



UTC 5G, Broadband & Small Cell Workshop: What You Need to Know

November 6-8, 2019

Hilton Franklin Cool Springs, Franklin Tennessee

Final Program

Wednesday, November 6

Optional Training Session (**additional fee**)

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|---------------------|---|
| 12:30 – 5:00 | Registration |
| 1:00 – 1:15 | <p>Fiber and RF Fundamentals in the 5G World</p> <p>This brief introduction will show how fiber and RF safety should be considered together in the 5G world. In today's design most small cell installations will require a fiber back haul. When working in the space with fiber and radio frequencies, it will be important that we make sure our workers are safe.</p> <ul style="list-style-type: none">• Sheila Wells, Nashville Electric Service |
| 1:15 – 3:15 | <p>Fiber Design Training</p> <p>In this session, the presenters will discuss how fiber is used in the 5G world. The basics of fiber will be covered along with the optimal fiber design in a high capacity environment. This training will include hands-on use of fiber tools that AFL will bring to the session.</p> <ul style="list-style-type: none">• Jacob Parton, AFL• Tom DePaolantonio, AFL• Paul Thompson, AFL |
| 3:15 – 3:30 | Break |
| 3:30 – 5:30 | <p>RF Fundamentals Training</p> <p>This class will expose the attendee to the basic fundamentals of RF when working in an RF environment. The topics covered in this class include but are not limited to 1) RF Basics, 2) RF Emissions and 3) Safe Zone tools.</p> <ul style="list-style-type: none">• Anthony Suppa, PSEG• Tyler Ekwel, GE |
| 5:30 – 6:00 | <p>Summary of the Day</p> <ul style="list-style-type: none">• Darren Farnan, United Electric Cooperative |

Thursday, November 7

7:00 – 8:00 Registration and Breakfast

8:00 – 8:30 Overview and Welcome

Welcome to the conference, overview of UTC's Utility Broadband and UtiliSite Committees, followed by highlights of UTC's 5G White Paper.

- Greg Angst, CenterPoint Energy, Chairman of the UTC Board of Directors
- Sheila Wells, Nashville Electric Service
- Darren Farnan, United Electric Cooperative

8:30 – 9:30 Utilities & 5G / Broadband / Small Cells – the reality of what is coming

This session will provide the attendee with an overview and introduction to the 5G / Broadband / Small Cell environment. The attendee will have access to crucial information to prepare for business and survival in the 5G / Broadband / Small Cells environment.

- Mike McGill, ikeGPS (Moderator)
- Kenneth Hill, Crown Castle
- Callan Kirschner, Ericsson
- Matt Mangriotis, Cambium Networks

9:30 – 10:30 Why Fiber is the Right Choice

Are you hesitating to deploy fiber because of concerns that you will be just enabling competitors to enter your community and take your customers? This session will explain why this is unlikely to happen and why, even with so-called next generation technology on the horizon, you cannot afford to wait to meet the broadband needs of your consumers. Hear from rural, urban and middle mile utilities on why they decided to move forward with their own fiber deployments and how they expect the competitive landscape to impact them.

- Carl Meyerhoefer, Calix (Moderator)
- Eric Fugett, Nashville Electric Service
- Darren Farnan, United Electric Cooperative
- Colin Scott, Momentum Telecom

10:30 – 10:45 Break

10:45 – 11:45 Fiber Engineering

This session is a continuation and expansion of the Fiber Design Training. The presenters in this session will discuss current tools, products, techniques and processes used in the 5G/Small Cell environment along with challenges and solutions.

- Sheila Wells, Nashville Electric Service (Moderator)
- Gary Vondrasek, Jacksonville Electric Authority

- Paul Thompson, AFL
- Bill Hawk, TRC Companies

11:45 – 1:00 Lunch and Session: Hybrid Solutions – Fiber and Wireless

The presenters in this session will discuss hybrid solutions using fiber and radio.

- Sheila Wells, Nashville Electric Service (Moderator)
- Judy LeStrange, GE
- Sam Lisle, ECI Telecom

1:00 – 2:00 Regulatory Update – FCC Pole Attachment Rules

How recent regulatory actions will affect your utility's pole attachment process; utility use case on pole attachments; what matters: attachment pricing, shot clock, one touch make ready, and other issues

- Karen Flewharty, Oncor (Moderator)
- Eric Langley, Langley Bromberg
- Paul Bowman, Atonix
- Brett Kilbourne, UTC

2:00 - 3:00 Broadband Funding Programs

The FCC has recently announced that \$20.4 billion in broadband funding will become available via the Rural Digital Opportunity Fund (RDOF), with a focus on increased service to rural areas. This session will explore RDOF opportunities, then briefly review USDA and state-administered funding opportunities.

- Randy Klindt, Conexon (Moderator)
- Darren Farnan, United Electric Cooperative
- Loyd Rice, SEMO Electric Cooperative

3:00 – 3:15 Break

3:15 – 4:15 Broadband Coverage Mapping

This session will explore the current status of broadband coverage mapping, how the FCC's current coverage maps are used to assess grant eligibility, and what is being done to draw fairer maps.

- Heather Gold, HBG Strategies LLC (Moderator)
- Lee Ayers, Mid-Carolinas Electric Cooperative
- Crystal Ivey, Tennessee Department of Economic & Commercial Development
- Brett Kilbourne, UTC
- Laura Spining, NTIA

4:15 – 5:15 Regional Deployments of Broadband in Rural Environments

This session will present case studies of rural utilities that have deployed broadband services in their service territories. Speakers will be utility employees.

- Noah Southerland, FiberRise (Moderator)
- Jody Wigington, Morristown (TN) Utility Services
- Matilda Harrison, Tombigbee Electric Cooperative
- Sean McGrath, Alcorn County Electric

5:30 – 7:00 Reception

Friday, November 8

7:00 – 8:00 Registration and Breakfast

8:00 – 8:15 Welcome Back

Review highlights from Thursday's sessions

- Sheila Wells, Nashville Electric Service

8:15 – 9:15 Panel Discussion: Small Cell Revenue Sources – where is there money to be made and how to make money? (Part I)

Panelists in this session will review revenue opportunities for utilities in the areas of dark fiber, power for small cells, and metering small cells. The session will include a discussion of what a typical 5G installation will look like.

- Allan Bakalar, PeakNet (Moderator)
- Kristie Goodson, Tennessee Valley Authority
- Karen Flewharty, Oncor
- Gary Vondrasek, Jacksonville Electric Authority
- Norine Luker, Crown Castle

9:15 – 9:30 Break

9:30 – 10:30 Panel Discussion: Small Cell Revenue Sources – where is there money to be made and how to make money? (Part 2)

Continuing from the previous session, panelists in this session will review revenue opportunities for utilities in the areas of macro towers, RF awareness, lighting, and strand mounts.

- Allan Bakalar, PeakNet (Moderator)
- Anthony Suppa, PSEG
- Brian Hurley, PeakNet
- Sonny Nuñez, Crown Castle

10:30 – 11:30 Pole Attachments Case Study

Utility speakers will review its existing pole attachment processes, procedures, and standards. This session will dive deeper into utilities' approaches.

- David Chaney, Varasset (Moderator)
- Karen Flewharty, Oncor
- Keith Williams, Georgia Power
- Chris Tyler, Nashville Electric Service

11:30 – 12:00 Workshop Wrap-up

- Sheila Wells, Nashville Electric Service

12:00 Adjourn the Workshop

UPCOMING EVENTS

**UTILITY TECHNOLOGY
FORUM REGION 8, 9, 10**

Reno, NV
Feb. 2-5, 2020

REGION 7 MEETING

New Orleans, LA
Feb 27 – 28, 2020

**REGION 3 SPRING
MEETING**

Nashville, TN
March 4-6, 2020

REGION 6 MEETING

Overland Park, KS
Mar. 23-25, 2020

**UTC TELECOM &
TECHNOLOGY**

Providence, RI
May 18-22, 2020