

## Introduction to the Power Grid

14 July 2017 – ME Lecture Hall – 1300

### Mr. Erik Hale

Project Director, Power Engineers, INC.



Mr. Erik Hale

### Abstract:

Mr. Erik Hale will deliver a presentation on the state of the Western Electrical Coordinating Council (WECC) transmission system, commonly known as the Western Interconnect, or simply the Grid. His presentation will start with a look at the components and extent of the WECC system and how it operates on a daily basis. There will be deeper explanations of the function of circuit breakers and transformers which provide the grid's core functionality. Mr. Hale will conclude with an insider's perspective on various Smart Grid initiatives; an explanation of micro-grids with a focus on DoD applications; and an exciting look at recent developments in large scale battery energy storage systems and renewable generation.

### Biography:

Mr. Erik Hale is a Project Director with POWER Engineers, Inc. in their Portland, Oregon office. In that role he leads a group of Project Managers and Engineers as they execute a wide variety of substation, transmission line, and distribution projects for the electrical utilities in the West. Mr. Hale is a former Air Force officer with 25 years of consulting experience with the electrical transmission grid. He earned a bachelor's degree in geology from UC Santa Barbara in 1982, and then, after joining the Air Force and surviving officer training, he earned a bachelor's degree in Electrical Engineering from Auburn University through the Air Force Institute of Technology. Mr. Hale is a registered Professional Engineer in Idaho and California, and sits on the Industry Advisory Board for the department of Electrical and Computer Engineering at Portland State University.



NAVAL  
POSTGRADUATE  
SCHOOL