

## Ross Guttromson

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(o) 505-284-6096  
(m) 505-239-1872  
rguttro@sandia.gov

### **Sandia National Laboratories (2010-Present)**

#### **Manager, Electric Power Systems Research**

- Responsible for line functions of a professional technical and administrative staff conducting research on energy storage economics, policy, integration, demonstration and testing, and transmission level operations and planning.
- Developed and grew transmission R&D portfolio from \$0M to \$5M. Total program about \$10M and growing.
- Routinely work across internal company boundaries to support multiple internal clients.
- Very comfortable managing up, down, across and comfortable with multiple bosses.

#### **Representative Activities at Sandia**

- Growing programs in Smart Grid, Micro Grid, Markets and Transmission R&D
- Leading a team to develop a wholesale market structure for a comprehensive energy and ancillary service product that will avoid bias against any existing or emerging resource. Industry Advisors: PJM, FERC, ISO-NE, KEMA.
- Managing the development of advanced market management system optimization (stochastic SCUC and SCED) in collaboration with Alstom and ISO-NE.
- Developing a Sandia program on resiliency for T&D operations and planning. Currently working with Public Service Electricity and Gas (New Jersey). Program is growing quickly.
- Working with BPA to develop a PMU based wide-area control for system small signal stability
- Conduct several renewable integration and storage integration studies; HECO, MECO, NV Energy, Southern Company, WECC.
- Electricity Policy Studies with FERC and State PUCs

### **Pacific Northwest National Laboratory (2001-2010)**

#### **Manager, Electric Power Systems Engineering**

- Responsible for line functions of a professional technical research staff.
- Responsible for programmatic aspects of Renewables Integration. Responsible for DOE clients and Industry (utility) clients. Responsible for program strategy, and business development activities.

#### **Representative Activities at PNNL**

- Led the development of the Electricity Infrastructure Operations Center (<http://eioc.pnl.gov>). Organized and managed demolition, construction, contracting, staffing, technology integration and commissioning of a new 2700 square foot research lab facility in a one year time frame, within budget. Managed installation of Alstom EMS system.
- Led a Balancing Authority Consolidation study for several BAs in the Western Interconnection
- Led multiple grid reliability, stability, and renewable energy integration projects
- Led human factors research for grid operations
- Managed the development of electric power grid software solutions grid planning, transmission reliability and renewable resource integration, including the beta version of GRIDLAB-D
- Researched methods to develop retail rate structures for demand response
- Led power system vulnerability assessments of the Eastern Grid and the ERCOT Grid (Texas) for DOE Office of Intelligence (*classified report*).

### **R.W. Beck Consulting Inc. (1999- 2001)**

#### **Project manager and Project Engineer**

## **Ross Guttromson**

509-528-3928

- Designed distribution substations and SCADA system upgrades.
- Performed transmission line feasibility studies and generation interconnections studies.

### **Siemens Westinghouse Power Corporation (1995-1999)**

#### **Project Manager and Generator Design Engineer**

- Electro-Magnetics and heat transfer analysis using finite-elements and other software tools.
- Designed generator stator components for generators as large as 1500 MVA
- Project manager for GenForce. This software connected disparate computational analyses to analyze the mechanical integrity of a generator under severe electromagnetic transients.
- Performed rapid technical analysis of large industrial generators needing immediate assessment to prevent loss of revenue.
- Designed and patented several unique electromagnetic enhancements to large generators

### **US Navy Nuclear Program, Submarines 1985-1991**

#### **Education**

- Executive Master of Business Administration, EMBA, 2008  
The Michael G. Foster School of Business, University of Washington
- Master of Science in Electrical Engineering (GPA 4.0), 2003  
Washington State University
- Bachelor of Science in Electrical Engineering (Summa), 1995  
Washington State University

#### **Professional**

- Board Member, Case Western Reserve University Great Lakes Energy Institute
- Licensed Professional Engineer, State of Washington
- Member of Western Electricity Coordinating Council Operating and Planning Committees
  - Former chair, WECC Variable Generation Planning Working Group
- Senior Member of IEEE
- DOE Q Clearance (TS equivalent)
- Publications and patents available upon request