



# **The FRCC GMD Experience**

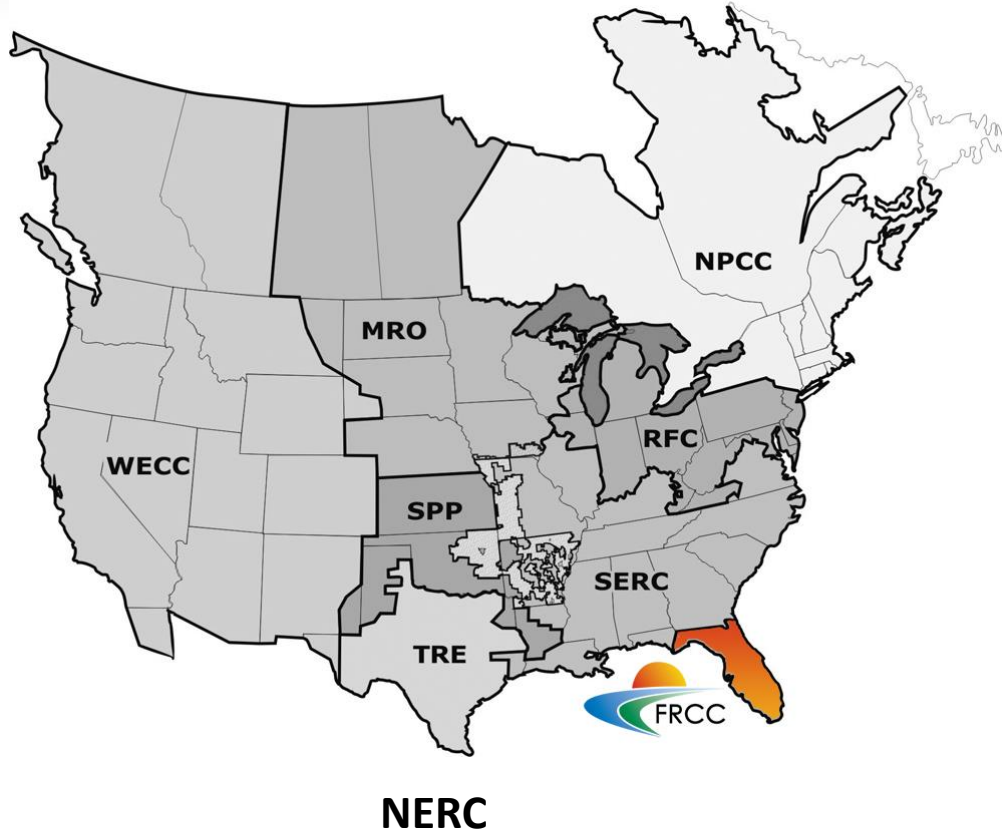
## **SWPC Workshop**

**An Industry Perspective**  
**April, 2013**

# Outline

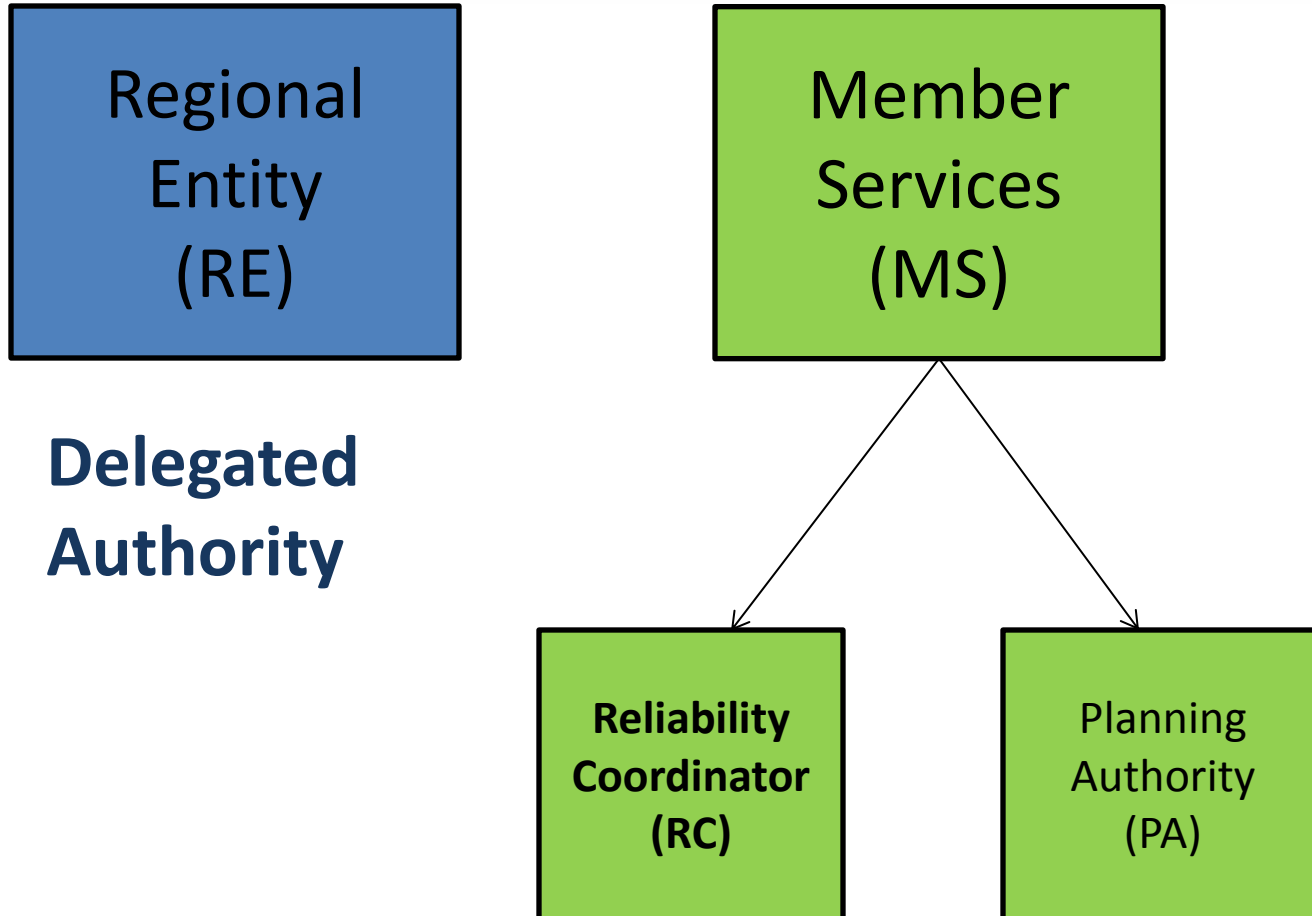
- Who we are
- What we do
- 2012 GMD Statewide Exercise
- Current GMD Efforts
- Future GMD Efforts
- Potential Path Forward

# 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

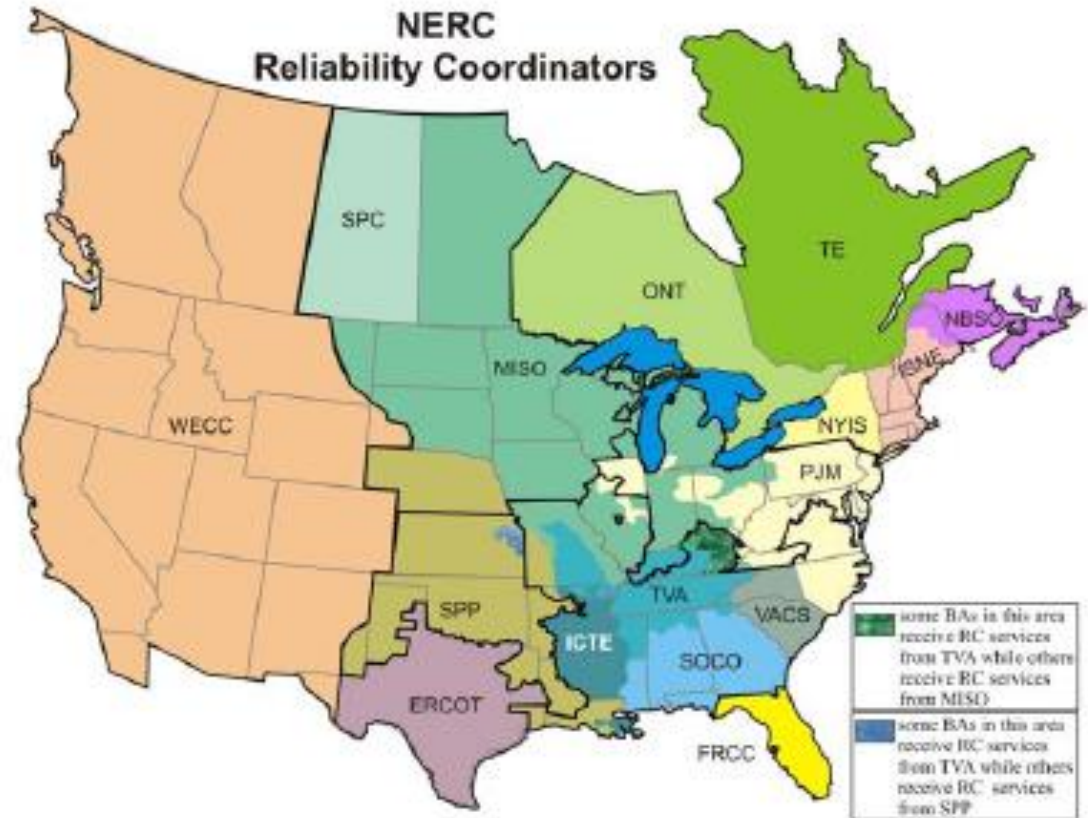
# FRCC - 2 Divisions



# 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



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# 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?