Primary Frequency Response Sr. Task Force (PFRSTF)
PJM Draft Proposal

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Primary Frequency Response Requirement

• Individual resource *capability* requirement to provide PFR
  – Droop not to exceed 5%
  – Deadband not to exceed +/- 36 mHz
    • Consistent with Eastern Interconnection

• All resources must provide PFR to support system restoration

• Plant level Digital Control Systems (outerloop controls)
  – Utilize locally sensed frequency as input in control systems
  – Digital control systems set up to allow unit to provide PFR

• Governor equivalent Mode of Operation
  – Utilize locally sensed frequency as input in control systems
  – Governor equivalent mode of operation must allow unit to provide PFR
Primary Frequency Response Requirement

- No “Headroom” or “Footroom” requirement
- Add clarifying manual language to M-14D
  - PFR is bidirectional
  - PFR is automatic response to local frequency measurement
Primary Frequency Response Required Resources

• Applies to all small and large, new and existing resources
• Exceptions
  – Nuclear generation
  – Documented exception process similar to PLS
• Measured individual unit performance during selected frequency events
  – Reserve right to report non-performance to FERC
Primary Frequency Response Compensation

- 2 Possible options
  - Cost of Service structure
    - Similar to Reactive Service (OATT Schedule 2)
    - Resource owner files with FERC for cost recovery
  - Capital investment already included in CONE
    - VOM is included in CP offer

- Telemetry requirements
  - Existing resources follow M-01 requirements (10 second scan)
  - New resources require 2 sec scan rate
  - PMU data required for new resources > 100 MW (M14-D, Sec 4.3)
• Units providing regulation are not expected to provide PFR during hours that unit is assigned regulation
• Pseudo-tied resources are expected to provide PFR
  – Dynamically scheduled resources follow rules of Native Balancing Authority
• Units providing synchronized reserves are expected to provide PFR
Additional Discussion Needed

• Details of “exception process”
• How to measure individual unit response
• Details of compensation structure
• Handling of PFR during Performance Assessment Hours
• Treatment of DER Resources

• Proposal is a first draft
• PJM working with IMM to come to agreement