NERC and RFC
BES definitions
NERC BES definition

• Goal continent wide gauge to apply the standards
• Allows for non-discriminatory interpretation, audits etc.
• Definition coupled with ROP changes to allow for classification of a particular facility that doesn’t fit the continent wide standard
• NERC has the final say regarding classification
RFC definition

• Is similar but differs in several areas
  – NERC specifically states the definition does not include local distribution, the RFC definition is silent on this aspect

• Other major differences include:
  – Generation resources
  – Radial lines
  – Local networks
  – Protection and auxiliary equipment
RFC/NERC differences

- Generation resources NERC def. includes
  - Black start resources identified in the Transmission Operator’s restoration plan Regardless of connection voltage
  - Provisions for dispersed generation system
  - Behind the meter generation
- RFC does not specifically address these types of generation
RFC/NERC differences

- Radial Lines
- NERC excludes radial facilities serving load, RFC does not.
  - RFC has interpreted that tapped radial facilities are included in the BES based upon the fact that “the failure of the radial facilities will adversely affect the reliable.”
RFC/NERC differences

- Local networks
- NERC makes provisions for a LN, RFC does not
  - NERC defines a local area network as Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN’s emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system.
- Similar to a radial facility serving load an LN is excluded from the BES
RFC/NERC differences

• Protective relays
• The RFC definition explicitly includes Protective relays or other control devices in the BES for application of NERC PRC-series Standards.
• The NERC definition does not as they are specifically stated in certain NERC PRC Standards.
NERC Phase II Work

• In addition to the basic definition approved by the FERC, certain items will be addressed in phase II of the project
  • These items include defining
    – Attributes of the Local network
    – Reactive device thresholds
    – Certain Generation thresholds
• FERC has issued NOPR 773 addressing the BES definition
Questions?