

Electric Power and Power Electronics Institute

WEEKLY SEMINAR SERIES – FALL 2015

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TRANSMISSION PLANNING IN REMOTE AREAS

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Abstract

Transmission systems serving load in remote areas can face power transfer constraints, poor voltage regulation, and significant project costs. These problems become exaggerated as the loads become more remote. When planning remote areas of a power system, it becomes increasingly important to understand the operation of power systems and to make good compromises. This case study will examine a recent transmission planning study Oncor performed for a remote area of the system. Power transfer constraints, poor voltage regulation, and potential voltage collapse are among the issues encountered during the study and will be discussed, along with some proposed mitigations.

Biography

Christopher Weldy is currently a Senior Engineer with Oncor in the System Planning group. His primary responsibilities include steady-state and dynamic planning for Oncor's transmission system. Before transferring to System Planning, he worked as an engineer in Oncor's System Protection group, where he designed protection and control systems for transmission and distribution stations. Christopher graduated from Texas A&M in 2009 with a BSEE, and he graduated from Georgia Tech in 2015 with an MSEE.