construction companies that serve a wide range of pole owners and network providers. CMA sought to understand how the current make-ready process can impede competitive service providers from extending high-speed connectivity to unserved or underserved business and residential populations across the United States. These interviews also sought to gather information related to specific projects where OTMR or OTMR-like arrangements were relevant and to discuss where these types of arrangements facilitated more efficient network deployment.

Executive Summary

Through our conversations, we identified five major themes which have either i) eroded market efficiencies and impeded the deployment of next-generation broadband networks, or, conversely, ii) allowed or will allow operators to improve efficiency, transparency, and predictability of the make-ready process. These themes are as follows:

(1) The current make-ready process is unpredictable and prone to delay. Sequential make-ready performed by different parties is very unpredictable, inefficient, and results in significant delays. Make-ready for existing attachers is expense-related work that receives the lowest priority. In practice, each attacher may only touch its own equipment and facilities, and thus must wait for the preceding attacher to finish its

¹ By way of background, CMA Strategy Consulting is a boutique 40-person consulting firm with offices in Boston, MA and San Francisco, CA focused on the telecommunications, media, and related high-tech industries. Founded in 2007, CMA assists operating companies and their investors with strategic planning, business development, market and competitive intelligence, due diligence, and business planning throughout the U.S. and internationally. CMA’s leadership has extensive experience in wired infrastructure and connectivity. CMA’s work on this matter was led by Nicholas Vantzelfde, who regularly advises senior executives on strategy, regulation, and competition issues in the communications, video, and media sectors. Mr. Vantzelfde works with service providers, investors, and government agencies to assess the market for new opportunities, anticipate competitive challenges, and implement new technology.

make-ready. As a result, the completion of overall make-ready is regularly delayed beyond the applicable deadlines due to participation from all the involved parties. Expecting these delays, providers often budget worst-case cost and delay scenarios, which effectively shrinks the provider's deployment radius. This results in fewer miles of fiber constructed and fewer customers served.

(2) Predictability and speed are key to network deployment. A predictable and speedy make-ready process allows builders to more accurately budget costs and more quickly realize revenue, which, in turn, leads to increased deployment of infrastructure.

(3) Lack of coordination reduces construction speed and cost-saving opportunities. Construction vendors working in both the electric and communications space on utility poles see that limited communication across pole owners, existing attachers, and new attachers leads to inefficiencies in completing make-ready work.

(4) In the absence of official ways to speed the process, parties currently use ad hoc means to speed deployment. Parties have tried to reduce unpredictability through ad hoc efforts to streamline the pole attachment process, but these processes are neither uniform nor consistent, and thus cannot fully address the problem.

(5) There is a consensus among interviewees that one-touch make-ready can substantially improve the process. Using a pre-approved vendor for make-ready construction can provide greater visibility across attachment activity, improve efficiency, and allow for forward-thinking construction efforts.

We describe below the parties we interviewed and some background gathered from our interviews, and then we discuss the themes developed by our conversations in more detail. We find that the consensus across these construction vendors, fiber providers, and utilities interviewed recognizes a currently inefficient process, and supports a one-touch make-ready policy at both the FCC level and in the states that regulate pole attachments.

Interviewed Parties

The subsequent materials reflect interviews with leadership from eleven different service providers:

- **Allen Bell**, Joint Use and Franchise Manager for Georgia Power Company, **Southern Company**. Mr. Bell has been deeply involved with joint-use of poles for over 14 years. Mr. Bell has experience complying with and operationalizing the FCC's pole attachment rules and is a member of the FCC Broadband Deployment Advisory Committee's Competitive Access to Broadband Infrastructure working group.
- **Andru Bramblett**, Director of Outside Plant for **Uniti Fiber**. Mr. Bramblett has over 20 years of experience in managing outside plant projects, with deep knowledge of the

deployment process for fiber network providers, particularly in the Southeast. Previously, Mr. Bramblett was the Vice President of Outside Plant Operations for Southern Light from 2004 until Southern Light was acquired by Uniti Fiber in 2017.

- **Bob Breeden**, Executive Vice President for **ElectriCom**. Mr. Breeden has worked with ElectriCom for 24 years; with extensive project management experience, particularly serving communications customers. ElectriCom provides construction services to both power and communications customers as well as right-of-way management across the U.S. with offices in Arkansas, Florida, Indiana, the Carolinas, and Texas.
- **Patrice Carroll**, President and CEO of **ImOn Communications**. Prior to leading ImOn as CEO in 2013, Ms. Carroll held extensive tenures at both McLeod USA and MCI. ImOn provides voice, cable, and data services to both residential and business customers in Iowa, primarily in and around the Cedar Rapids market. ImOn's data services are supported by a continuously expanding fiber footprint.
- **Larry Coleman**, President of **GoNetSpeed**. GoNetSpeed is a new fiber-based broadband service provider in the Pittsburgh area serving both businesses and residential customers. Prior to his involvement with GoNetSpeed, Mr. Coleman founded and served as the president of Sunesys, a fiber service provider, which was sold to Crown Castle.
- **Jon Deluca**, Former President and CEO of **Wilcon**, which has an extensive network throughout Southern California. Mr. Deluca was CEO and President until the company was sold to Crown Castle in early 2017. Mr. Deluca had been the CEO of Wilcon since joining in 2011, significantly expanding the company's fiber footprint and revenue base. Prior to his tenure with Wilcon, Mr. Deluca spent over a decade with FiberNet Telecom Group, originally as the company's CFO and then as president and CEO, until its sale to Zayo Group.
- **Dwight Eng**, former Senior Manager with **Michels Corporation**. Mr. Eng, who recently retired from full-time work, is an industry veteran with over 40 years of experience working with both utilities and construction firms on both aerial and underground line construction projects. Michels is one of the largest utility contractors in the U.S.
- **Nicholas Fischer**, Network Deployment and Operations Lead of **Google Fiber** for Nashville, TN. Google Fiber provides fiber to the premise connectivity to a dozen U.S. markets, with many more planned. Mr. Fischer has been involved in each of the company's fiber builds, and leads the deployment of their fiber network for the Nashville market.

- **Brett Lindsey**, President and CEO of **Everstream**; a fiber network operator with an extensive network throughout Michigan and Ohio serving business, wireline carrier, and wireless customers. Mr. Lindsey has served as president and CEO of Everstream since 2014. Mr. Lindsey has held senior leadership roles in the telecommunications space, including with Vox Mobile, Qwest, and XO. Most recently he served as COO of OneCommunity.
- **David Mayer**, General Counsel and Executive Vice President of Business Development for **Lightower**, a metro fiber operator headquartered in the Northeast with an extensive fiber footprint stretching from Maine to North Carolina, and from Boston to Chicago. Mr. Mayer has over 25 years of experience in the telecommunications space, with tenures at Conversent Communications, One Communications, and Viridian Investment Partners prior to joining Lightower.
- **Rob McGee**, Executive Director of Global Transport Engineering and Implementation for **Verizon**. Mr. McGee is responsible for the deployment of Verizon's entire competitive fiber plant.

Background

Aerial deployment – the attachment of network infrastructure to utility poles – tends to be the cheapest method to deploy fiber, but can also be the slowest. Service providers assess network investments by the length of the investments' payback periods. A network build sees the shortest payback by minimizing both the cost and length of deployment. Expediting the make-ready process can reduce payback periods and thus spur increased investment for next-generation networks. The current process is inefficient; impeding broadband deployment and creating additional burdens for pole owners.

As the communications landscape has been reshaped by the Internet over the past twenty years, so too has the use of poles. Historically, the communications space on poles housed equipment for the incumbent local exchange carrier (ILEC) and in many areas a single cable provider as well. As competitive carriers and cable overbuilders entered the market, they sought to attach in that same communications space as well. Wired broadband providers also piggybacked in the same space. Competitive broadband connectivity increases the demand for pole space real estate as new Internet service providers seek to serve homes and businesses by deploying their own infrastructure. As a result, pole management has become increasingly complex.

Utility providers own the vast majority of poles in the U.S. and their core business is providing electricity to their customers, not managing third-party attachments on their poles. As pole attachments grow in number and complexity, utilities are increasingly and reluctantly forced to allocate additional resources towards pole management and away from their core services. In

different parts of the country, pole owners use varying approaches to manage pole assets, including self-provisioning, outsourcing management, and joint ventures. Of the eleven entities interviewed, it was a common theme that utility companies still generally manage their poles and the make-ready process internally. There are, however, a few areas where providers have experienced third-party pole management.

Discussion

Each operator has had unique and diverse experiences with the deployment of fiber networks on third-party owned poles. All have experienced issues with the current make-ready process for pole attachments, including substantial delays in extending high-speed connectivity and inefficient practices that slow business efforts. We found that the current make-ready process, including sequential make-ready performed by different parties, results in significant delays, lack of predictability, increased costs, and reduced fiber network expansion. Lack of predictability was the single most important driver of delays and increased costs; which causes potential attachers to seek alternatives to building fiber along aerial pole routes. All conceded that aerial deployment was consistently cheaper than other deployment options, but the lack of predictability for revenue realization and the potential for customer dissatisfaction created significant obstacles for the deployment of next-generation networks. To that end, all agreed that in aerial deployments, they often budgeted worst-case cost and delay scenarios, which effectively shrinks the provider's deployment radius. Based on our interviews, we conclude that the current make-ready process has therefore resulted in fewer business case hurdles being met, and, thus, fewer miles of fiber constructed.

Further, consensus amongst these parties strongly supports a one-touch make-ready process for pole attachments. The providers we interviewed experienced or sought to negotiate informal OTMR-like processes to increase the predictability of the fiber deployment process. A few have, at times, been successful in negotiating or, through a trust-based system, effecting an OTMR-like regime for aerial deployment in certain jurisdictions. In other areas, attachers used a pre-approved vendor that was pre-authorized to move and make-ready other attachers' facilities. However, not all providers were able to informally implement such a system in all areas or for all or most attachments, leading to increased unpredictability.

Like service providers, contractors specializing in the construction of aerial fiber networks fall victim to the same inefficiencies of the current make-ready process. These inefficiencies have a direct impact on the contractors' ability to complete work in a timely manner. Under the current fragmented make-ready process involving many parties of varying motivations, a network construction project creates unique problems in the orchestration across the different pole owners and attachers. The unpredictability of the current make-ready process results in contractors supporting idle crews and a sub-optimal scheduling process. Given the opportunity,

contractors strongly prefer the chance to complete more make-ready projects with a single truck roll, reducing their costs and reducing project times.

Through our conversations, we identified five major themes: (1) the current make-ready process is unpredictable and prone to delay; (2) predictability and speed are key to network deployment; (3) lack of coordination reduces construction speed and cost-saving opportunities; (4) in the absence of official ways to speed the process, parties currently use ad hoc means to speed deployment; and (5) there is a consensus among interviewees that one-touch make-ready can substantially improve the process.

1. The Current Make-Ready Process is Unpredictable and Prone to Delay

Providers describe multiple examples of instances in which the current process is unwieldy and unpredictable. While in some cases a third-party manager may help provide a bit more predictability, there are significant issues that such practices do not address.

In the make-ready process, existing attachments are inspected more closely than is typically possible during on-going maintenance. It is through this process where violations of existing attachers' equipment is often identified. As part of make-ready, all existing violations must be addressed prior to a new attachment. Existing attachers are then burdened with addressing an unplanned expense which will allow a new competitor access to their established market. In other words, existing attachers are incentivized to delay addressing violations discovered during make-ready as much as possible while staying within mandated timelines. Even excluding the violations, existing attachers must complete their make-ready work prior to a new attacher's work. Coordination among attachers tends to break down given the lack of incentives for existing attachers. The very nature of make-ready signals increased competition and, thus, can encourage existing attachers to assign the lowest priority to make-ready work and draw the process out as long as possible under current allowable timetables.

Unlike existing attachers, the utility has a different set of motivations. It will not experience increased competition from a new aerial network deployment but it does have costs associated with the make-ready process. The role of the utility is often expanded into one of arbitrator when it discovers violations by previous attachers or when coordinating between multiple attachers. Make-ready related work is not a profit center for utilities and, as a result, utilities often lack incentives to find innovative solutions to issues that arise.

The burden for expediting a new attachment (rightfully) lies on the new attacher. New attachers often find the most expeditious solutions require well developed relationships with involved parties; a status not always congruent with a new entrant attempting to deploy a new network.

For example, in some locations, a provider (often an ILEC) may have a joint space agreement with the utility for dedicated space on poles. Within the communications space, generally this

provider will be the lowest attacher, with cable sitting above them, and then the competitive fiber providers sitting in the top of the communications space. At many pole locations, legacy attachments were placed without considering how to maximize future attachments. When this is the case, a new attacher will have to work with the utility to orchestrate movement within the communications space so that existing attachers may be better positioned. A service provider may be able to directly contact existing attachers, and offer to move their equipment to complete make-ready in a single truck roll. However, new entrants that have not fully developed a trust-based relationship with these market players or the pole owners – or when dealing with a pole owner who may have an adverse competitive incentive – often cannot accomplish these make-ready projects in a single truck roll, resulting in unpredictable delays.

In essence, there is an implicit insurance premium paid by new entrants. They must go through the make-ready process at the pace dictated by existing regulation, which creates a significant disadvantage in length of builds versus established competitors, who have developed a trust relationship with existing attachers. Further, since existing attachers may not know or trust these new entrants or may sense a competitive threat, new attachers can be forced to wait through delays that result from a sequential make-ready process. Providers are often forced to wait for each attacher to finish their own make-ready work, and, as a result, make-ready delays can extend significantly beyond applicable timetables.

There are some instances where a pole owner manages its poles in ways that can alleviate some of the issues. An energy utility in Iowa, for example, outsources pole management to a third party. This third party's ability to operate as a pole manager hinges upon its ability to alleviate burdens of the pole attachment process, and it has an obligation to the utility alone. Thus, following the guidelines prescribed by the FCC precisely is its key objective. This structure minimizes the pole attacher's ability to achieve or incentivize an expeditious timeframe for new attachments. The result is an attachment no quicker or slower than outlined in existing regulation. While this significantly increases predictability, it can greatly extend time frames over other utilities.

On the west coast, there are regional administrative bodies such as the Southern California Joint Pole Committee (SCJPC) which manage make-ready matters. In California, requirements for poles and attachments to withstand horizontal pressure from wind tend to be more stringent than in other parts of the country – utility poles in California are subject to specific loading guidelines established in California Public Utilities Commission General Order No. 95. New attachers find that the majority of their proposed attachments do not pass wind-loading requirements, even if a new attacher is able to provide testing showing otherwise. While the SCJPC has visibility into the continuous modifications and upgrades occurring on poles via its utility and tenant agreements, this information is not available to new attachers, making it difficult for them to accurately predict the outcome consistently.

These two examples illustrate how the increasing complexity of pole attachments has resulted in pole owners seeking outside-party management help. In both these cases, the administrative body alleviates the burden of coordinating pole tenant activity, primarily at the service of the utility. As a result, new attachers seeking to deploy next-generation networks are not consistently afforded an opportunity to develop a direct relationship with the utility to potentially expedite the make-ready process.

2. Predictability and Speed are Key to Network Deployment

Providers explained to us that a predictable and speedy make-ready process allows builders to more accurately budget costs and more quickly realize revenue, which, in turn, leads to increased deployment of infrastructure. But providers noted that new broadband providers (or even existing providers in a new area) may not have built up the kinds of personal relationships and trust with pole owners that would allow them to speed up deployments or make the timeline more predictable.

Providers we interviewed noted that under the existing, sequential make-ready process, it can be very hard to know when an attachment will actually be finalized and on the pole. This makes budgeting difficult and slows deployment overall. They also explained that while in some instances, providers may be able to work with pole owners to short-cut some of the delay, this is harder when they are a new entrant in a market.

For example, in Nashville, TN, aerial deployment is the only form of outside network deployment that is economically feasible as the city sits atop a massive limestone bowl. Two and a half years ago, Google Fiber announced plans to deploy fiber to the premises in the city and its surrounding areas. The scope of Google Fiber's total planned network build exceeded 3,000 miles requiring attaching to approximately 88,000 poles. But Google Fiber has experienced significant delays accessing poles that require make-ready. With multiple pole owners even in a single neighborhood, build-out needed to occur on both utility-owned and ILEC-owned poles. But without a uniform make-ready process, there were significant delays. These delays meant that in some neighborhoods, even as Google Fiber was building out its attachments, another attacher was also seeking make-ready on about 5-10% of those poles. During this period, the utility is also conducting on-going maintenance and upgrades on a portion of the poles. As the make-ready process lengthens, it becomes increasingly difficult to control other outside variables. Google Fiber was left dealing with issues that were well beyond its original responsibilities had the make-ready been completed earlier and in a timely fashion.

Providers have also found that the lack of predictability in the pole attachment process has caused providers to choose different, sometimes more expensive, ways of deployment. For example, one small provider told us that more than two-thirds of new builds are buried underground, while less than a decade ago about three-quarters of new builds were aerial. The

shift doesn't reflect changes in prices, but rather the importance of getting networks operational quickly. This provider does not currently have any mandates or assumptions driving an increased preference for underground over aerial. In most of their footprint, it is more expensive to go underground. But the delays of the make-ready process for aerial deployments often tips the scale in favor of underground over aerial builds. The unpredictability of the make-ready process can thus force fiber providers to choose between lower cost and fast, predictable speed for network deployments.

Further, it may be difficult for new or smaller providers to address the lack of predictability in the current environment. Gaining pole owners' trust is critical, and can be hard to establish, creating a significant barrier to entry for new entrants, thus reducing competitive expansion. Trusted attachers are often able to move efficiently and predictably with less oversight and fewer bureaucratic delays. An attacher's successful relationship with a pole owner hinges on a mutual liability for the common infrastructure. Using pre-approved construction vendors and rigorous record-keeping are tools that help, but without the ability to use them, much of the trust is historically relationship-based.

Further, where a broadband provider is unknown or new, the lack of a long-standing trust relationship and name-recognition often means that there is less opportunity to informally expedite attachments with the utility or pole-owner. For example, one relatively new provider explained that despite being managed by a team of industry veterans with deep knowledge of the make-ready process across multiple markets, the make-ready process had been significantly slowed by the lack of public recognition of the new entity's name.

These examples show how costly and time consuming the lack of predictability can be on the deployment of broadband networks. Each involved party may act in its own self-interest, extending timelines when it benefited them, and rarely working towards what is most advantageous for the next attacher. Discovering issues from a prior attacher can result in a snowball effect of continuing to pass the buck down to the new attacher. Interviewed parties have heard that even cities and municipalities run into these roadblocks when trying to accomplish municipal work.

3. Lack of Coordination Reduces Speed and Increases Cost

Even in the early days of network deployment when just the ILEC and an incumbent cable operator occupied the communications space on utility poles, the make-ready process was never truly forward-looking, nor has it anticipated the needs of a competitive supply of next generation broadband networks. Attachers looking to reap OTMR-like benefits are willing to take on greater duties and responsibilities in the make-ready process to reduce the burden on both pole owners and incumbent service providers. However, such benefits rely on coordination, and coordination requires participation by all involved parties.

Providers generally recognize that the utilities themselves don't have the manpower or communications background to perform all make-ready tasks themselves. Outside plant construction vendors recognize the distinction between electric and communications make-ready work. Vendors specializing in utility construction recognize that work in both the power and communications space may be difficult to accomplish with a single crew, but note that nevertheless, a single vendor is still able to complete work in both spaces by using two crews – one crew qualified to work in the communications space and another crew qualified to work in the power space. Thus, there are still significant opportunities to increase construction speed and realize cost-savings by utilizing a one-touch process.

Make-ready tasks in the electrical and communications space on poles generally requires two different work crews. Electrical linemen have different training allowing them to work on the utilities' equipment in the power space; an area off limits to the communications crews working on poles. Vendors that specialize in outside plant construction generally have separate crews for tasks involving equipment in the power and communications spaces on poles. Linemen may be capable of completing both power and communications tasks, but rarely do so in practice due to the premium on labor for a power crew over a communications crew.

Many vendors specializing in utility plant construction either have both power and communications crews, or strong sub-contractor relationships which allows them to perform both. For example, one vendor we spoke with has staff to support both power and communications crews, and finds it practical to keep a separation between both types of crews. Crews specializing in work on the communications space of poles have not only the experience and expertise to perform communications make-ready for multiple attachers, but the incentive to do so. Similarly, crews specializing in work above the communications space have the experience and expertise to perform work in that space. While this model requires two truck rolls to complete make-ready work involving tasks in both the communications space and above the communications space, a single vendor can still handle both truck rolls so long as it has crews that are qualified to work in those spaces.

Consensus from interviewing service providers supports the notion that new providers are often willing to forgo the cheapest method so long as the alternative proves timely and predictable. However, existing attachers may be incentivized to draw out the process as long as possible to delay the entrance of a new competitor. As a result, when a pole has existing violations that must be addressed prior to make-ready, the violating attacher often unilaterally seeks the cheapest (and slowest) resolution to satisfy requirements. Similarly, the utility is not incentivized to seek a more expeditious method if it increases their costs.

Nevertheless, the utility plays a key role in resolving disputes as they arise amongst attachers. As the administrator and record-keeper, it provides the single version of the "truth" that assists in the resolution of disputes around violations and responsibilities. As the administrator in the

make-ready process, the utility can find itself in disputes directly with attachers, compounding inefficiencies to all parties, particularly when there are multiple attachers performing make-ready at different times. As the number of parties doing make-ready increases, the potential for disputes over the lack of transparency in billings (based on varying thresholds for detail in billings needed by attachers and the utility) also increases and can add to make-ready delays.

Costs (and duration) of completing large-scale projects for construction firms like ElectriCom can be increased when make-ready tasks for various attachers are not properly coordinated; forcing the new attacher to juggle resources between pole locations based on which of the poles have make-ready already completed. A one-touch make-ready process would allow a single crew to complete all work within the communications space, thus allowing for more efficient planning of construction resources. Often construction vendors have a strong preference for a make-ready process that allows them to consolidate otherwise disparate make-ready tasks within a project. Such a process would reduce construction costs which could in turn be passed on to attachers via price competition amongst construction vendors; furthering the attractiveness of such a program to high-speed broadband providers.

4. In the Absence of Official Ways to Speed the Process, Parties Currently Use Ad Hoc Means to Speed Deployment

As a result of a systemic lack of predictability, the parties that we interviewed are aware that many new entrants in many markets have made unauthorized attachments and dealt with the consequences later, if at all. Some new entrants have found the market costs for violating the current regulatory make-ready hurdles are lower than the opportunity cost spent pursuing fully authorized methods “by the book.” Most often these are discovered only when a new attacher is seeking to get on poles. The remediation required to fix unauthorized attachments creates further delays for new attachers. It is clear from multiple conversations that the existing regulatory regime where utilities manage their poles has created a barrier to entry, but the difficulty monitoring and enforcing regulation can create a tragedy-of-the-commons situation within the communications space of utility poles. Unauthorized attachments are potentially dangerous, and they increase the burden placed on both the pole owner and established attachers.

Where the make-ready timetables can be shortened such that authorization may be reached quickly, the risk for making unauthorized attachments outweighs the benefits and the incentive to do so is decreased. Some construction companies explain that it is not unusual to have the same crew be asked to move multiple attachments on the same pole over several weeks. In instances where they can informally work with pole owners or attachers to coordinate, the construction crew can be more efficient in one trip, saving time and money.

To counter the delays in the current system, some providers have found that OTMR-like processes, such as an electric utility's approach involving pre-approved "turf vendors," can expedite the process for attachers. Turf vendors are prequalified to perform contracted tasks within a geographic area according to an established set of rates and guidelines. These turf vendors are paid by the attacher, so they are incentivized to complete the work quickly, but they have approval to do all the make-ready and construction work from the utility and most other key market players who would need to otherwise do their own make-ready. Because the turf vendor can perform all make-ready in one visit, this can save 60-120 days in the permitting and make-ready process. The turf vendor may be able to charge a premium for these expedited make-ready results. But a new attacher is often willing to pay this premium to achieve quicker completion of make-ready. And a pre-approved turf vendor levels the playing field because existing and new market entrants all have access to the same expedited make-ready timelines. However, turf vendors are not universally or consistently available.

5. There is a Consensus among Interviewees that One-Touch Make-Ready Can Substantially Improve the Process Without Creating Safety Risks

In Nashville, where non-aerial alternatives are often infeasible due to limestone bedrock, an OTMR ordinance has been authorized, giving providers an opportunity to accelerate the deployment of their network. Unfortunately, the market impact of this ordinance is yet to be realized as its implementation has been stalled by pushback from incumbent service providers, and has yet to expedite efforts in the area. Providers in this area, however, feel that this OTMR ordinance could address the systemic issues that have slowed the deployment of next-generation broadband networks across much of the U.S, and may be a valid example to guide future efforts to accelerate the deployment of next generation broadband networks.

Today, parties indicated that make-ready for existing attachers is expense-related work that receives the lowest priority. That is, existing attacher make-ready has no direct tie to revenue and, as a result, many parties are not motivated to complete anything in a timely manner. Currently allowed timetables for existing attachers are so lengthy and the sequential practice of exercising the timetable so cumbersome that they effectively serve as a regulatory barrier to entry, reducing competition. A one-touch make-ready approach would allow for faster aerial deployment, thus reducing the need to utilize costly underground deployment methods while increasing competition. These benefits would be passed to end-users via additional competitive service availability and lower pricing. Additionally, the faster deployment under an OTMR approach would result in more new or moved attachments being up to code because new attachers would have less incentive to engage in riskier unauthorized attachments. And the single contractor used in an OTMR approach would have greater visibility into the pole's attachments overall, so as to assess how a new attachment should be made and how best to ensure wind-loading and other requirements are met.

Some fiber providers expressed a willingness to take on further liability to act as insurance against the concern that new attachers may damage existing attachments during the make-ready process. Fiber providers have, in the past, taken on this increased liability in areas where they have successfully found means to expedite the make-ready process beyond currently mandated timetables. Further, our conversations reinforced the notion that established trust and accountability and repeated interactions between parties deter reckless behavior.

The utilities we spoke with recognize that the current system is inefficient, and it will likely remain so until policy is changed. For utilities, pole attachments are an obligation, but not a profit center. There is no incentive for pole owners to devote additional resources to the process, and innovation therefore is hindered by existing policy. OTMR puts the burden on the parties that are driving the expansion, are motivated by the promise of new revenue/new customers, and, with proper rules, should be trusted to complete the work timely and safely.

We did not find significant concerns raised about the safety of having approved contractors work in either the communications or the electrical space, so long as those contractors were properly trained or licensed. In fact, construction companies advised that they today often have crews trained to work in either space, and can coordinate the work among their personnel to safely manage both wireline and wireless attachments. We did not receive any reports that the use of contractors created safety issues or tended to damage existing networks.

Thus, consensus across these construction vendors, fiber providers, and utilities interviewed recognize that the current process is inefficient, and unnecessarily unpredictable. Our interviews confirmed that the option of using one-touch make-ready would remedy these inefficiencies and increase predictability.

Regards,



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