



# BAL-003 Performance

March Operating Committee



# BAL-003-1.1 Frequency Response & Frequency Bias Setting Requirement 1

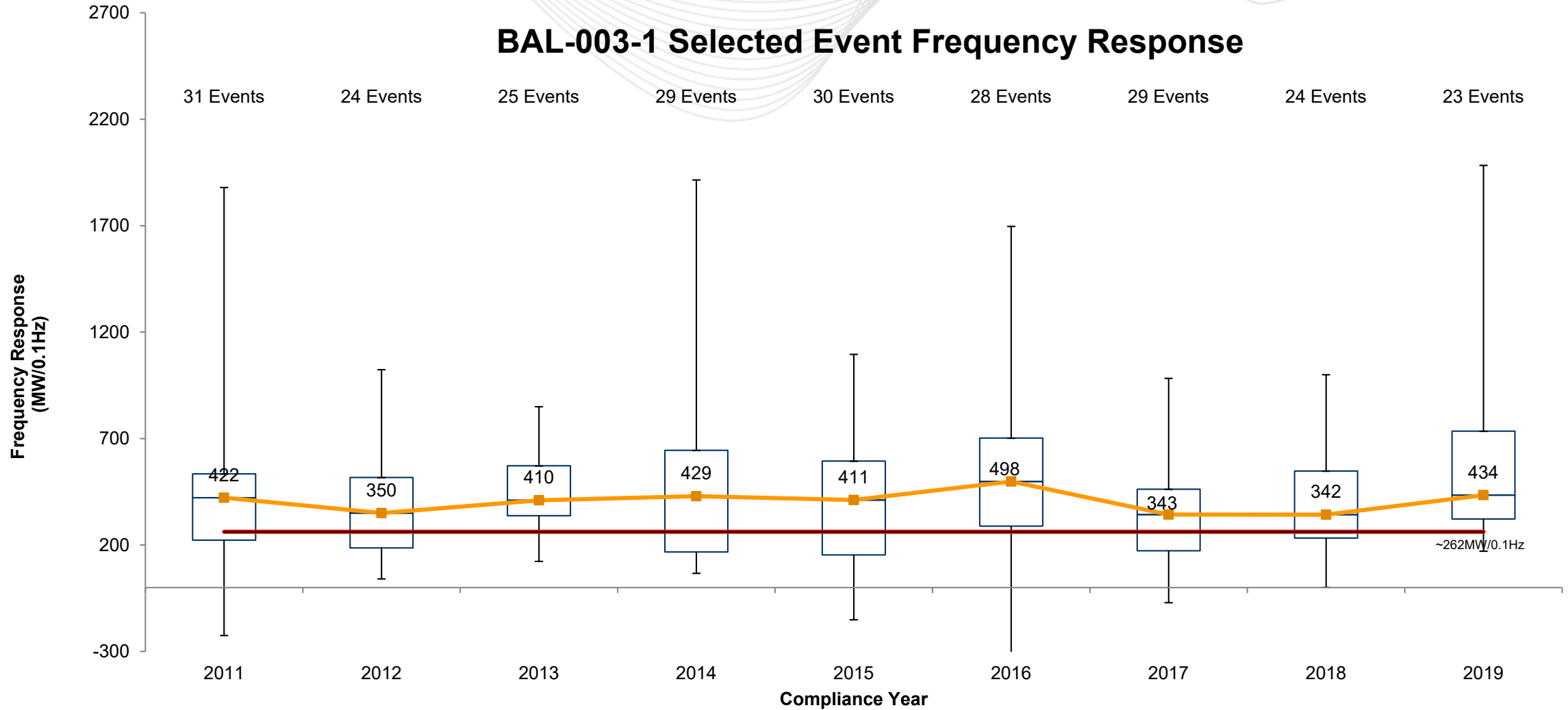
- **Requirement 1:** Each Balancing Authority shall achieve an annual Frequency Response Measure (FRM) that is equal to or more negative than its Frequency Response Obligation (FRO)...

Interconnection Frequency Response Obligation X Balancing Authority Pro-rata Share

$$FRO_{BA} = IFRO \times \frac{\text{Annual Gen}_{BA} + \text{Annual Load}_{BA}}{\text{Annual Gen}_{Int} + \text{Annual Load}_{Int}}$$

**PJM FRO for 2019 operating year = (-1015 MW/0.1 Hz) x (25.88%) = -262.7 MW/0.1Hz**  
**2019 Operating Year : December 2018 – November 2019**

**Field trial data prior to Operating Year 2017**



- *Phase 1* BAL-003-2 Frequency Response & Frequency Bias Setting
  - Subject to NERC Board of Trustees & FERC approval
  - Interconnection Frequency Response Obligation (IFRO) calculation updates
  - Process Documents:
    - Resources Loss Protection Criteria
    - ERO Support of Frequency Response and Frequency Bias Setting Standard
- *Phase 2* BAL-003 Revisions (*Standard Drafting Team Meeting March 11-13*)

# APPENDIX

BAL-003 Events Compliance Year 2019
12/18/2018 12:26:47
1/31/2019 01:25:29
2/23/2019 15:56:52 *
2/25/2019 00:24:21
3/06/2019 22:04:50 *
3/10/2019 01:01:45 *
3/15/2019 20:39:02
4/14/2019 19:19:04
4/21/2019 13:58:09
4/25/2019 09:18:43
5/03/2019 15:54:08
5/09/2019 04:48:12
5/25/2019 20:38:13
7/11/2019 20:45:14 *
7/19/2019 09:45:39
7/27/2019 19:30:04
8/25/2019 12:04:01
8/27/2019 01:10:29
8/31/2019 20:55:44
9/03/2019 09:35:29 *
9/21/2019 09:00:19
9/23/2019 12:06:02
10/14/2019 19:21:47 *

## Events listed on NERC Resource Subcommittee Site

The screenshot shows the NERC website's Resources Subcommittee page. The breadcrumb trail is: Home > Committees > Operating Committee (OC) > Resources Subcommittee (RS). The page title is 'Resources Subcommittee (RS)'. Under 'Archived Related Files', there is a list of functions: Reviewing and assisting in the development of generation and load "balancing" standards; Reviewing and assisting in the development of interconnection balancing standards; Providing oversight and guidance to working groups and task forces; Providing industry leadership and guidance on matters relating to balancing resources and demand issues; Addressing the reliability aspects of inadvertent interchange creation, accounting, and payback; Review balancing authorities' control performance; Address technical issues on automatic generation control (AGC), time error correction, operating reserve, and frequency response; Provide oversight and guidance on aspects of interchange scheduling.

On the right side, under 'Subcommittee Resources', there is a list of documents including '2016 Frequency Response Annual Analysis Report', '2017 Frequency Response Annual Analysis Report', and '2018 Frequency Response Annual Analysis Report'. Under 'BAL Standards Supporting Documents', there is a table with columns 'Type' and 'Title'. The table lists:
 

- BAL-001 (1)
- BAL-002 (2)
- BAL-003 (19)
  - 1. Standard and Supporting Documents (5)
  - 2. Frequency Events (1)
    - IFR Master Event List
  - Additional Resources (13)

\* Events highlighted were also included in PJM Manual 12 Event Selection (please reference M-12 Section 3.6.2 Event Selection for additional information)

- **Project 2017-01 Link:**  
<https://www.nerc.com/pa/Stand/Pages/Project201701ModificationstoBAL00311.aspx>
- **BAL-003 Implementation Plan Link:**  
[https://www.nerc.com/pa/Stand/Project201701ModificationstoBAL00311/Project\\_2017\\_01\\_Implementation%20Plan%20BAL\\_003\\_2\\_October\\_2019\\_clean.pdf](https://www.nerc.com/pa/Stand/Project201701ModificationstoBAL00311/Project_2017_01_Implementation%20Plan%20BAL_003_2_October_2019_clean.pdf)
- **Resources Loss Protection Criteria Link:**  
[https://www.nerc.com/pa/Stand/Project201701ModificationstoBAL00311/Project\\_2017\\_01\\_RLPC\\_Clean\\_October\\_2019\\_Ika.pdf](https://www.nerc.com/pa/Stand/Project201701ModificationstoBAL00311/Project_2017_01_RLPC_Clean_October_2019_Ika.pdf)
- **Procedure for ERO Support of Frequency Response and Frequency Bias Setting Standard:**  
[https://www.nerc.com/pa/Stand/Project201701ModificationstoBAL00311/2019%20ERO%20Procedure%20document\\_October\\_2019\\_clean\\_from\\_last\\_posted\\_Project\\_2017\\_01\\_Ika.pdf](https://www.nerc.com/pa/Stand/Project201701ModificationstoBAL00311/2019%20ERO%20Procedure%20document_October_2019_clean_from_last_posted_Project_2017_01_Ika.pdf)