



Primary Frequency Response Sr. Task Force Update

Glen Boyle

Manager, Operation Analysis &
Compliance

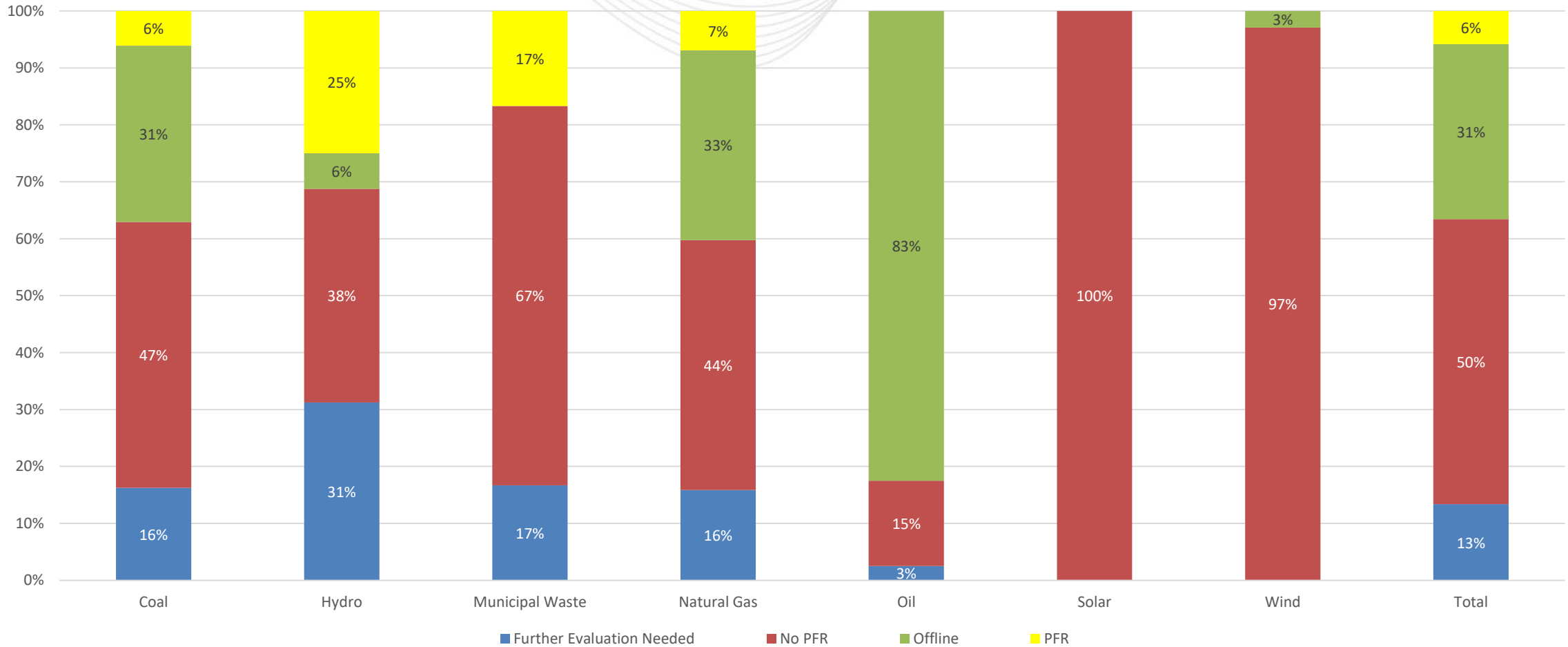
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Markets & Reliability Committee

- MRC endorsed PFRSTF to go on hiatus for one year
 - PJM to continue to monitor unit PFR performance during 2019 using criteria described in PFRSTF and documented in PJM Manual 12
 - PJM provide quarterly updates to Operating Committee on 2019 PFR performance
- In Jan 2020, the MRC will consider next steps for PFRSTF based on performance trends and 2019 reporting

- Evaluated 583 units (50MW and greater) for 10 events in 2019
 - Small number of resources are observed to consistently provide PFR to the system
 - A large number of resources are off-line during the selected events
- Performed outreach on a number of units, working with GOs to better understand expected performance from their units

PFR by Fuel Type - Units > 50MWs



- Majority of the units have the *capability to provide* primary frequency response (have governor controls)
 - Some resources have made modification to control system to provide PFR through this effort!
- Very few are observed to *provide* primary frequency response during the selected events for the following reasons
 - Outer loop controls, sliding pressure operations, & temp. control
 - Droop & deadband (DB) setting (some units as high as 200mHz DB, others setting droop to 5% but not getting a realized 5%)
 - No headroom on CC due to configuration or duct burners
 - Telemetry discrepancies (evaluation measurement period)

- Monitoring NERC activities around Primary Frequency Response
- The Standard Drafting Team is working on Phase II of BAL-003 proposed changes (reference document: [BAL-003 Standards Authorization Request](#)). Work includes:
 - Revising the Standard to address real-time aspects of frequency response, ensure appropriate functional entity applicability (potentially adding GO/GOP), and develop performance measurements
- NERC 2019 Generator Operator Survey
 - NERC and NERC Resources Subcommittee conducted a voluntary survey for Generator Operators to submit Primary Frequency Response data for their resources
 - Evaluation of results and performance are ongoing. Expecting the results to be available Q1 2020

- Keep PFRSTF on hiatus for another 6 months
 - PJM to continue to monitor unit PFR performance and provide updates to Operating Committee
 - PJM to continue monitoring industry activities around primary frequency response.
- Update to MRC in July with recommendation to continue PFRSTF efforts or sunset group.