

NM SMART Grid Center Webinar Series

CURRENT NSF/DOE Engineering Research Center Overview

Presenter: Kevin Tomsovic, University of Tennessee

Date of Webinar: Wednesday, April 22, 2020

Time: Noon – 1:00 PM MT

Abstract

CURRENT, Center for Ultra-Wide-Area Resilient Electric Energy Transmission Networks, is a National Science Foundation Engineering Research Center that is jointly supported by NSF (National Science Foundation) and the DoE (Department of Energy). CURRENT focuses on wide area control technologies to allow high levels of renewables into the power grid while maintaining high reliability. This talk will overview CURRENT research and emphasize the need for developing new testbeds to better understand grid modernization. Major grid changes under the new paradigm include: (a) the increasing number of power electronic interfaced devices both for renewable resources and for new loads; (b) the emerging importance of the analysis of the communication network for understanding operations; (c) a more actively controlled distribution system; and (d) new performance requirements for both reliability and resilience. The CURRENT approach uses both software and hardware environments to ensure comprehensive testing.

Speaker Bio



Dr. Kevin Tomsovic is currently CTI Professor in the Dept. of Electrical Engineering and Computer Science at University of Tennessee, and director of CURRENT, a National Science Foundation and Department of Energy Engineering Research Center. He received the BS from Michigan Tech. University, Houghton, in 1982, and the MS and Ph.D. degrees from University of Washington, Seattle, in 1984 and 1987, respectively, all in Electrical Engineering. From 1992-2008, he was a Professor at Washington State University in the Department of Electrical Engineering and Computer Science. Visiting university positions have included National Cheng Kung University, National Sun Yat-Sen University and the Royal Institute of Technology in Stockholm. He held the Advanced Technology for Electrical Energy Chair at Kumamoto University in Japan from 1999-2000 and was a Program Director at the National Science Foundation in the Electrical and Communications Systems division of the Engineering directorate from 2004-2006. He is a Fellow of the IEEE.