GE
Grid Solutions

Wide Area Monitoring Protection and Control (WAMPAC) Solutions

The complexity of the modern electrical power systems is steadily increasing with the penetration of massive amount of asynchronously connected renewable generation. This generation that is connected through inverters reduces the inertia of the Grid and significantly changes how today's power system operates. These characteristics require shortened power system response time and strategies for dealing with the grid's reduced inertia and weakened system strengths. GE's advanced wide area monitoring protection and control (WAMPAC) solutions address these challenges and enable utilities to have a reliable, stable, and green power system.

WAMPAC solutions address the challenges of connecting renewable resources by integrating distributed controls that respond in real time and by providing system operators with situational awareness needed to respond to power system disturbances. These WAMPAC solution provide cost-effective methods to improve resiliency, reliability, and security of integrated grids.

How WAMPAC solutions work:

- Utilize sensing and monitoring of power system characteristics at many points across the grid.
- Communicates measured characteristics with all distributed and centralized monitoring and control locations.
- Deploys distributed algorithms for enabling fast control to isolate and react to localized events.
- Provides enhanced visualization for real-time situational awareness.

Why GE?

Complete end to end solution

From plant measurement to control room monitoring & centralized control range of solutions available from analysing, visualization, monitoring, and control.

Application domain knowledge

Applying our knowledge and perspective to resolve limits and risks in the power systems combining experience of substation protection and control, telecommunication, and centralised power systems management.

Global center of excellence & regional capability

Engineering, project management and execution capabilities of CoE and regional teams to manage and execute projects from small to large scale. Many years of installed base experience of projects covering end to end providing operational efficiency, reliability, and security for the power systems.

Key Benefits

- Enabling secure renewable integration in the Grid
- Fast & reliable actions based on wide area and accurate information ensuring grid stability
- Real time grid actions that are proportional to the size of the event

GE WAMPAC Solutions

System Oscillation Damping

Detecting and actioning on multiple signal oscillation types

- Inter-area Oscillations
- Forced Oscillation

Mitigating Reduced Inertia

Fast and coordinated frequency response using real time measurement of phasors

- Large local rate of change of frequency
- Large frequency excursions
- Network phase angle divergence

Managing Weak System Strength

Providing support for renewable energy generators with power electronic which creates weaker system strength

- Voltage stability issues
- Control stability issues
- Power electronic inter-oscillations

For more information please contact
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