



Edison Electric
INSTITUTE

Thursday, October 19 Briefing for FCC Policy Advisors

Edison Electric Institute
Federal Communications Commission
October 19, 2017



Agenda

- Smart communities require smart connections.
- The importance of pole networks to smart communities and broadband deployments.
- Pole attachment safety and reliability concerns in the application process.
- One-Touch Make-Ready and Process Improvements.
- Joint use relationships – a powerful tool to advance broadband deployments.

Smart Communities Commitment

Support the **EEI Smart Community Commitment** by working with *at least one* community in your service area to help advance its smart city goals.

- Work with that community to install, fund, or partner in one or more of the 5 areas identified below.
- Existing projects, new projects, and public announcements of specific projects will count.



Smart Street
Lighting



Smart
Transportation



Smart
Buildings



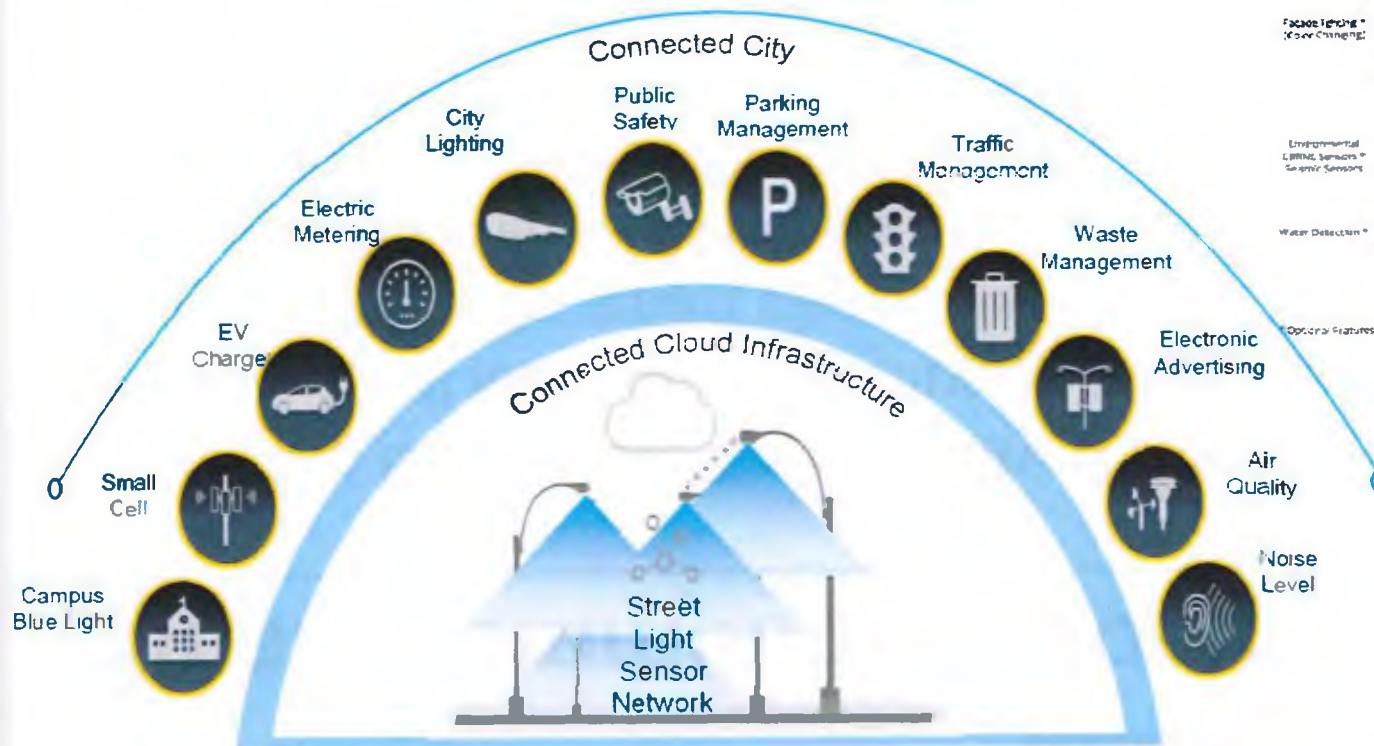
Distributed
Energy
Resources



Data Analytics
and Intelligent
Services

More is Coming Quickly: This is not Just a Communications Question

- Cities and towns will look to cut costs, enhance safety and ensure communities are vibrant and appealing for economic development.



Consumers are Driving the Need for Massive Communication Density

- The communications assets required for broadband deployments and smart communities are anticipated to be numerous compared to macro sites.
- The assets follow population and require an intersection of:
 - Open air, electric power, and fiber backhaul.
 - Poles infrastructure helps communications infrastructure achieve scale, speed, and cost.
 - Significant cost/revenue is at risk for all.



Differing Goals of Communication Companies and Electric Utilities Can Create Conflicting Objectives

- Speed to market
- Priority service
- Minimize Cost
- One size fits all rules
- Worker & Public Safety
- System Reliability
- Minimize Operational Impact

Smart Infrastructure Requires Smart Deployment

- It requires greater collaboration to achieve mutual benefit.
- Stakeholders like municipalities have critical priorities, like aesthetics, for economic development.
- Electric assets can and will be used for multiple other interests beyond communications: security, sensors, cameras, traffic management, etc.
- Both networks must be safe and extremely reliable!

Perception



Reality



Understanding Distribution Pole Design

Electric Supply Space

- Amount of Space Dependent on Needs of the Electric System
- Types of Construction Vary (Horizontal vs Vertical)

Communication Worker Safety Zone

- There Are Few Simple Distribution Poles
- Each Pole is Designed to Meet the Needs of the Distribution System

Third Party Space

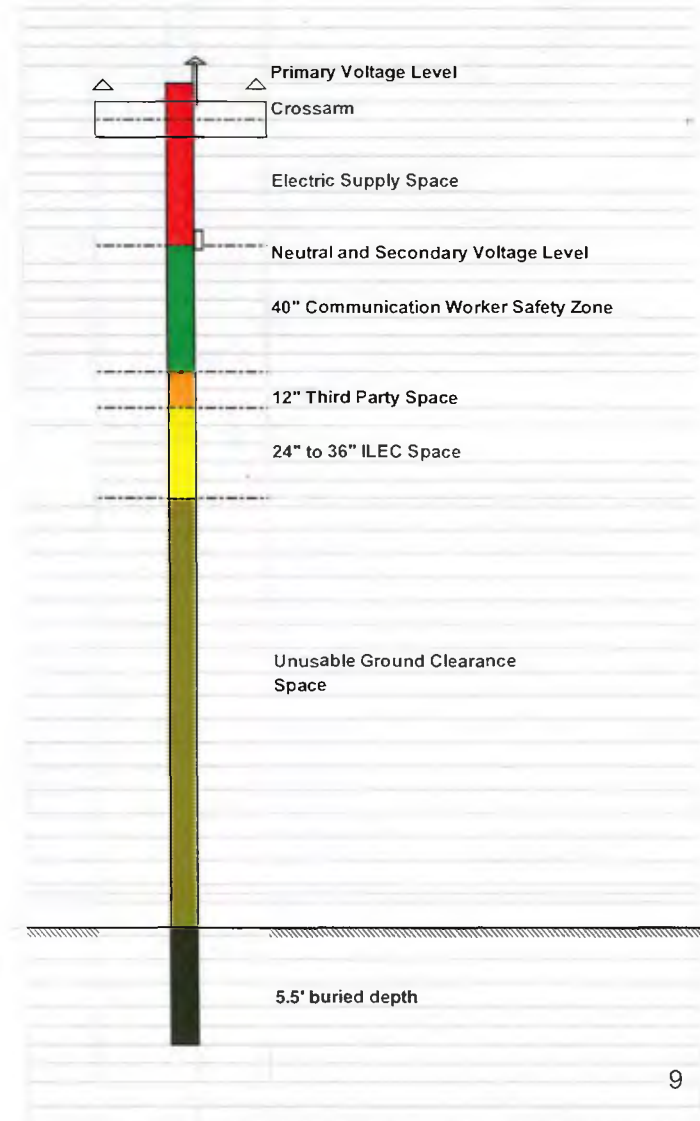
- 12" Separation Between Attachers

ILEC Space

- Space Allocation Dependent on Joint-Use Agreement

Unusable Ground Clearance Space

- Only Unusable for Pole to Pole Wireline Attachments
- Used Very Frequently



Safety

- The electric system poses inherent hazards
- Nothing is more important than the safety of workers and the public
- Unique skills are required
- Compromising time can compromise safety
- Nothing related to accommodating pole attachers should compromise safety



Communications Contractor \neq Power Contractor



Reliability

Electric distribution systems are exposed to a variety of environmental conditions



Ice Loading



Wind



Reality: These Are Not “Pizza boxes”

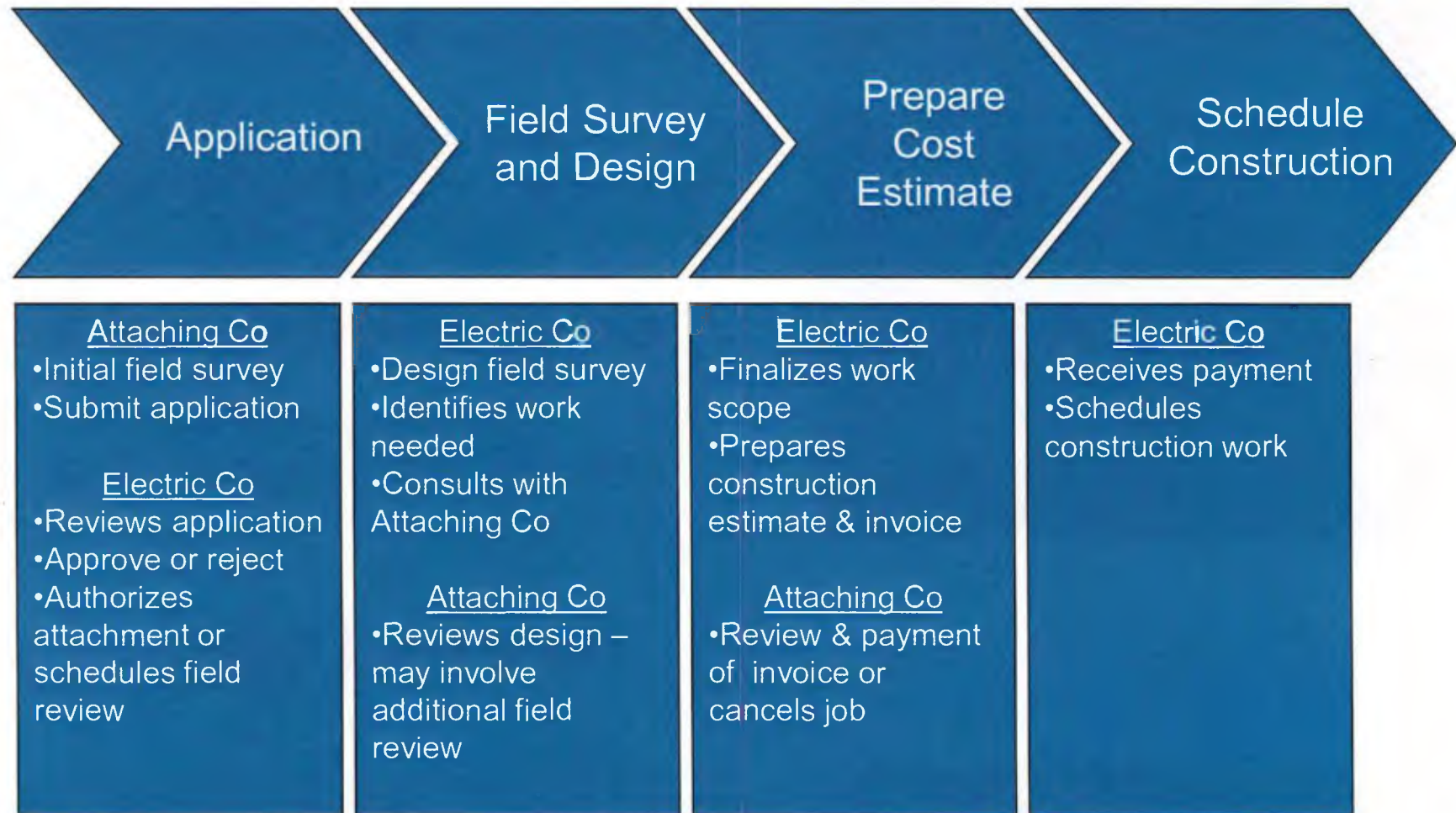




Safe Reliable Distribution Systems Require Rigorous Design

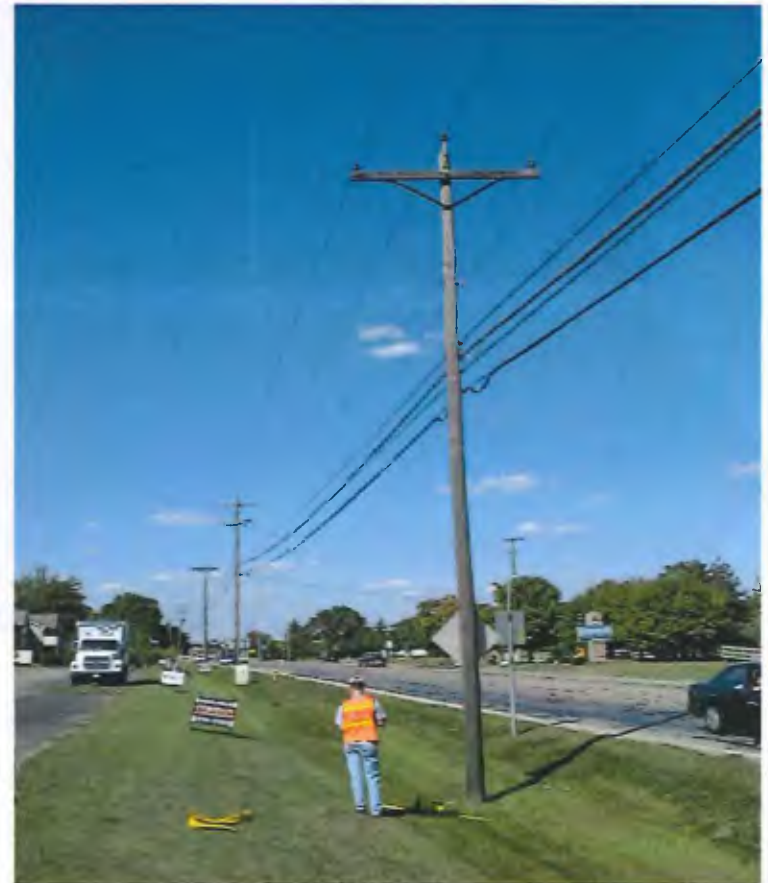
- Each electric company designs their system based on the environment where they operate.
- The NESC only establishes minimum level standards for safety.
- Many utilities are under state regulated reliability standards established by their PUC.
- Accommodating pole attachments must be done in a way that does not compromise safety or reliability.

Attachment Design Steps



Field Survey

- Proper and thorough front end engineering is essential
- Each site must be visited in the field
- Online databases don't remove the need to perform field visits
- Compromising engineering time can result in safety and reliability risks
- Each job is unique and requires a unique Solution



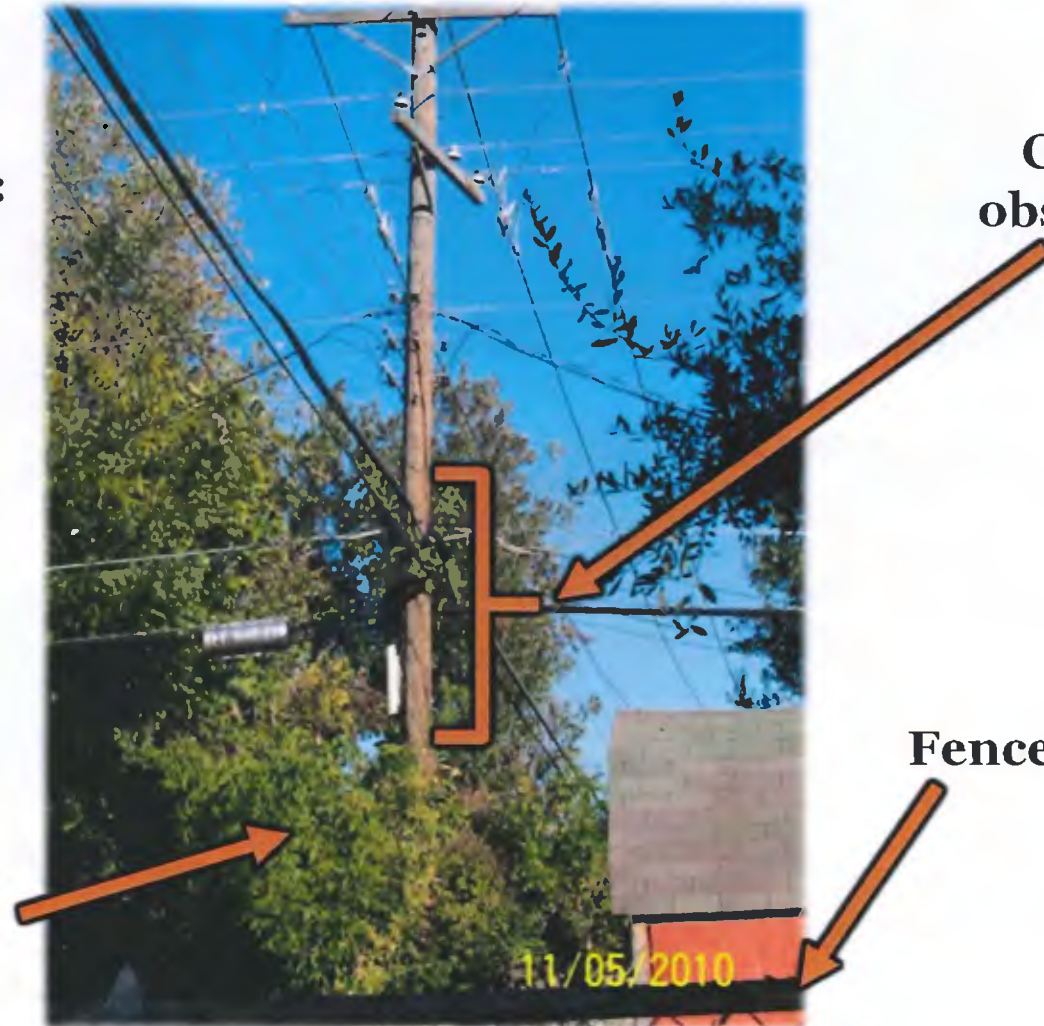
Timeframe to Complete Make-Ready



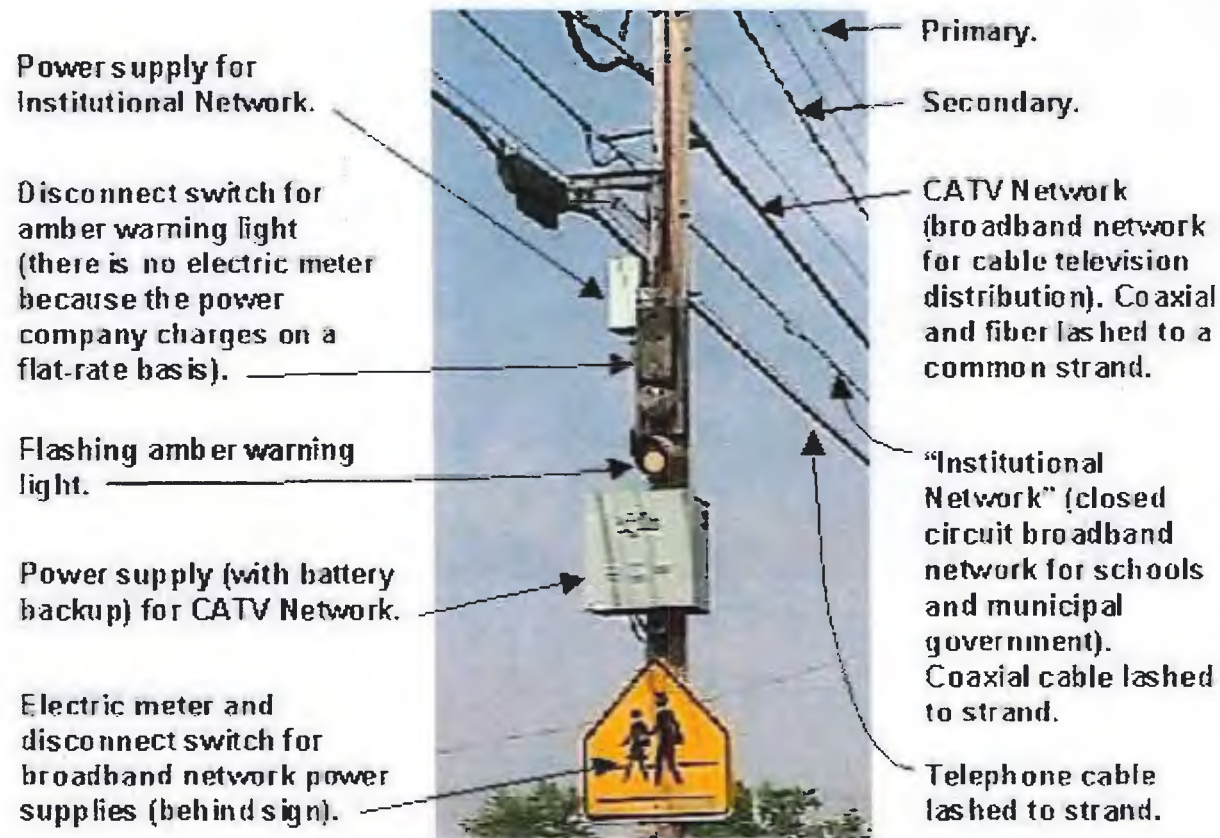
Reality: Location Matters

**Backyard Access Only:
Must Climb Pole**

**Vegetation, Tree
trimming
required**



Rearrangements are Complex and Labor Intensive



Sun Prairie, Wisconsin, 1998

Example 1

Safety Violations Impede Process



- **45 Day Application Review + 14 Estimating Period**
- **Communications Infrastructure Expanding at Record Pace**

Reducing the 59 day permitting cycle to analyze and design new attachments would be detrimental to the existing infrastructure.

A typical electric company already manages very substantial numbers of attachments on poles today.



With **pole space at a premium**, it's imperative to perform sound engineering analysis to ensure public safety, system reliability and efficient use of space.

- National Electric Safety Codes (NESC) and other state and local building codes must be adhered to. **Public safety is paramount.**
- Limiting design requirements would lead to **unauthorized attachments, pole overloads and clearance violations.**
- 45 days to conduct a comprehensive evaluation for a new utility pole attachment is **reasonable and necessary for public safety and system reliability.**



One-Touch Make-Ready

- Delays in getting existing communication attachers to relocate is the **single largest** contributor towards delayed deployment.
- A One-Touch Make-Ready (OTMR) solution for work in the communication space will speed up broadband deployment
- OTMR must be limited to the communications space
- Electric utilities should not be required to pre-approve contractors that work in communications space.

Process Recommendations

Timelines

- The FCC should not reduce current timelines.
- Proper engineering must be done to ensure safety and reliability.

Pole Construction Issues

- Safety standards are not unreasonable and are set by a variety of other regulators, state and local laws, and industry best practices.

Overlashing

- Each utility needs to establish what level of review is necessary for overlashing.
- Strand mounted wireless devices should not be considered overlashing.

Data Disclosure

- Pole and conduit networks are critical energy infrastructure and should remain non-public and closely guarded.
- Web-based databases are not feasible and do not eliminate the need for field visits and unique estimates for each job.

Joint Use Relationships - A Powerful Tool to Advance Broadband Deployments

- Joint use relationships with electric companies were developed to efficiently utilize pole networks.
- Both parties agreed to ALL the terms and conditions of the agreement.
- Both parties agreed to share the cost of a single network of poles instead of building redundant pole lines – which saved both parties money.
- Agreements are typically premised upon target ownership ratios (50/50, 45/55, 40/60).
- If one party owns more than its target ownership %, the other party makes an adjustment payment to offset the additional ownership costs.

Joint Use Relationships Give ILECS Different Benefits Than Competitors

- Facilitates deployment due to agreements provide ILECs with reserved space on electric poles and minimal or non-existent make-ready
- ILECs already have space on poles in rural America – what is stopping the deployment?
- Further interference in these long standing contracts by the FCC will hamper broadband deployment
- Without the benefit of joint use agreements, ILEC deployments will slow to the pace of their competition and increase the demand on pole attachment make-ready for all stakeholders.

Other Joint Use Benefits

- Contract Issues:
 - There is no term for rate/foot in a joint use agreement.
 - Both parties have allocated space on a pole.
 - Both parties can make multiple attachments.
 - Both parties allowed to use more than allocated space.
- As a result, there is virtually no make-ready in this arrangement.

A New Direction

- As the demand for scarce resources increases, so should the price to attach mandatory wireline attachments
- Pole rates are not a significant factor in broadband deployments. This is illustrated by the fact that there is continued deployments in metropolitan areas and a need to incent deployments in rural areas.
- In cases where the pole owner was treated as partner, deployments have gone much smoother.

Wireless Attachments vs. Wireline Attachments

- Wireless should be treated differently than wireline and not as a form of wireline in the rates and rules.
- This is a proverbial “square peg in round hole” problem.
 - FCC’s rate formulas – particularly the Telecom rate formula – presume only wireline attachments.
 - The exercise of trying to apply the wireline rate to an antenna causes confusion at best and anti-competitive results at worst.
- Almost all antenna designs put ancillary equipment in the “unusable space.”
- Small cell and other wireless attachments should be treated more like colocation on towers.
 - Wireless rates on electric distribution poles should be \$1000 per pole at minimum

Rate Recommendations

- ILEC rate recommendations:
 - Take no further action beyond what the 2011 Order.
 - If anything, the FCC should consider reversing this part of the 2011 Order.
 - ILECs have had more than six years to “take their shot.”
 - The potential for further disruption in settled contract expectations would be disruptive to broadband deployments.
- Wireline rate recommendations:
 - Returning the mandatory rate to the Telecom Rate as originally envisioned by Congress would incent pole owners to be engaged with the result of greater benefits on balance to facilitating broadband deployments.
 - FCC should not consider further reductions to the rate.
 - This would be “more of the same.”
 - Keeping further restrictions on the providers of pole space is not the solution.

Takeaways

- EEl is committed to smart communities built on smarter energy infrastructure that leverage the power of data and technology to improve sustainability, spur economic development and help drive efficiencies and enhance the overall quality of life for their citizens.
- The growing interdependence between the communications infrastructure and the smart electric grid can lead to a more reliable networks for both or impede both depending on how they are executed.
- Smart infrastructure deployments require integrated platforms that move beyond the traditional discussion of pole attachments.
- Electric company assets are at the unique nexus of assets and stakeholders.
- Smart infrastructure deployments most need policies that promote collaboration, innovation, and provide incentive to parties to act.
- Enabling economic forces to act will provide the solution and the incentive for stakeholder engagement to facilitate smart infrastructure deployments.



Questions?