



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



Dave Souder  
Director, Operations Planning  
October 27, 2017

- 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

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

- 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

- 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

- 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