

INTEGRITY INTO EVERYTHING

## IS YOUR DISTRIBUTION SYSTEM READY FOR FIBER?

### Five questions to ask.

#### INTRODUCTION

Thanks to the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Act, there is an unprecedented amount of federal dollars currently allocated toward the creation of fiber broadband networks. Electric utility companies considering an investment in the fiber industry that want to seize this opportunity must be prepared for the road ahead. Is your distribution ready for fiber? Here are five important considerations to help you answer the larger question.

#### 1. What level of investment will you make?

This is a question with two likely answers: Electric utility providers can become internet service providers (ISPs) or create middle mile networks through existing pole infrastructure and lease that connectivity to a partner ISP that will provide the last-mile connection to homes and businesses. If you create an ISP, you own and operate the connection from beginning to end, which offers greater control over factors like the placement of your cable. You'll also be responsible for communications and marketing, which offer opportunities to explain how the new network meets your community's needs. If you provide the middle mile infrastructure, there are opportunities for revenue without ISP responsibilities like customer service, billing, and so on. Middle mile network providers are also eligible for federal grant money through the IIJA's Middle Mile Grant Program.

#### 2. How many existing poles must be replaced to meet make-ready requirements?

Aerial fiber installation—that is, running fiber lines on electric poles—is far less expensive than burying cables in the ground. But as you approach a fiber build (regardless of how you answer the first question, above), some percentage of your poles will need to be replaced. Standard distribution poles that were first installed in the mid-20th century for \$150-\$200 may now cost ten times as much for the combined cost of labor, construction equipment, and the pole itself. Anything you can do to reduce the number of poles that must be replaced to meet your make-ready requirements will save valuable time and money. And this consideration leads directly to the next.



FUTURE  
GROWTH

## IS YOUR DISTRIBUTION SYSTEM READY FOR FIBER?

### 3. Do your poles have ample comm space and, if not, what will you do?

The National Electric Safety Code (NESC) requires that communications lines—in what is called the comm space—be run 40” below the bottom of the supply space, which carries electricity. The 40” neutral space requirement can create problems with ground clearance, such that poles that previously had ample ground clearance now, with lines added in the comm space, no longer have sufficient clearance. At Finley, we have seen companies with 20-25% pole reject rates due to this NESC requirement. But there’s good news: Certified journeymen linemen are authorized to install fiber lines in the supply space. In other words, the 40” comm space requirement only applies to maintain a safe clearance for non-certified personnel; the supply space can be utilized when the installation is completed by a certified journeyman lineman. This provision, of course, requires a utility entity to give permission for supply space use, which is not an issue if the fiber-installing entity is also the pole-line owner. While your labor costs will increase somewhat, your pole reject rate will go down and can potentially save you hundreds of thousands of dollars.

### 4. Will easements become a roadblock?

Be aware of your easement situation. When power lines were installed in the 1930s and earlier, easements for power lines were most often exclusive to electric service—there was no apparent provision made for communications networks to be run across the same lines. It wasn’t until the 1950s or later that most entities started including provisions for communications lines. If older easements are still in place, your whole project could be in jeopardy. Has your council reviewed the easements to ensure you are allowed to run fiber on your electric poles? Some states have created laws to address this historical oversight, but many still have not. Earlier this year, the law firm Keller & Heckman LLP [wrote an article](#) stating, “Roughly 20 states have implemented some form of legislative fix, most within the past three years.” As you consider a future build, do your due diligence and check whether your state laws make provisions for communications lines being added to electric poles.

### 5. Is there an opportunity to combine fiber upgrades with smart grid implementation?

Many electric providers are finding opportunities to implement smart grid enhancements and install fiber lines simultaneously, thereby saving money on the overall project. The communications required for smart grid deployment requires fiber lines to connect smart grid equipment. It’s straightforward enough to add additional fiber lines to support broadband service at the same time, essentially accomplishing two goals at once. This combination of efforts may also present new funding opportunities, as part of the IIJA is set aside for energy initiatives like smart grid deployments.

Just as you tell your customers Call before you dig, we urge you to Study before you start. The creation of fiber networks is rife with opportunities and challenges. If you’ve done the work to ensure your distribution is ready for fiber—asking and answering the five questions shown here—you’re already well on your way to helping both your community and your company be stronger.

**For more information on this topic and other services, contact Finley Engineering at 800-225-9716 and ask for Chad Wolfe, [c.wolfe@finleyusa.com](mailto:c.wolfe@finleyusa.com), or visit our website [FinleyUSA.com](http://FinleyUSA.com).**

