



The Distribution Operations and Automation interest group, is mainly concerned with technologies and system software (ADMS, OMS, DERMS, and SCADA) that are essential for modernized operation of the grid, including the related field sensors, ICT, and enterprise IT system integrations. The program is also concerned with the requirements for the future operation of the grid in the presence of new technologies and devices on the edge of the grid, including Distributed Energy Resources (DER), the growing presence of electric vehicles, the needs of smart cities, and the services and transactions that may be offered through internet-enabled technologies.

The Distribution Operations and Automation interest group brings industry professionals together by creating a platform for organizations to network and exchange knowledge by discussing experiences, sharing technical expertise, and resolving common issues and barriers. Through the collective assessment of new technologies, vendors, and case studies, as well as the leveraging of research dollars, program members can share in investigations and initiatives at minimal cost. This is accomplished through the organization of webinars, conferences, and projects/studies to fill the knowledge gaps identified by program members.

## Topics & Issues

1. DER Integration with the Grid
2. Distribution Automation
3. Faulted Circuit Indicators and Line Sensors
4. The Integration of IT with OT
5. Building and Maintaining the Network Model

## Technical Advisor



Mr. John Fuerth has a Bachelor of Engineering Science degree from the University of Western Ontario in electrical power systems and is a professional engineer in the Province of Ontario. He has been working for over 35 years in the electric power industry, including almost 30 years in Distribution system engineering and planning. With Hydro One, he led the development of tools for the assessment of proposed distributed generation (DER) connections to the distribution system, including system impact assessments and technical interconnection requirements. He also led the assessment and planning for over 2000 MW of DER connections to the Hydro One distribution system. He worked with the advanced distribution system team to develop DMS functional requirements for the integration of DER, system planning tools, and other operating requirements. John also managed the generation connection planning department and the distribution investment planning department while at Hydro One.

## Collaborative Projects

- Example Roadmaps for Improving the Maturity of DER Management at Distribution Utilities
- Impacts on Distribution System Operations when Integrating DER
- Interfacing DMS/OMS/SCADA Systems with Enterprise Business IT Systems for IT/OT Integration in the Smart Grid
- Guide to Estimating Benefits From Smart Grid Applications: Fault Location Isolation and Service Restoration (FLISR) and Voltage/Var Optimization (VVO)
- Best Practices Guide to Utility Communications Platform Deployment in Distribution Automation

## Topics & Issues

- The integration of distributed energy resources (DER), including operating the grid in the presence of renewable energy generation, smart inverters, energy storage systems, price responsive demand response, and, the consideration other technologies on the edge of the grid, including community ownership of DER and microgrids.
- Distribution automation deployment strategy; faulted circuit indicators and line sensor application and technologies; and, the integration of utility operating systems (OT) with enterprise IT.
- Building and maintaining the network model, including experiences and suggestions for network modeling and state estimation, data governance for maintenance of the network model; and, leveraging smart meter data, AMI, and other customer information.
- Utility business transformation as required to successfully deploy, manage, and continuously improve each of the above.

## Annual Activities

- 2-Day Industry Conference
- General Meeting
- Regular Conference Calls
- 3-5 Training Webinars
- On-Demand Information Exchange
- Collaborative Project Development

\*Participation is open to Electrical Utilities.

