

Managing Extreme Events and Other Factors Affecting the Electrical Grid

IEEE PES Technical Council has organized a Late Breaking News (LBN) Session to share recent, important issues affecting our industry. As regular sessions are planned a year before the meeting, this session addresses topics of urgent interest and impact, presented by industry leaders. The main theme this year is “Managing Extreme Events and Other Factors Affecting the Electrical Grid”, addressing issues and solutions described below.

Recently, a number of extreme events have affected power grids around the world, including an increase in weather related events (hurricanes, floods, droughts, wildfires, tropical cyclones, wind and ice storms), acts of vandalism, and wide area outages and blackouts. Wide area blackouts, such as the ones in India, Southern California and Mexico, are emphasizing needs for better grid management. Societal mindset has changed and a new sense of urgency has been brought to all energy issues, including expectations for very reliable power grid operation. Regulatory bodies ask their utilities to investigate vulnerability, hardening options, and how to restore the system faster. Furthermore, as the use of natural shale gas for generation is increasing, addressing interdependency with electric power is becoming an important issue, including availability and delivery to gas power plants and planning electrical power delivery.

LBN Session, July 23rd, 8 AM – Noon

Chair: Damir Novosel, Quanta

Co-Chair: Juan Castaneda, SCE

Session 1:

Chris Root – Northeast Storm Experience and Improvements

Tom Gwaltney, FP&L – Storm Hardening and Preparedness

Gregg Lemler, PG&E – Hardening Grid against Vandalism - Metcalf Substation Event

Tom Pierpoint, PHI – Technology Innovations to Improve Response to Extreme Events

Panel Discussion

Session 2:

Vic Romero, SDG&E – Using Microgrids for Disaster Recovery

Juan Castaneda/Bob Yinger, SCE – Modeling and Simulating High Impact System Events

Cheri Warren, NGrid – Innovation in Customer Communication during Big Events

S.C. Srivastava, Indian Institute of Technology Kanpur – Lessons Learnt from Indian Blackout and Future Solutions

Panel Discussion