The FRCC GMD Experience

SWPC Workshop

An Industry Perspective

April, 2013
Outline

• Who we are
• What we do
• 2012 GMD Statewide Exercise
• Current GMD Efforts
• Future GMD Efforts
• Potential Path Forward
FRCC Region

- 1 of 8 that make up NERC
- Established in 1972
- Peninsular system
- Multiple players – cities- IOUs – co-ops – 100 to 21,000 MW
- Interdependence
- FCG/SERC then FRCC Region
- 2003 NE Blackout
- 2005 EPA / NERC / ERO
- FRCC became 1 of the 8 NERC Regions with DA form NERC / FERC

- Mandatory Standards
FRCC - 2 Divisions

Regional Entity (RE)

Member Services (MS)

Delegated Authority

Reliability Coordinator (RC)

Planning Authority (PA)
FRCC Reliability Coordinator (RC)

- est. officially 2001 voluntary

• 1 Adjacent RC (Southeastern)
• Clear balancing obligation (interface)
• Radial system has always necessitated close coordination
• Hierarchy of control and reliability monitoring
• 24/7 out of Miami – contract with an Agent
• 1 of 16 – in North America
• Single Region – single RC
Florida Energy Assurance Plan – the start

• Early on - Lack of GMD information – FL not a GMD Hotspot
• NERC HILF work – GMD TF established
• Concept started in 2011 – FDEM DOE EM preparedness grant
• Statewide Workshops geared toward GMD aftermath
• Regional workshops (EM Regions) (~380 )3 months – 21 sessions
• 3 Day Exercise (~100)
• E managers, law enforcement, public health, industry stakeholders (utility and telecomm), SWPC
Florida Energy Assurance Plan – the exercise

• Structured training on GMDs – potential impacts, what, why and how we detect
• Smaller Regional sessions provided widespread coverage and availability of GMD awareness training
• Academia / GMD SMEs could provide direct input and expertise to participants
• Everything you wanted to know but were afraid to ask
• 3 day Exercise – 1 day of GMD awareness training, SWPC and Regional Grid operations - 2 days of structured GMD scenario training
• Facilitated response discussion – inject - response – discussion -
Florida Energy Assurance Plan – the results

• Tremendous opportunity – provided the “Florida” community with GMD awareness

• Brought together a very diverse group of folks that would be required to work together in any hazard response

• Scenario exercise allowed a back forth that uncovered interdependencies / a better understanding of all E-plans FDEM/ utilities / telecomm and county level preparedness plans and needs

• Local GMD SME (Dr Turner) – provided a great bridge of knowledge between theory and potential impacts as did Metatech and SWPC
Florida Energy Assurance Plan – the results

• Provided a “targeted” forum to go over grid ops and realistic response to utility threats
• An effective FDEM/DOE partnership at improving FL E Response
• GMD Training continues at FRCC
• Fall RC Training / Spring seminars
• Looking to better “institutionalize” GMD knowledge and NERC GMD TF work within FRCC – a parallel - cold weather prep.
FRCC GMD Vulnerability Assessment

- RFP for “Regional” GMD vulnerability assessment
- Help quantify and scale the GMD threat for FRCC
- Give FRCC entities a better information to incorporate in their modeling efforts
- Determine if additional equipment monitoring is warranted
- “Institutionalize” and build on the NERC GMD TF work
- Make sure we understand the potential impacts to Florida of a 1 in 100 year storm
- Make sure our GMD knowledge base is better incorporated into our operational processes.
Potential Path Forward

• Continue to support the NERC GMD TF Work
• Support continued GMD awareness training and “institutionalizing”
• Refine and standardize GMD modeling methodology for power systems analysis
• Communicate – communicate – communicate –
• Support continued outreach across all stakeholders and SMEs – must understand each others problems to identify continued research and cost effective solutions
• Support improving direct comms between RCs and with SWPC forecasters
• Support improving SWPC forecast granularity and targeting – ex. Regional e-field forecast – forecast with geographic gradient of potential impact, etc
  – Today’s forecast granularity may send mixed signals to stakeholders
  – cry wolf effect
  – Hurricane “Cone” forecast - don’t mobilize the East coast for a storm in the Gulf
Questions?