



UTC FOUNDATION FACT SHEET

# Supporting **FUTURE** Technology And Telecommunications **TALENT** Today.

## ABOUT THE FOUNDATION

The Utilities Technology Council Foundation's (UTC Foundation) mission is to sponsor educational incentives and programs to attract, retain and support top technology and telecommunications talent to foster the future workforce in critical infrastructure industries. Our vision for the future is an abundance of skilled and passionate talent transforming critical infrastructure industries through technology.

Formed in response to the need from industry to supply highly trained engineers and technologists qualified to meet the demands of the energy industry, UTC Foundation wants to enhance the available technical and business workforce, advance telecom and technology, and facilitate strategic collaboration between industry and education.

It is an exciting time to work in the telecommunications and technology areas within utilities, and UTC Foundation aims to highlight the innovation and opportunities available to students within utilities.

UTC Foundation is a highly collaborative utility and educational partnership that hopes to produce a technical workforce, ready for the advancements in technology for the global energy industry.

The energy industry faces a workforce shortage just at this critical time when there is a need to build new infrastructure. UTC has a history of supporting our members' professional talent development and networking needs. The UTC Foundation aims to take this one-step further by encouraging students to explore telecommunications and technology within utilities as an area of focus.

## GET INVOLVED

By donating to the UTC Foundation, you will help us:

- ✔ **PROMOTE** higher education in telecommunications and technology disciplines within the utility industry
- ✔ **ENCOURAGE** research and participation by students at utility technology industry events
- ✔ **SUPPORT** students and programs aimed at utility careers

The UTC Foundation is dedicated to preparing the future generation of utility professionals who will protect the world's critical infrastructure.

## WHO WE HELP

By supporting students and educational institutions, UTC Foundation will be addressing a number of new research and technical issues supporting the growth and resiliency of the electric grid through optimizing telecommunications and IT technologies.

## UTC TEAM

Led by a Board of Directors from the utility and critical manufacturing sectors that oversees the Foundation's strategy and helps build industry relations. The UTC Foundation team is working with educational institutions to align curriculum to industry needs, assist in student projects, and identify research topics.

## UTC FOUNDATION BOARD OF DIRECTORS

Greg Angst, CenterPoint Energy  
UTC Chairman

Sheryl Riggs, Interim UTC CEO  
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## 2017 – EPIC CENTER (NORTH CAROLINA)

Cyber security as it applies to electric power / grid control systems (EMS and SCADA) and the utility telecommunications infrastructure

**Project Timeline:** August 2017 - April 2018

### OBJECTIVE:

This research project aims to build a cyber-security research testbed to:

- 1) Identify the potential vulnerabilities affecting the integrity, availability, and confidentiality of the information flow in the smart grid EMS and SCADA
- 2) Study the impacts of various cyber-attacks on the smart grid system
- 3) Investigate the practical cyber-security solutions to mitigate the damages caused by these cyber-attacks. This research object correlates with the cybersecurity requirements stated within NERC/CIP such as CIP-007-6 System Security Management and CIP-011-2 Information Protection.
- 4) White paper that summarizes the findings of all the project tasks.
- 5) Present the work either online or in person
- 6) Demonstrate the models that has been developed

## 2018 – 5G PROJECT

Investigation of 5G as a communications technology to support the Smart Grid of the Future

### OBJECTIVE:

A project in UCLA that would bring together students with researchers and professors to collectively explore and develop a set of recommendations for 5G technology in the power sector to assist the power sector towards a more modern grid.

- We would engage students through the entire process of the project from performing research to writing the reports.
- Students would get the opportunity to register for classes starting with the smart grid introductory class "Design and Analysis of Smart Grids" in Spring 2018 followed by further opportunities to take other related classes at UCLA.
- The students would get the opportunity to research communication technologies, computing, and data sent over communication systems in the context of power grid modernization.
- This highly interdisciplinary opportunity should help the students expand their horizons in terms of what lies ahead in the field of the energy grid modernization sector.

“ *The utility industry is an exciting place to work because of all the advanced technologies—we want new graduates to join us for a great career!* ”

*Kathy Nelson, Former Chair | Great River Energy*

The UTC Foundation (UTC Foundation) was formed to help solve the workforce challenge facing utilities and critical infrastructure technology providers. In the U.S., particularly, infrastructure is in need of upgrades and building more interconnectivity to meet evolving customer demands. In the near future, the pipeline of talent for this effort will be in greater demand. UTC Foundation sees this as an opportunity for strengthening the relations between the educational systems and the utilities needing the labor and leaders. With an aging workforce and technology advancements across smart systems, utilities today need to work closely with educational sources to grow the talent needed to fill job openings.

UTC Foundation's programs will support and promote educational institutions and programs that connect students with utility- and critical infrastructure-related interests. Our industry-education partnerships will unite students, faculty and industrial partners to help deliver the workforce of the future. The UTC Foundation is dedicated to the interconnection of the utility industry and education, and we will focus on programs, scholarships and the underwriting of continuing education efforts to support utility needs. By supporting students and educational institutions, the UTC Foundation will address a number of new research and technical issues and support the growth and resiliency of utilities by optimizing telecommunications and IT technologies.