Compliance Monitoring and Enforcement Program and Organization Registration and Certification Program Quarterly Report

Q3 2022

November 1, 2022

RELIABILITY | RESILIENCE | SECURITY

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Preface

Electricity is a key component of the fabric of modern society and the Electric Reliability Organization (ERO) Enterprise serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of the North American Electric Reliability Corporation (NERC) and the six Regional Entities, is a highly reliable and secure North American bulk power system (BPS). Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.

Reliability | Resilience | Security
Because nearly 400 million citizens in North America are counting on us

The North American BPS is made up of six Regional Entity boundaries as shown in the map and corresponding table below. The multicolored area denotes overlap as some load-serving entities participate in one Regional Entity while associated Transmission Owners/Operators participate in another.
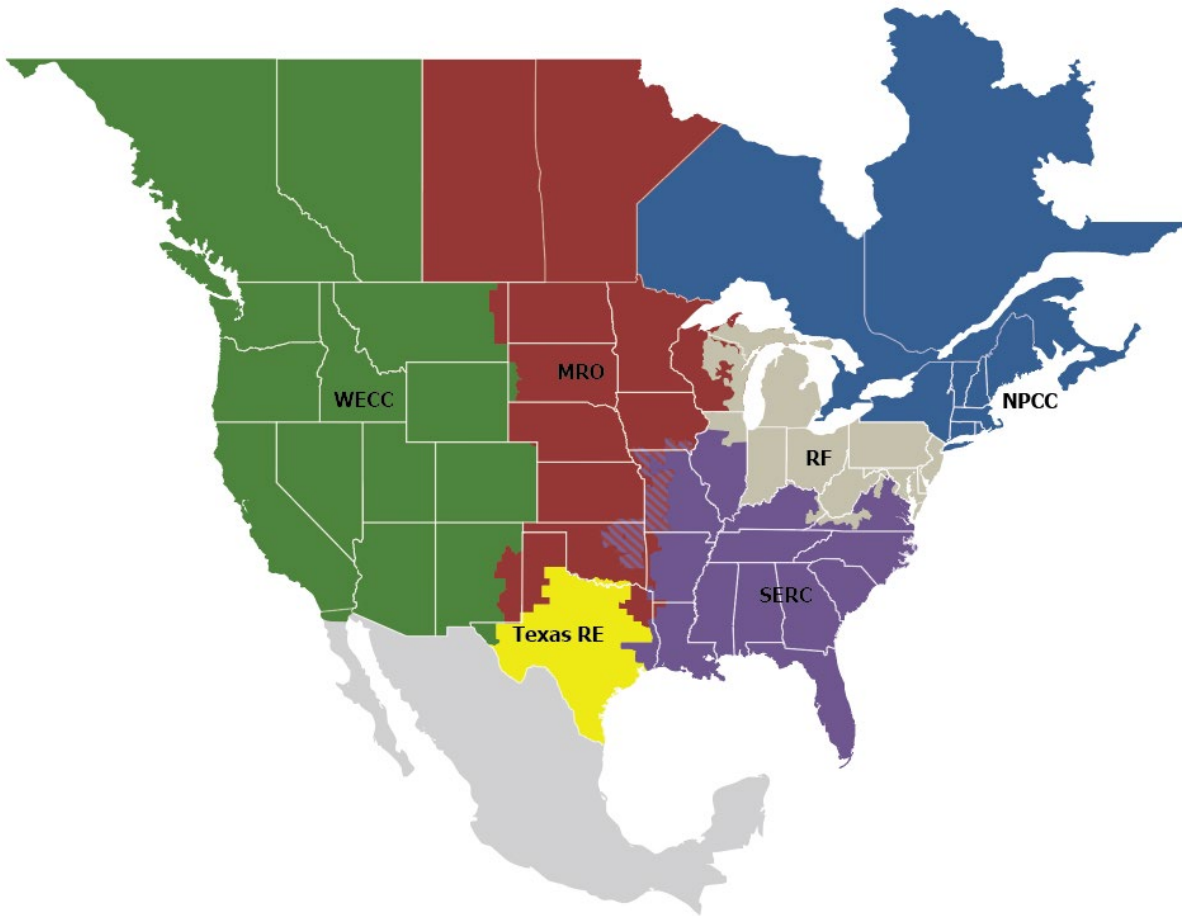
MRO	Midwest Reliability Organization
NPCC	Northeast Power Coordinating Council
RF	ReliabilityFirst
SERC	SERC Reliability Corporation
Texas RE	Texas Reliability Entity
WECC	WECC

Executive Summary

This report highlights key ERO Enterprise[1] Compliance Monitoring and Enforcement Program (CMEP) and Organization Registration and Certification Program (ORCP) activities that occurred in Q3 2022 and provides information and statistics regarding those activities.

In Q3 2022, CMEP and ORCP activities throughout the ERO Enterprise reflected continued implementation of a risk-based approach and program alignment. The ERO Enterprise:

- Continued to adopt Align enhancements consisting of compliance monitoring, audit and scheduling functionality. Additional enhancements were provided in a smaller September 2022 release;

- Filed four Full Notice of Penalty (Full NOP) and four Spreadsheet Notices of Penalty (SNOPs);

- Monitored Regional Entity implementation of Compliance Oversight Plans (COPs) for their registered entities; and

- Processed 60 registration changes.

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[1] The "ERO Enterprise" refers to the affiliation between NERC and the six Regional Entities for the purpose of coordinating goals, objectives, metrics, methods, and practices across statutory activities. The operation of the ERO Enterprise does not conflict with obligations of each organization through statutes, regulations, and delegation agreements. The activities discussed in this report relate to compliance monitoring and enforcement performed in connection with United States registered entities. ERO Enterprise activities outside of the United States are not specifically addressed.

Chapter 1: CMEP Activities

ERO Enterprise Collaboration with Stakeholders on Higher Tier Risks
CIP-008 Implementation
The ERO Enterprise completed its assessment of registered entities' implementation of CIP-008 and provided a non-public report to the Regions, specifically how registered entities define Reportable Cyber Security Incident and attempts to compromise. In addition, the ERO Enterprise posted a Study Summary providing key observations and recommendations for stakeholders. [2] As a follow up, NERC staff drafted and submitted a Standards Authorization Request (SAR) to have a Standards Drafting Team (SDT) propose modifications to the Reliability Standards and associated definitions as necessary to provide a minimum expectation for thresholds to support the definition of attempt to compromise. Modifications should be focused on CIP-008-6; however, as stated in the SAR, it may be necessary to modify other related standards for consistency.

Facility Ratings
The ERO Enterprise continues to engage with stakeholders regarding the uptick in moderate and serious risk violations of the NERC Reliability Standard for Facility Ratings (FAC-008/FAC-009). The North American Transmission Forum (NATF) continues working with its members to implement best practices related to Facility Ratings and the ERO Enterprise continues to provide outreach to industry through presentations at the NERC and Regional Entity Board meetings, and webinars. Regional Entities continue focusing on Facility Ratings during compliance monitoring and enforcement activities. This remains a focus of the risk element, "Gaps in Program Execution," which is part of the 2022 CMEP Implementation Plan.

IROLs
In Q3 2022, the ERO Enterprise continued engaging with Subject Matter Experts (SMEs) at the various Reliability Coordinators (RCs) to understand how they are performing their analysis and determining Interconnection Reliability Operating Limits (IROLs), including how RCs have incorporated the recommended practices outlined in the Reliability Guideline – Methods for Establishing IROLs. [3] This activity started in Q4 2021 and aggregated information on potential industry best practices and the ERO Enterprise will outline any concerns in a public report after completion of the activities, expected in Q4 2022.

Align Project
In Q3 2022, the Regional Entities continue to adopt Release 4.0 enhancements consisting of compliance monitoring, audit and scheduling functionality. Additional enhancements were provided in a smaller Release 4.1 in September.

The Align project team completed development of Release 4.5, which consists of functionality for Inherent Risk Assessments (IRAs) and Compliance Oversight Plan (COPs). This release was delayed for later in Q4 2022 while the team conducts performance testing for system stability prior to production release. Training and adoption plans for all releases are still in progress.

Project activities remaining for 2022 include historical data migration and the inclusion of Canadian provinces in the use of Align. Those activities will continue into Q1 2023.

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[2] CIP-008-6 Effectiveness Study Summary (2022), available at https://www.nerc.com/pa/comp/CAOneStopShop/CIP-008-6%20Effectiveness%20Study%20Summary.pdf.
[3] NERC Reliability Guideline, Methods for Establishing IROLs (2018), available at
https://www.nerc.com/comm/PC_Reliability_Guidelines_DL/Reliability_Guideline_Methods_for_Establishing_IROLs.pdf.

ERO Enterprise Industry Outreach

Training and educational opportunities concerning Reliability Standards, compliance monitoring and enforcement processes, and other supporting reliability functional areas are provided to industry participants at various events through the year. These programs are intended to enhance the knowledge and capabilities of the industry in identifying and addressing risk, thereby improving the reliability of the BPS.

NERC Filings to FERC

In September 2022, NERC filed its annual report on wide-area analysis of Technical Feasibility Exceptions (TFEs).[4] In the report, NERC indicated that it continues to consider opportunities to modify or eliminate the TFE process to reduce the administrative burden it places on registered entities and Regional Entities.

Enhancements to CORES Application

The ERO Enterprise continues to develop an enhanced version of the functional mapping module within the Centralized Organization Registration ERO System (CORES) on the ERO Portal.

CORES includes functional mapping module to identify critical functional relationships between registered entities. During the registration process, the ERO Enterprise performs a review of functional relationships identified by the NERC Rules of Procedure (ROP), certain Reliability Standards, and other important entity relationships.

Functional mapping identifies the relationships between registered entities by their function. NERC Standards also use the registered functions to create compliance relationships. When the ERO Enterprise maps registered entities to each other, it ensures there are no gaps in their compliance nor functional registration. The ERO Enterprise also uses functional mapping information to ensure that there are not any gaps in registration, for determining entity risk, and for other CMEP activities.

Several registered entities have volunteered to participate in a focus group that will provide the ERO Enterprise with valuable registered entity input and feedback during the developmental process. This enhancement to functional mapping capabilities will have several expected benefits, which include new functionality; new notifications for both registered entities and the ERO Enterprise; improved user interface, data entry controls, data architecture; and consolidation of existing data from other systems and applications. The ERO Enterprise will provide additional updates as the project progresses.

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[4] Annual Report of the North American Electric Reliability Corporation on Wide-Area Analysis of Technical Feasibility Exceptions (2022), available at
https://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/TFE%20Annual%20Report%202022.pdf.

Chapter 2: Regional Entity Oversight

Enforcement Oversight
Focus on Serious Risk Violations
In Q3 2022, NERC filed one Full NOPs with FERC that included three violations of the operations and planning (O&P) Reliability Standards with a penalty of $512,000. Full NOP filings vary quarter to quarter and the timing of filings generally depend on when Regional Entities reach settlements with registered entities.

In Q3 2022, NERC filed three Full NOPs that included 13 violations of the CIP Reliability Standards.

Spreadsheet NOPs
In Q3 2022, NERC filed four SNOPs with FERC that included five violations of the O&P Reliability Standards, carrying a total penalty of $375,000. The O&P SNOPs filed in Q3 2022 addressed a mix of moderate and minimal risk issues, including failures to:
- maintain Facility Ratings that were consistent with Facility Ratings Methodology (FRM), including during times of equipment failure and limitation;
- maintain Facility Ratings that were equal to the most limiting applicable equipment rating of the individual equipment that comprises the facility;
- perform maintenance in accordance with time-based maintenance programs;
- use three-part communication when issuing and receiving an Operating Instruction during an emergency.

NERC filed no SNOPs in Q3 2022 that included violations of the CIP Reliability Standards. SNOP filings vary quarter to quarter and the timing of filings generally depend on when Regional Entities reach settlements with registered entities.

Annual Find, Fix, Track, and Report and Compliance Exception Programs Review
In Q3, NERC issued requests for information (RFIs) to the Regional Entities and provided feedback on sampled FFTs and CEs to the Regional Entities. In Q4 2022, NERC will issue its Annual FFT and CE Review Report for the 2021 fiscal year (FY) and file with FERC. NERC and FERC staff will also start the FY2022 Annual FFT and CE Programs review in Q4 2022.

Compliance Monitoring Oversight
NERC Oversight Priorities
In Q1 2022, NERC developed its 2022 Compliance Monitoring Oversight Plan based on the 2022 ERO Enterprise Work Plan Priorities.[5] Throughout 2022, NERC Compliance Assurance staff will focus on the following (Focus Areas 3 and 4 are not included below because they are being addressed by non-CMEP program areas):

Focus Area 1: Expand Risk-Based Focus in Standards, Compliance Monitoring, and Enforcement
1. **Standards**
   - **Cyber**: Registered entity implementation of recommendations from the supply chain report[6]. Regional Entity implementation of supply chain report recommendations into monitoring engagement planning and fieldwork.

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[5] 2022 ERO Enterprise Work Plan Priorities, approved by Board of Trustees on November 4, 2021, available at https://www.nerc.com/AboutNERC/StrategicDocuments/ERO_2022_Work_Plan_Priorities_Board_Approved_Nov_4_2021.pdf.
[6] Supply Chain Risk Assessment (2019), available at https://www.nerc.com/pa/comp/SupplyChainRiskMitigationProgramDL/Supply%20Chain%20Risk%20Assesment%20Report.pdf.

- **Energy and Reliability:** Registered entity implementation of recommendations from the 2021 FERC/NERC Cold Weather Report[7]. Regional Entity implementation of 2021 FERC/NERC Cold Weather Report recommendations into monitoring engagement planning and fieldwork through use of the Cold Weather Preparedness Practice Guide.
2. **Compliance**
   - Regional Entity effectiveness of addressing Facility Rating issues.

Focus Area 2: Assess and Catalyze Steps to Mitigate Known and Emerging Risks to Reliability and Security
1. **Assessment:**
   - **Energy and Reliability**: Regional Entity use of technical guidance provided during the 2022 ERO Enterprise Spring Workshop IBR/DER session and through the DER Practice Guide.
   - **Supply Chain and Security Engineering:** Implement Supply Chain report's recommendations

Focus Area 5: Capture Effectiveness, Efficiency, and Continuous Improvement Opportunities
1. **Align/SEL**
   - Explore potential additional uses of Secure Evidence Locker (SEL) functionality for other registered entity data gathering (e.g., NERC Alerts)

Oversight Activities

In addition to any identified O&P or CIP targeted risks, audit observations will focus on how Regional Entities are integrating an evaluation of the effectiveness of registered entities risk mitigation, including an evaluation of internal controls into its compliance audit engagements. Lastly, NERC will use audit observations to conduct oversight into how Regional Entities are utilizing Align functionality and possible improvements for the SEL.

Compliance Oversight Plans

During Q3 2022, Regional Entities continued to develop COPs using results of the IRA and performance considerations such as internal controls, culture of compliance, compliance history, event analysis trends, or other regional considerations to identify key risks. COPs include the NERC Reliability Standards and Requirements associated with identified risks, the targeted interval of monitoring activities, and the type of CMEP tools (such as Compliance Audit, Spot Check, or Self-Certification). NERC will continue to monitor development of COPs throughout the remainder of 2022 to ensure ERO Enterprise alignment.

Align Release 1 Oversight Activity

During Q3 2022, NERC continued to finalize the report on oversight of the Align tool's usage by the ERO Enterprise and registered entities. The oversight activity included both uses of the Align tool and SEL as deemed appropriate for evaluation of implementation. The objective of the review activity was to evaluate a sampled use of the tool for effectiveness and that use adheres to ERO Enterprise expectations for data confidentiality. NERC is finalizing an internal report to be shared with the Regional Entities in Q4 2022. NERC will also conduct training with ERO Enterprise and registered entity users as needed to ensure appropriate use of the Align and SEL tools.

ERO Enterprise CIP-008 Effectiveness Activity

On January 1, 2021, CIP-008-6 became effective and it expanded the applicable systems to include Electronic Access Control or Monitoring Systems, as well as an additional reporting requirement for defined "attempts to compromise". In Q3 2021, the ERO Enterprise began conducting this activity to gain visibility and better understand how industry has implemented their program in response to these changes and concluded this oversight activity in Q2 2022. NERC Compliance Assurance initiated this ERO Enterprise activity to understand how registered entities are defining Cyber

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[7] The February 2021 Cold Weather Outages in Texas and the South Central United States: FERC, NERC and Regional Entity Staff Report (2021), available at https://www.ferc.gov/media/february-2021-cold-weather-outages-texas-and-south-central-united-states-ferc-nerc-and.

Security Incidents and "attempts to compromise". The goal of this activity is to improve the ERO Enterprise's understanding of industry practices for defining key incident response terms and the impact those definitions have on required reporting. The team released a non-public ERO Enterprise report and a public summary of the report[8] to share lessons learned and/or develop guidance based on the activity (*e.g.,* Practice Guide, outreach, etc.).

Certification
Q3 2022 Certification Completions
During Q3 2022, the ERO Enterprise performed no full certifications and two certification reviews of entity EMS changes. The ERO Enterprise continues to implement a risk-based approach on certification engagements and it determined that no further reviews were necessary for five industry-submitted possible triggers for certification review activity. Appendix D provides a breakdown by Regional Entity.

Registration
The Registration groups across all Regional Entities continue to experience a significant increase in new Generator Owners (GO) and Generator Operators (GOP) using inverter-based resources (*e.g.*, solar, wind, and batteries).

Q3 2022 Registration Changes
In Q3 2022, NERC processed 58 Registration changes, of which 43 were functional activations and 15 were functional deactivations. Of the 15 functional deactivations:
- Ten were where compliance responsibility was assumed by another Registered Entity,
- Two were where assets were sold to another Registered Entity and
- Three were determined to no longer meet registration criteria.

BES Exception Requests
In Q3 2022, NERC completed its review for one BES Exception Request. Additionally, NERC has been processing a different BES Exception Request. Following the Submitting Entity's interest in supplementing the record and subsequent supplement, the NERC Review Panel is completing its analysis. The Exception Request processing should be complete in Q4.

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[8] See footnote 2.

Chapter 3: ERO Enterprise Performance Objectives

Priorities for 2022

To guide enforcement and compliance monitoring activities in 2022, NERC has identified the following priorities:

- Deliver Release 4.0 and 4.5 of the Align tool;

- Provide training to RE CMEP staff to enhance the ERO Enterprise work products and review how the ERO Enterprise tools are being used;

- Evaluate post-COVID-19 monitoring activities;

- Support development and sustainment of risk-based Facility Rating programs and resolution of Facility Ratings noncompliance;

- Focus on program alignment, including consistency efforts on penalties, mitigation, coordinated oversight for MRREs, training exercises, technical training, documentation, and risk assessments;

- Monitor the progress of the ERO Enterprise's enforcement streamlining efforts by examining the balancing of efficient resolution of minimal risk noncompliance with timely, comprehensive resolutions of higher risk violations;

- Rollout of enhanced Compliance Oversight Plans for engagements in 2022; and

- Focus on how registered entities have mitigated reliability and security risks while achieving compliance with the Reliability Standards, including intentional focus on internal controls.

In 2022, the ERO will continue to monitor and report on key CMEP and ORCP activities.

Appendix A: Enforcement

Information regarding the ERO Enterprise's Enforcement activities and metrics is provided below, focusing on noncompliance inventory; identification, mitigation, disposition, and risk of noncompliance; and vegetation management.

Noncompliance Inventory
Open Noncompliance in the ERO Enterprise Inventory
Figure A.1 shows the ERO Enterprise's open noncompliance inventory by the year reported to the Regional Entity. The ERO Enterprise's open noncompliance inventory consists of noncompliance reported to or identified by the Regional Entities or NERC that has not yet been processed by filing with FERC (Full NOPs and SNOPs), submission to FERC (FFTs and CEs), or being dismissed. As of Q3 2022, approximately 6% of noncompliance was reported in 2019 or earlier. The ERO Enterprise reduced its open inventory reported in 2019 and earlier by approximately 20% in Q3 2022.
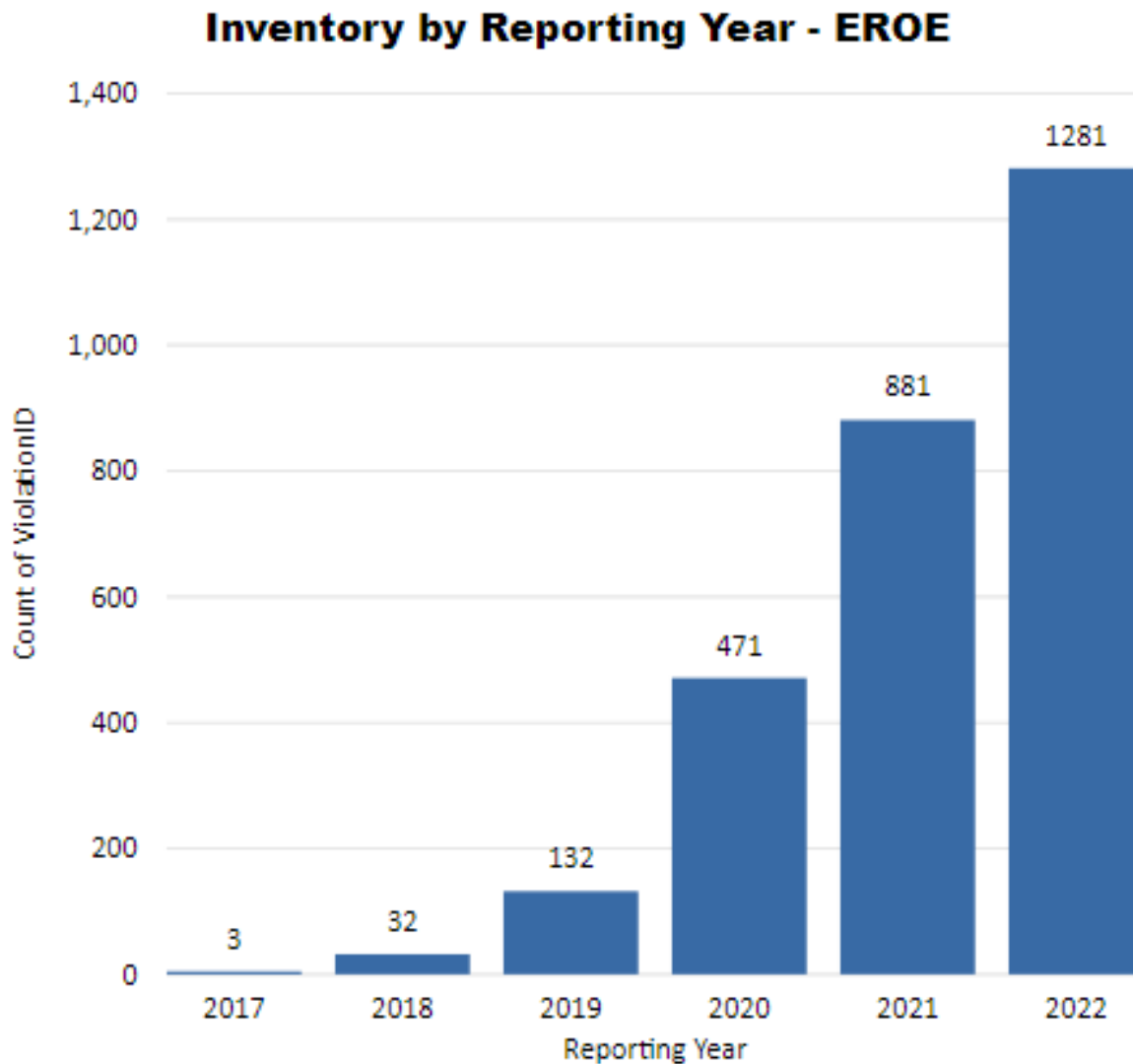
Inventory by Reporting Year - EROE

Reporting Year	Count of ViolationID
2017	3
2018	32
2019	132
2020	471
2021	881
2022	1281

Figure A.1: ERO Enterprise Inventory by Year Reported

Reported Age of Noncompliance in the ERO Enterprise Inventory

Figure A.2 shows the age of all open noncompliance in the ERO Enterprise inventory, and corresponds to the information shown in Figure A.1. The ERO Enterprise strives to process noncompliance in a timely manner such that its open noncompliance older than two years old is kept to a minimum. Information about mitigation of the oldest noncompliance in inventory can be found in the "Mitigation of Noncompliance" discussion below.
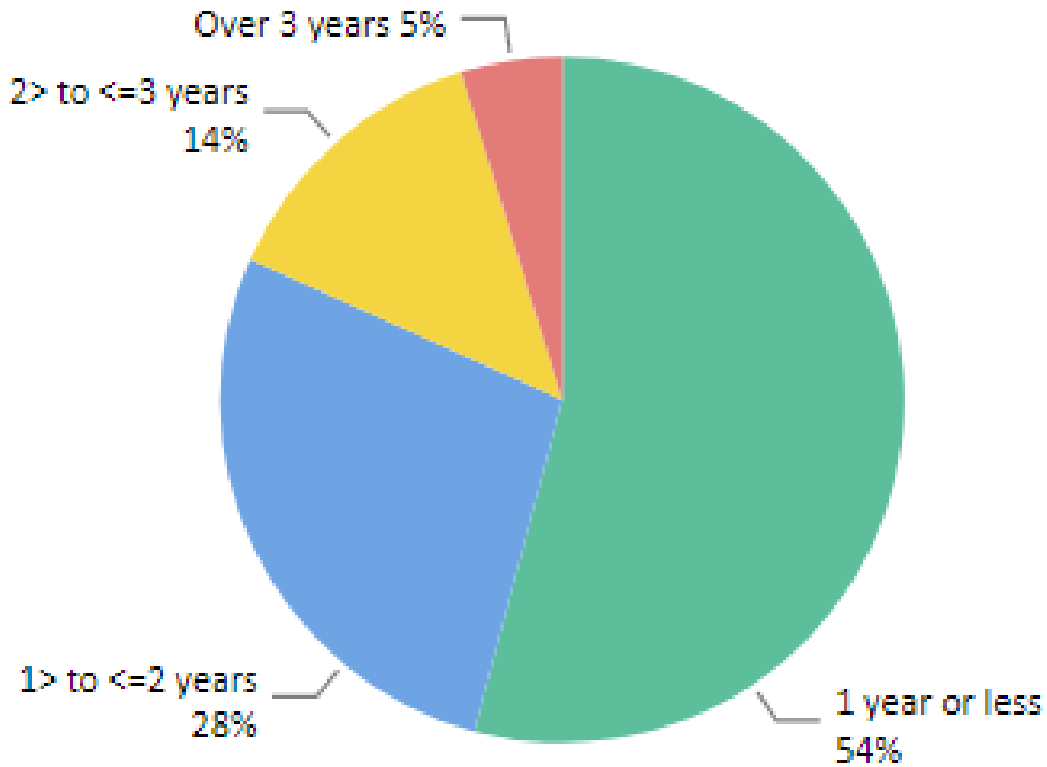
Figure A.2: Age of Noncompliance in ERO Enterprise Inventory

Average Age of Noncompliance in the ERO Enterprise Inventory

Figure A.3 shows the average age of noncompliance in the ERO Enterprise's inventory in the past eight quarters for CIP, O&P, and overall inventory. [9] The average age of noncompliance shows slight changes from one quarter to another and reflect both the number of newly reported noncompliance and the age of cases processed in that quarter – resolution of older cases tends to lower the average age while resolution of newer cases may raise the average age. At the end of Q3 2022, the average age of both CIP and O&P noncompliance was approximately 14 months old.
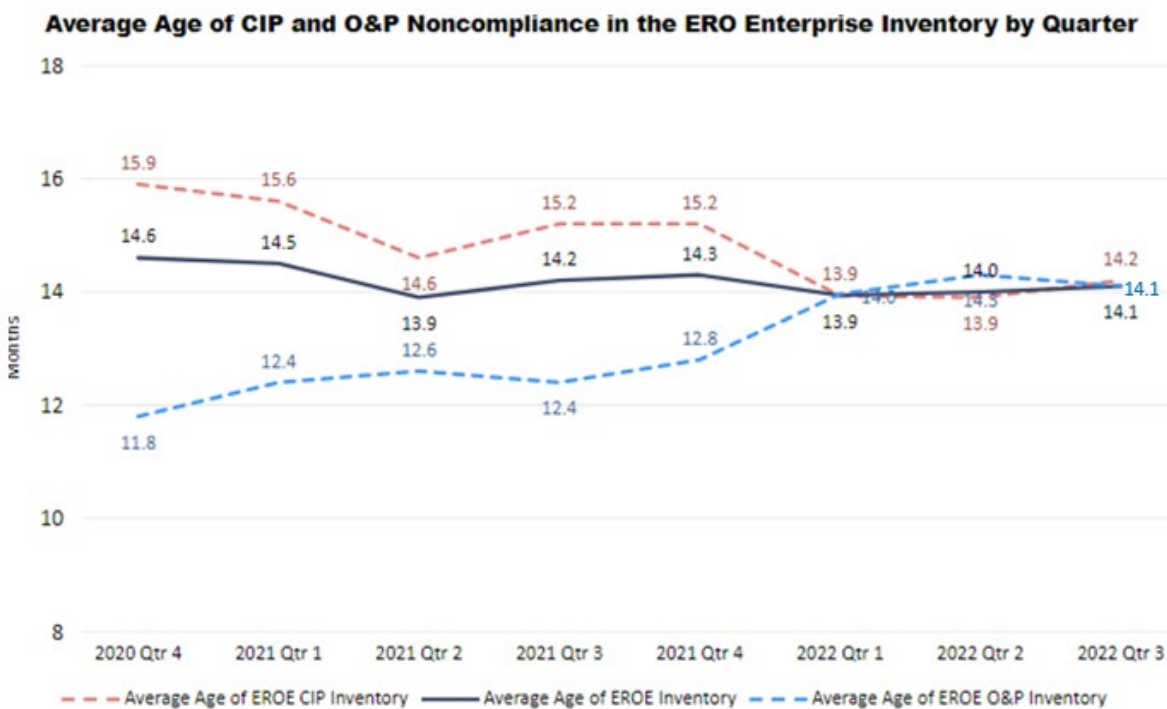
Average Age of CIP and O&P Noncompliance in the ERO Enterprise Inventory by Quarter

Figure A.3: Average Age of Noncompliance in ERO Enterprise Inventory

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[9] The age of noncompliance in the inventory runs from the time the noncompliance is reported to the end of the calculated quarter.

Identification of Noncompliance

Number of Reported Noncompliance through Q3 2022

Figure A.4 shows the number of noncompliance submittals in the past five years by the year reported. Several factors can influence the number of submitted noncompliance in a given year, including, but not limited to, newly enforceable Standards and phased-in implementation of Standards, discoveries by registered entities, and CMEP risk-based monitoring activities.

As of the end of Q3 2022, 1,386 noncompliance were reported to the ERO Enterprise in 2022. If this trend continues through the end of 2022, the number of noncompliance discovered this year would be more in line with noncompliance levels last seen in 2018 and 2019. The ERO Enterprise monitors the level of incoming noncompliance to identify notable trends and determine if it needs to take action to address issues of concern.
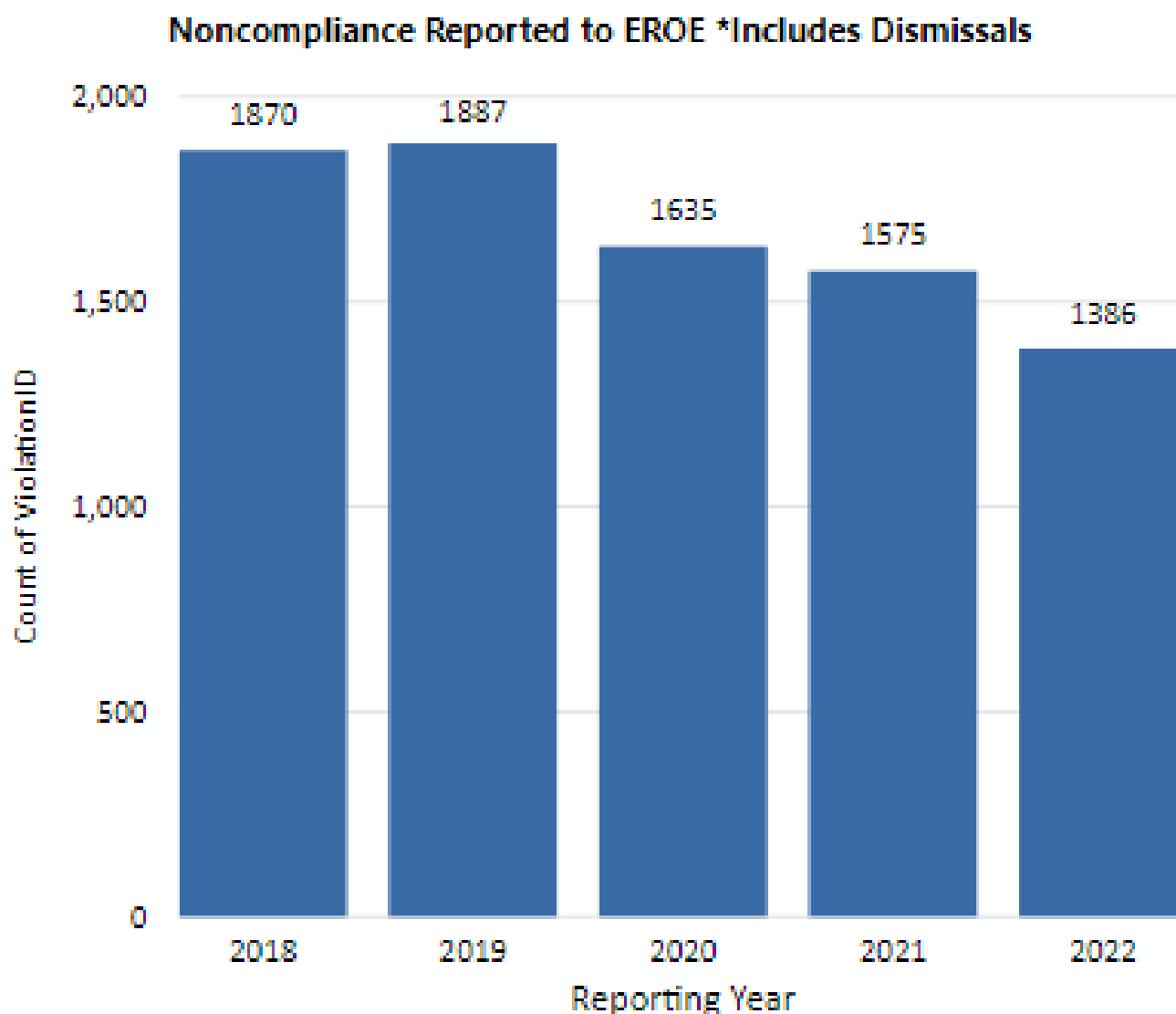

Figure A.4: Noncompliance Reported by Year

Self-Assessment and Self-Identification of Noncompliance

Figure A.5 shows the level of internal and external identification of noncompliance in the past five years. The ERO Enterprise looks for high levels of self-reported noncompliance as indicators that registered entities have good detective controls and strong cultures of compliance. Self-Reports and Self-Certifications are treated as internal identification of noncompliance, while Compliance Audits, Spot Checks, and all other methods of discovery are treated as external identification of noncompliance.

The average internal discovery level for the past five years has been about 80% or higher, indicating that registered entities continue to identify and address potential noncompliance through their own internal controls.
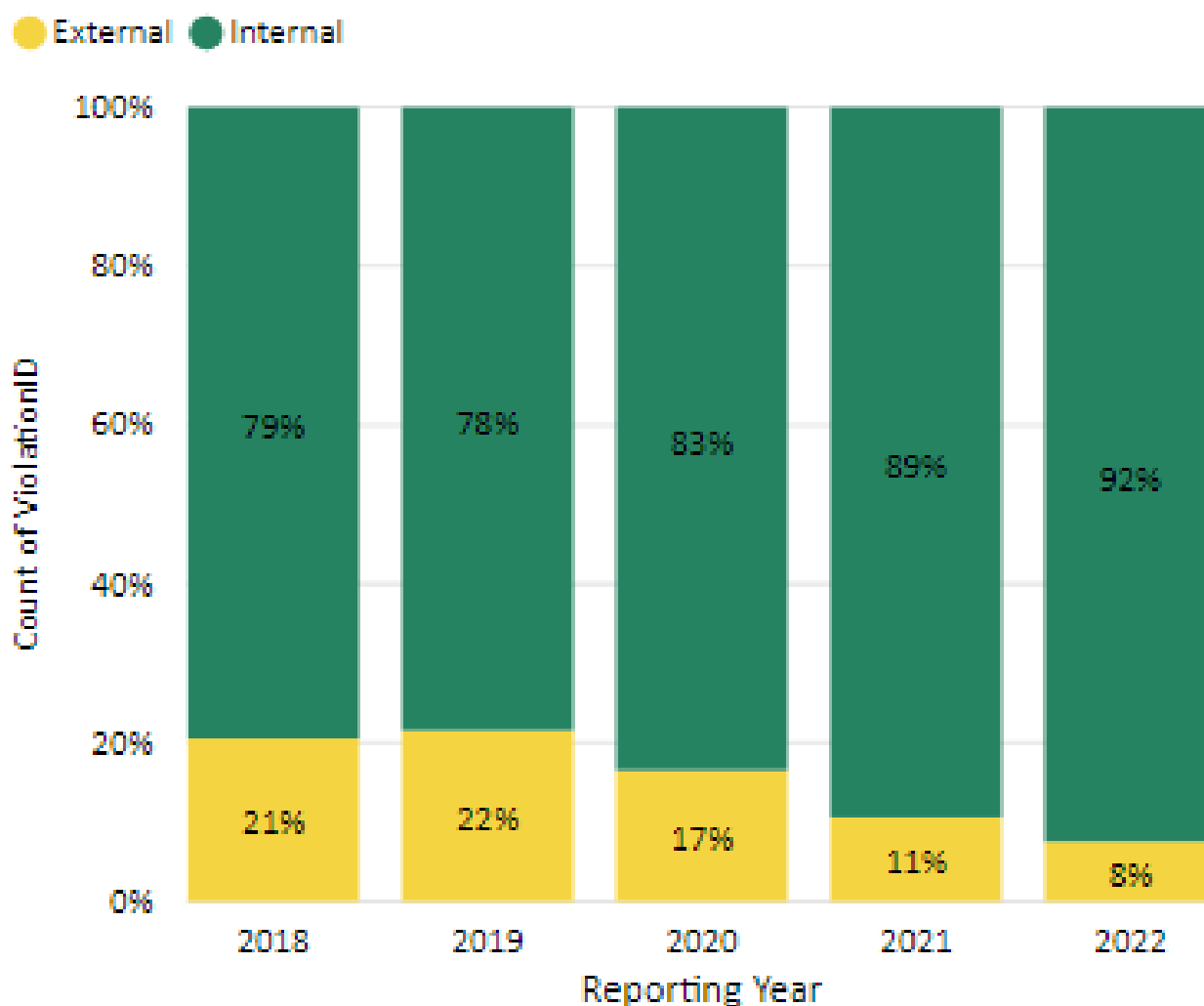

Figure A.5: Breakdown of Internally and Externally Discovered Noncompliance by Year

Mitigation of Noncompliance
Mitigation Completion Timeframes

Figure A.6 shows the amount of time it has taken registered entities to complete mitigation activities for all mitigation completed from 2017 to the present. Timely mitigation of noncompliance, which corrects the noncompliance and includes steps to reduce future recurrence, reduces risk to the BPS.

For the mitigation completed since 2017, 88% of mitigation is complete within one year of the noncompliance being reported to the ERO Enterprise. The ERO Enterprise monitors the status of mitigation for older noncompliance as priorities for confirmation that registered entities have completed mitigation. Less than 2% of pre-2020 noncompliance have mitigation in progress. In many of these older cases, ongoing mitigation has ended the violation, but the entity is implementing steps to strengthen its controls to prevent future recurrence.
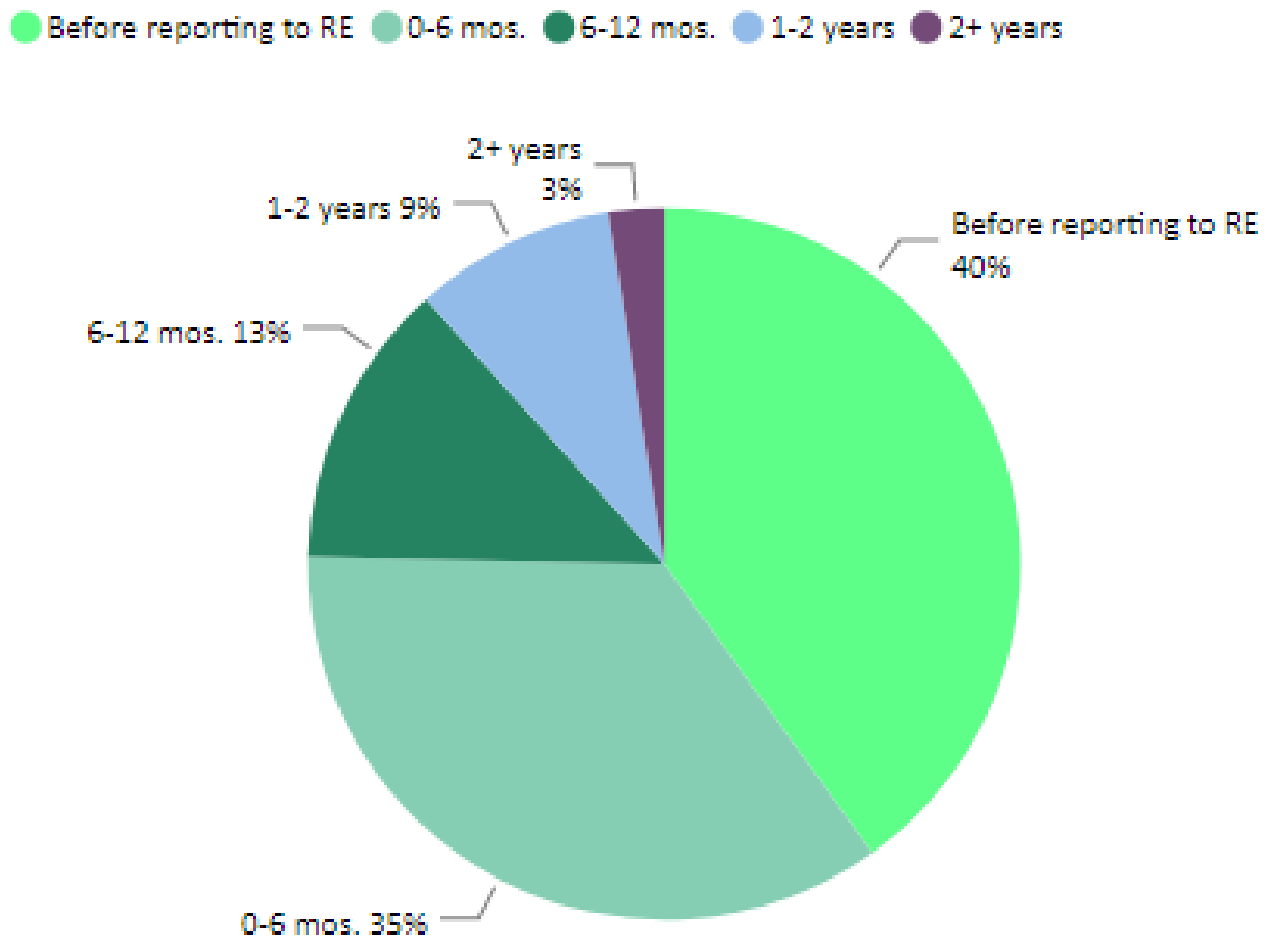

Figure A.6: Timeframes for Mitigation Completion

Disposition and Assessed Risk of Noncompliance

Figure A.7 provides detail on the disposition of the noncompliance resolved since 2018. Over this period, the ERO Enterprise processed 74% of all noncompliance as CEs, with 17% of dispositions as self-logged CEs.

Similarly, Figure A.8 provides detail on the assessed risk of the noncompliance resolved since 2018. Over this period, the ERO Enterprise assessed the risk of 79% of all noncompliance as a minimal risk.

Filing Year	SLG-CE	CE-NOT-SLG	FFT	SNOP	NOP	Total
2018	159	611	48	109	35	962
2019	220	933	158	101	209	1621
2020	194	875	198	70	57	1394
2021	261	723	212	98	110	1404
2022	228	498	157	35	129	1047
Total	1062	3640	773	413	540	6428
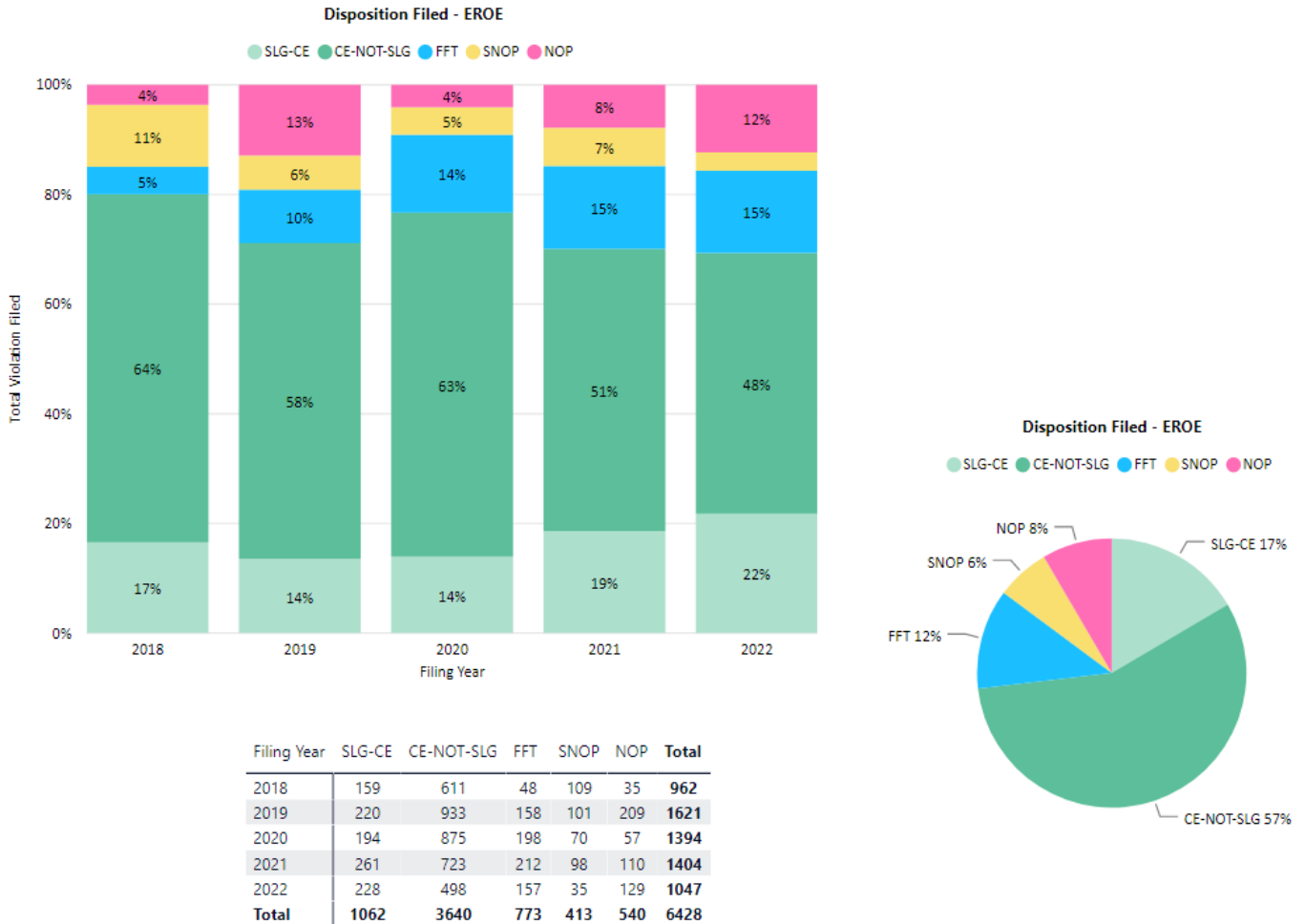
Figure A.7: Disposition Type of Noncompliance Processed by Filing Year

Assessed Risk - EROE

● Minimal ● Moderate ● Serious

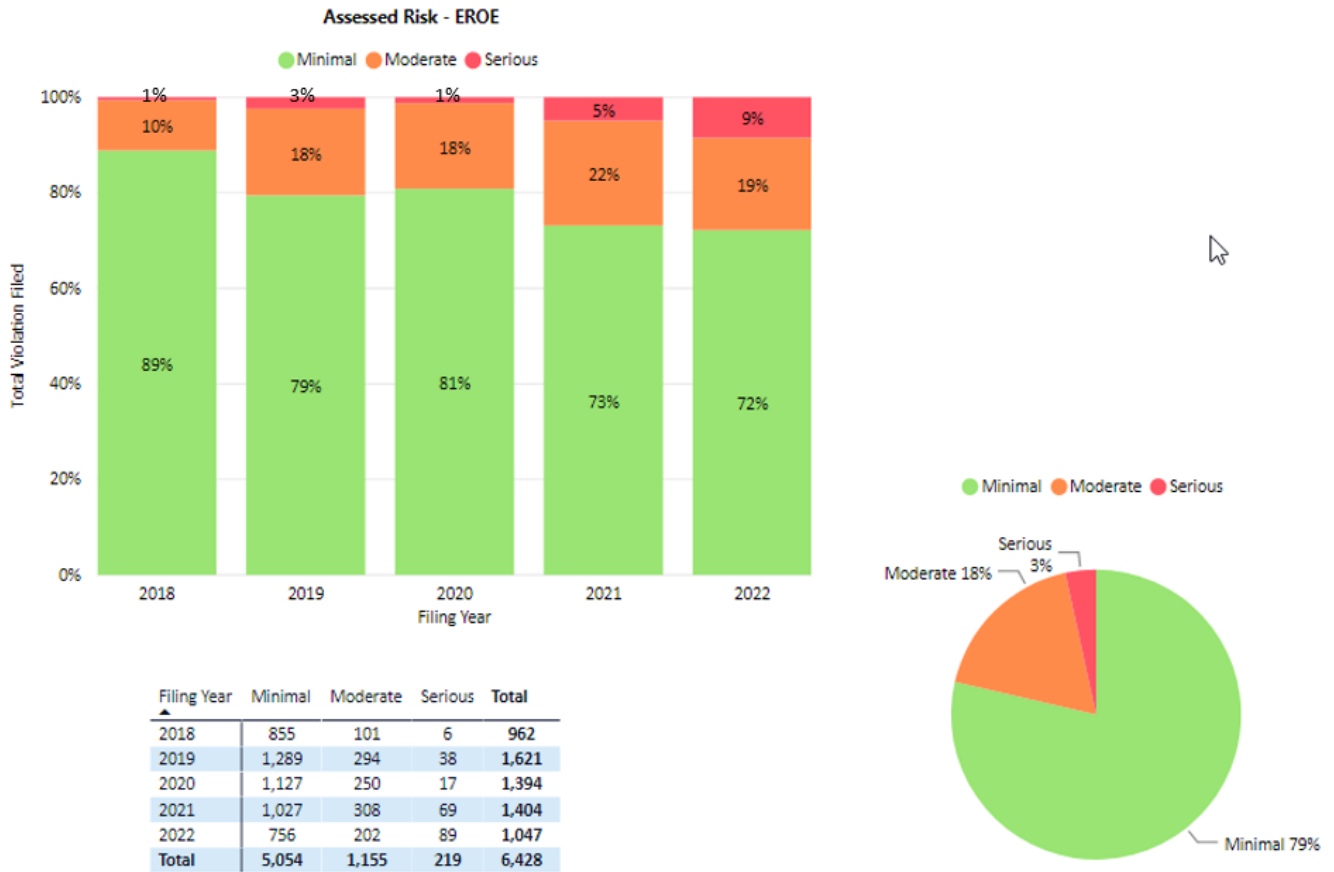| Filing Year	Minimal	Moderate	Serious	Total
2018	855	101	6	962
2019	1,289	294	38	1,621
2020	1,127	250	17	1,394
2021	1,027	308	69	1,404
2022	756	202	89	1,047
Total	5,054	1,155	219	6,428

Figure A.8: Assessed Risk of Filed Noncompliance by Filing Year

Risk of Noncompliance

Most Violated Standards by Risk in 2021–Q3 2022

Figure A.9 shows the top 10 most violated Standards by assessed risk for noncompliance processed in the period from 2021 through Q3 2022. Figure A.10 is similar to Figure A.9, but only shows the top 10 most violated Standards for serious risk noncompliance processed in the period from 2021 through Q3 2022. CIP-007 remains the most frequently violated Reliability Standard in the period from 2021 through Q3 2022, followed by CIP-004 and CIP-010.

The majority of the serious risk violations were violations of the CIP Standards, particularly those relating to Electronic Security Perimeters and interactive remote access, ports and services, security patches, account management, baselines, and categorization of BES Cyber Systems. The serious risk O&P violations involved Facility Ratings and vegetation management. As noted above, the majority of the serious risk violations and other violations resolved in Full NOPs in 2022 were mitigated by the registered entity prior to filing with FERC. In addition, the Regional Entities have actively engaged with the registered entities involved in the larger compliance failures to improve their reliability and security programs going forward.

Top 10 Standards Filed by Risk - EROE

Standard	Minimal	Moderate	Serious	Total
CIP-007	236	137	41	414
CIP-004	259	35	17	311
CIP-010	176	81	28	285
CIP-006	122	19	11	152
CIP-003	139	8	3	150
PRC-005	82	32	2	116
MOD-025	77	14		91
CIP-002	63	12	4	79
CIP-005	19	31	25	75
CIP-011	61	11	1	73
Total	1234	380	132	1746

Figure A.9: Most Violated Reliability Standards by Risk Level in 2021–Q3 2022

Top 10 Serious Risk Filed Standards - EROE

Figure A.10: Most Violated Reliability Standards by Serious Risk in 2021–Q3 2022

Compliance History and Repeat Noncompliance

The ERO Enterprise monitors compliance history (defined as a relevant prior violation of the same or similar Reliability Standard and Requirement) and repeat noncompliance with similar conduct (defined as a prior violation that stemmed from similar actions or conduct). The ERO Enterprise looks at a registered entity's compliance history to determine if the registered entity's prior conduct warrants aggravation of the proposed disposition method or penalty. If an entity has repeated noncompliance with similar conduct or a similar cause as prior noncompliance, the ERO Enterprise is more likely to aggravate the proposed disposition method or penalty to deter the unwanted conduct and incentivize efforts by the registered entity to improve its programs and internal controls to prevent recurrence of similar violations in the future. The ERO Enterprise monitors these cases to explore the relationship of prior mitigation to repeat noncompliance and to identify any additional areas of focus and future actions.

Figure A.11 shows, for the last five years, the number of filed violations (blue line), the number of filed violations with compliance history (orange line), and the number of filed violations with repeat conduct (or aggravating compliance history) (pink line). Figure A.12 is similar to A.11, but only shows, for the last five years, compliance history and aggravation history for moderate and serious risk filings. The charts show that only a small portion of the filings had aggravation history and that serious risk violations tended to have a higher percentage of aggravation history compared to moderate risk violations. The ERO Enterprise will continue to analyze the information as the year progresses and highlight any notable trends in future quarterly reports.
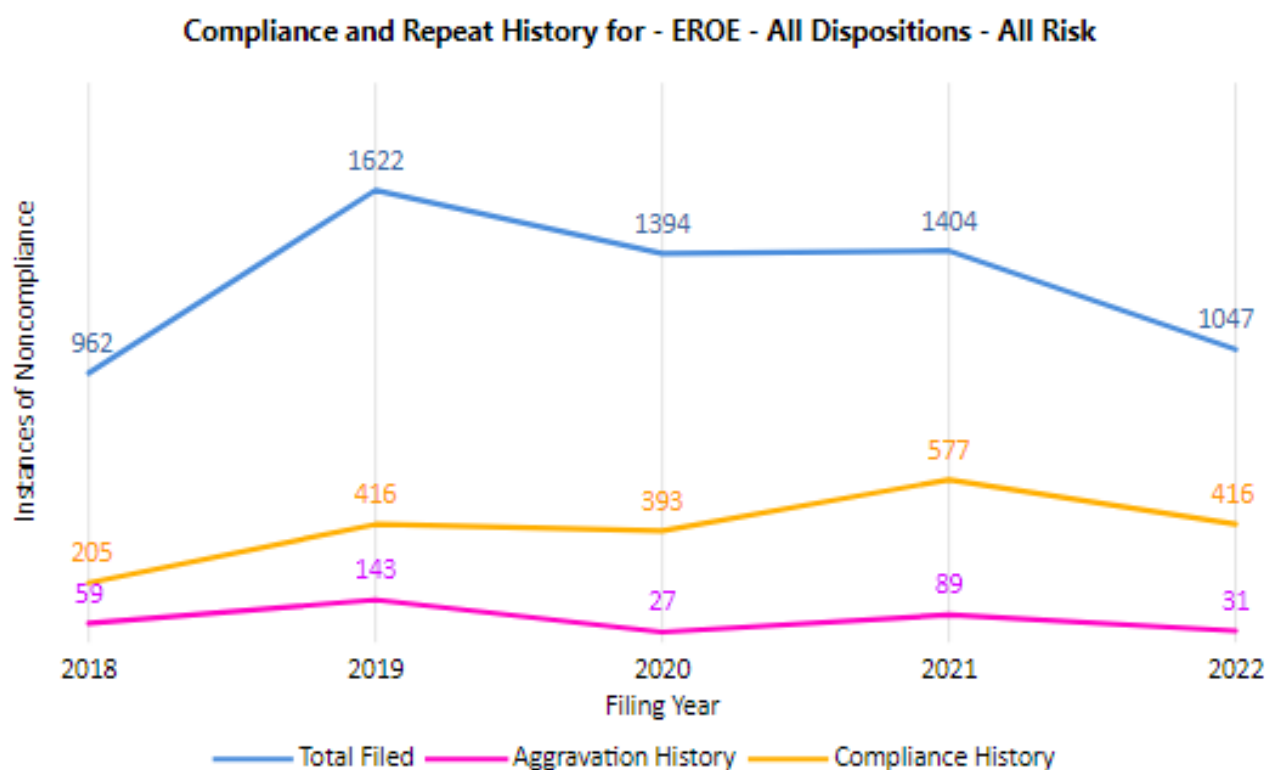

Figure A.11: Compliance History and Aggravation History for All Violations

Compliance and Repeat History for - EROE - All Dispositions - Moderate and Serious Risk
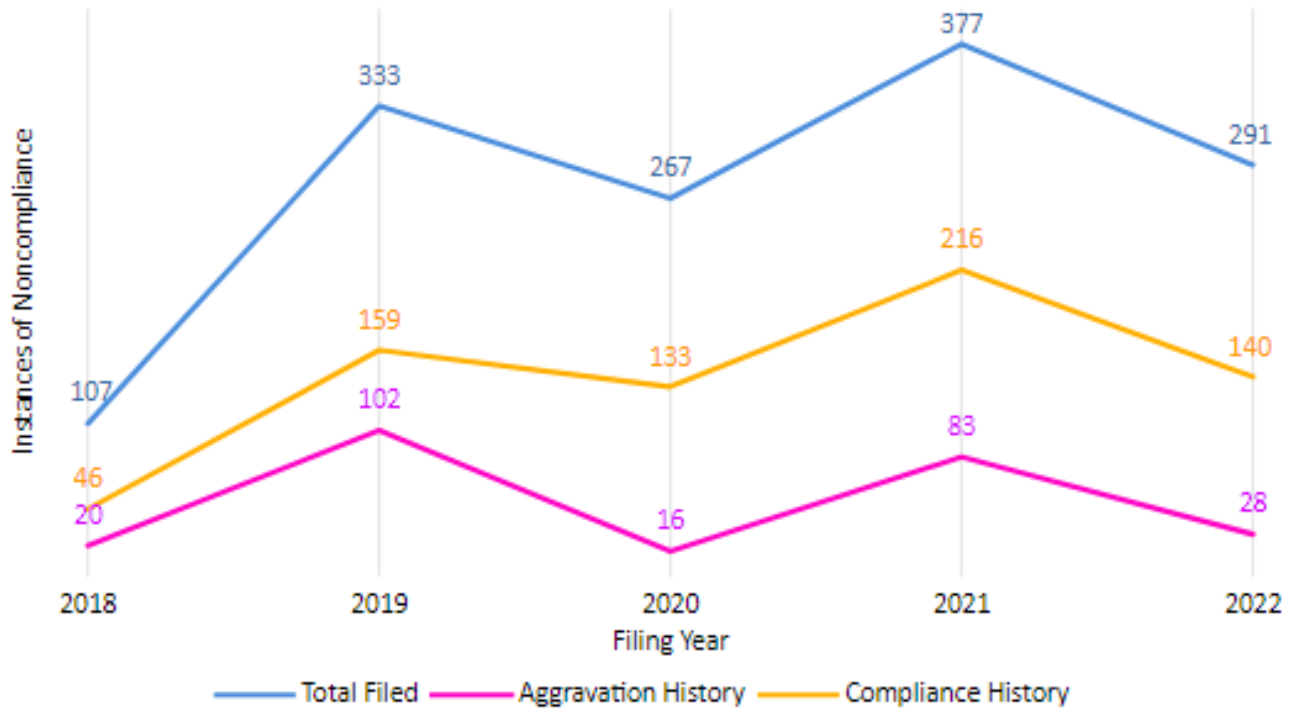
Figure A.12: Compliance History and Aggravation History for Moderate and Serious Risk Violations

Vegetation Management

NERC regularly reports on two items related to vegetation management: (1) the violations filed and (2) vegetation-related outages reported to NERC as part of Periodic Data Reporting (PDS) of the Transmission Vegetation Management (FAC-003) Standard. Figure A.13 shows the number of Category 3 vegetation-related outages from outside of the right-of-way reported over the last five years. The ERO Enterprise consolidates vegetation-related outage information on a delayed quarterly basis. Information related to Q3 2022 will be available in Q4 2022. The ERO Enterprise has not filed any violations of FAC-003-4 to date in 2022.
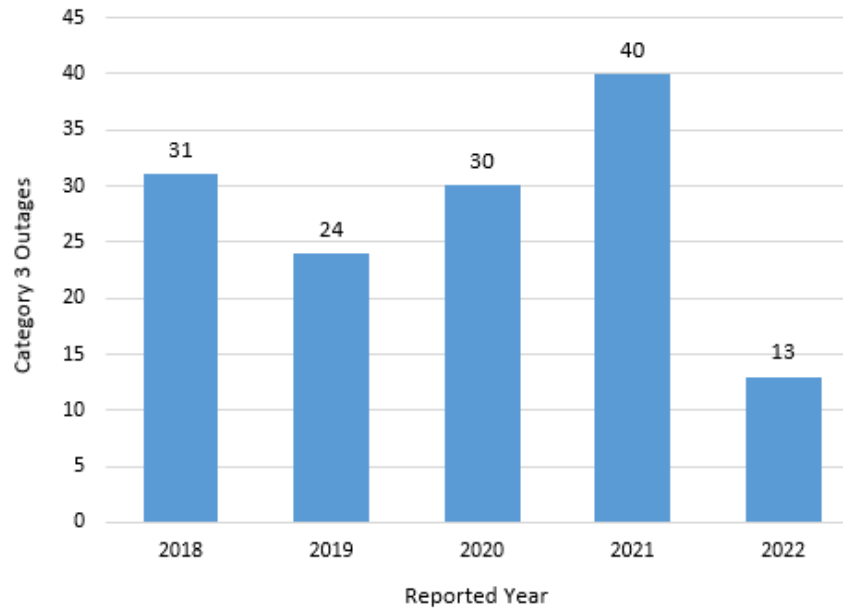

Figure A.13: Vegetation-Related Outages from Outside of the Right-of-Way (Category 3)

Facility Ratings

Strong and sustainable Facility Ratings programs are essential for reliable planning and operation of the BPS. Accurate Facility Ratings, among other things, ensure accurate System Operating Limits and Interconnection Reliability Operating Limits that may prevent voltage instability, uncontrolled separation or cascading outages, and equipment damage or failure.

Incorrect Facility Ratings continue to present risk across the BPS and remain a key area of focus for the EROE. Since November 2021's call to action, the EROE has continued to use a risk-based approach through its CMEP monitoring activities to assess and address risk from inaccurate Facility Rating risk.

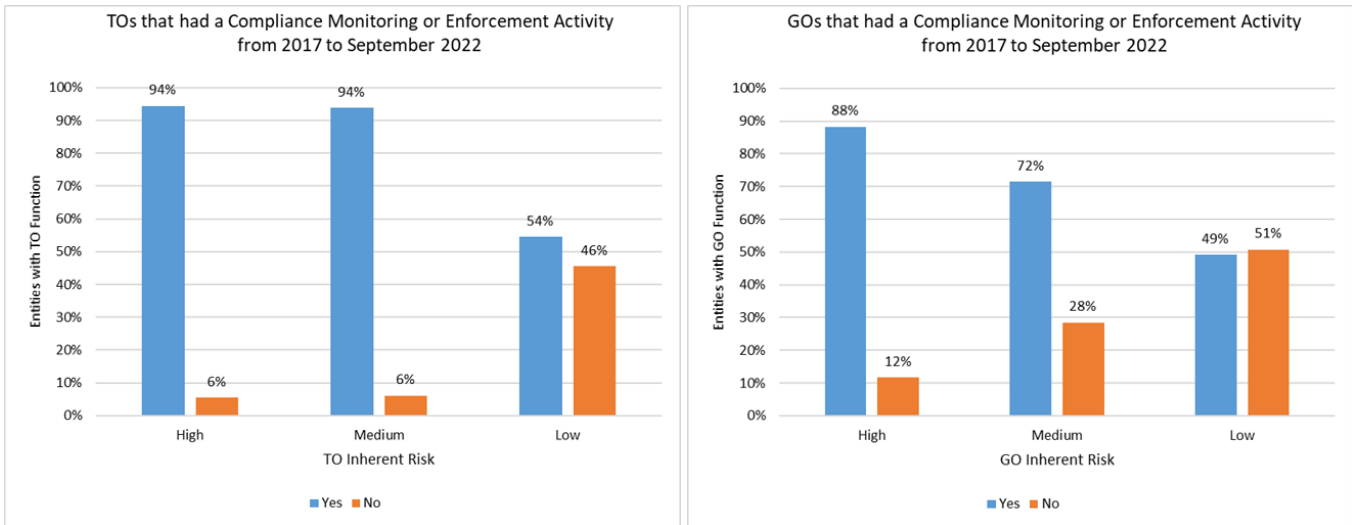Figure A.18 shows percent of CMEP engagement by Inherent Risk of applicable TOs and GOs since 2017.

**Figure A.18: EROE CMEP Facility Rating Interactions
By Inherent Risk from 2017- September 2022**

Figure A.19 shows the use of risk-based enforcement disposition approaches for Facility Rating noncompliance over the last five years.

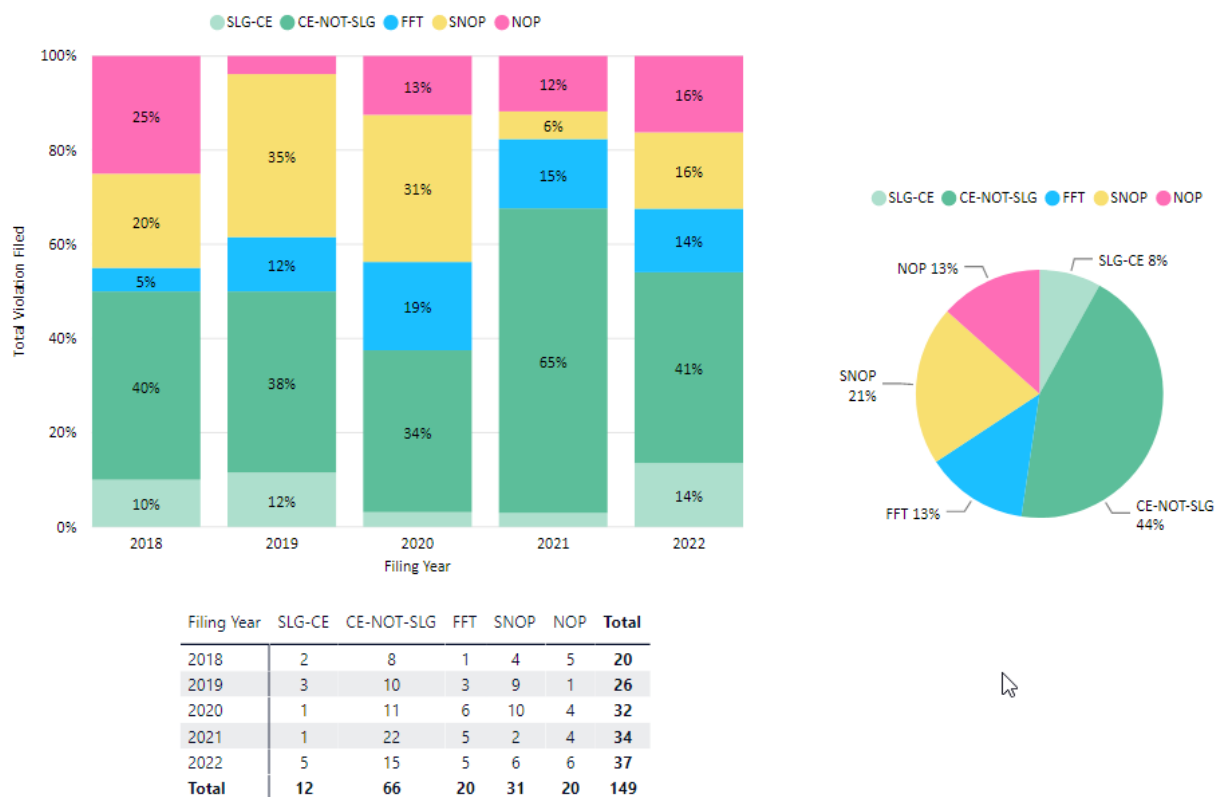| Filing Year	SLG-CE	CE-NOT-SLG	FFT	SNOP	NOP	Total
2018	2	8	1	4	5	20
2019	3	10	3	9	1	26
2020	1	11	6	10	4	32
2021	1	22	5	2	4	34
2022	5	15	5	6	6	37
Total	**12**	**66**	**20**	**31**	**20**	**149**

**Figure A.19: Disposition of the Facility Rating
Noncompliance in the Past Five Years**

Commonly observed root causes of both moderate and serious risk Facility Rating violations include:
- Lack of sustainable and comprehensive Facility Rating program with appropriate levels of internal controls;
- Failure to identify and assess key controls within change management processes; and
- Lack or deficiency of internal controls to document and track changes.

Appendix B: Compliance Assurance

Coordinated Oversight Program for MRREs

The purpose of the Coordinated Oversight Program is to increase efficiency and eliminate unnecessary duplication of compliance monitoring and enforcement activities for Multi-Region Registered Entities (MRREs). A registered entity operating in or owning assets in two or more Regional Entities' jurisdictions with one or more NERC Compliance Registry (NCR) identification number is a potential candidate for inclusion in the voluntary Coordinated Oversight Program. In connection with the program, the ERO Enterprise takes into account reliability considerations such as, but not limited to, a registered entity's registered functions, load and generation capacity, transmission assets, and transmission and generation control centers.

In Q3 2022, the ERO Enterprise approved one additional MRRE for entry into the Coordinated Oversight Program. Currently, there are 266 registered entities participating in the Coordinated Oversight program. [10]

Figure B.1 represents the distribution of the MRRE groups by Lead Regional Entity, and Figure B.2 represents the distribution of MRREs by registered function. The registered entities that opted to join the program include various reliability functions in multiple Regional Entities.
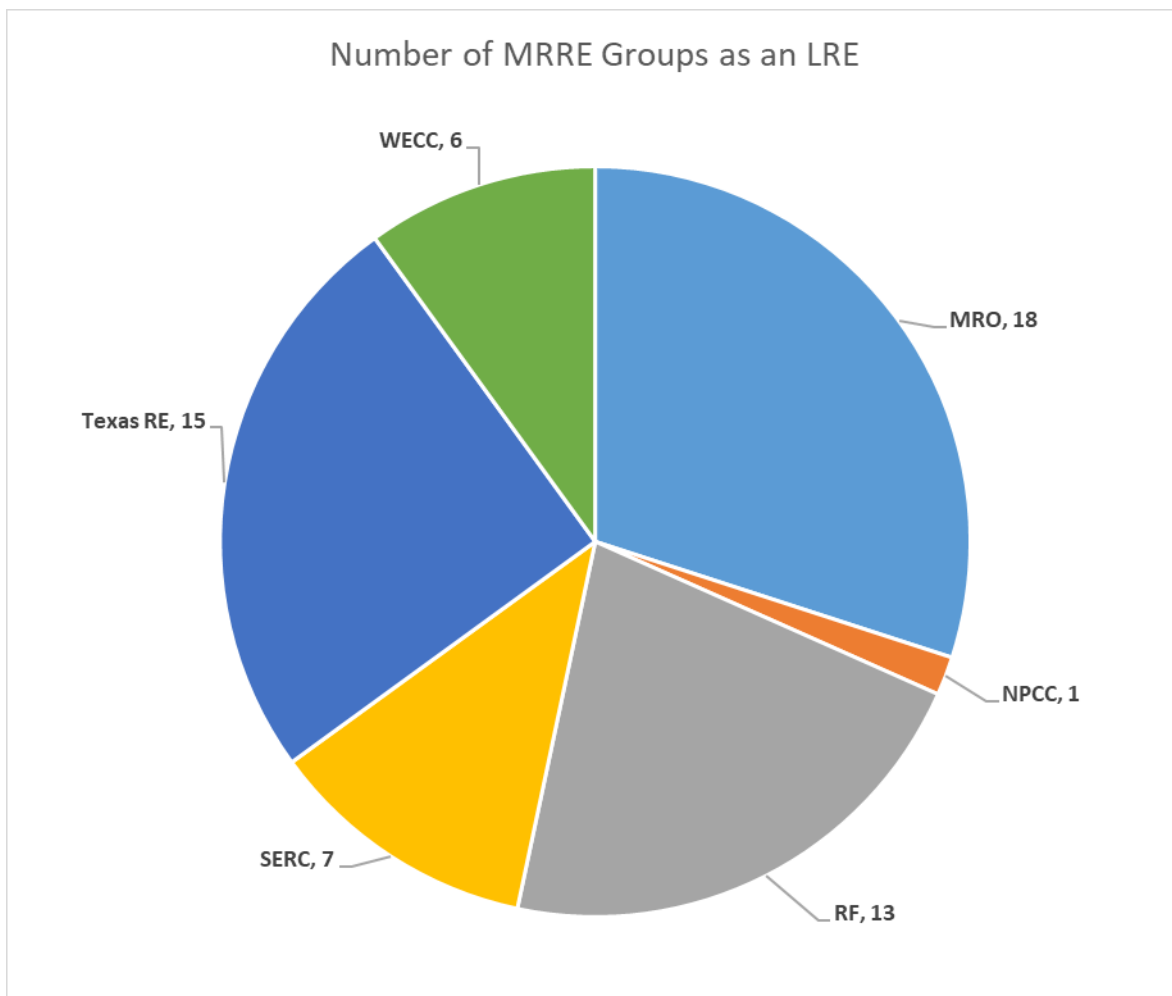

Figure B.1: Distribution of MRREs under Coordinated Oversight by Lead Regional Entity

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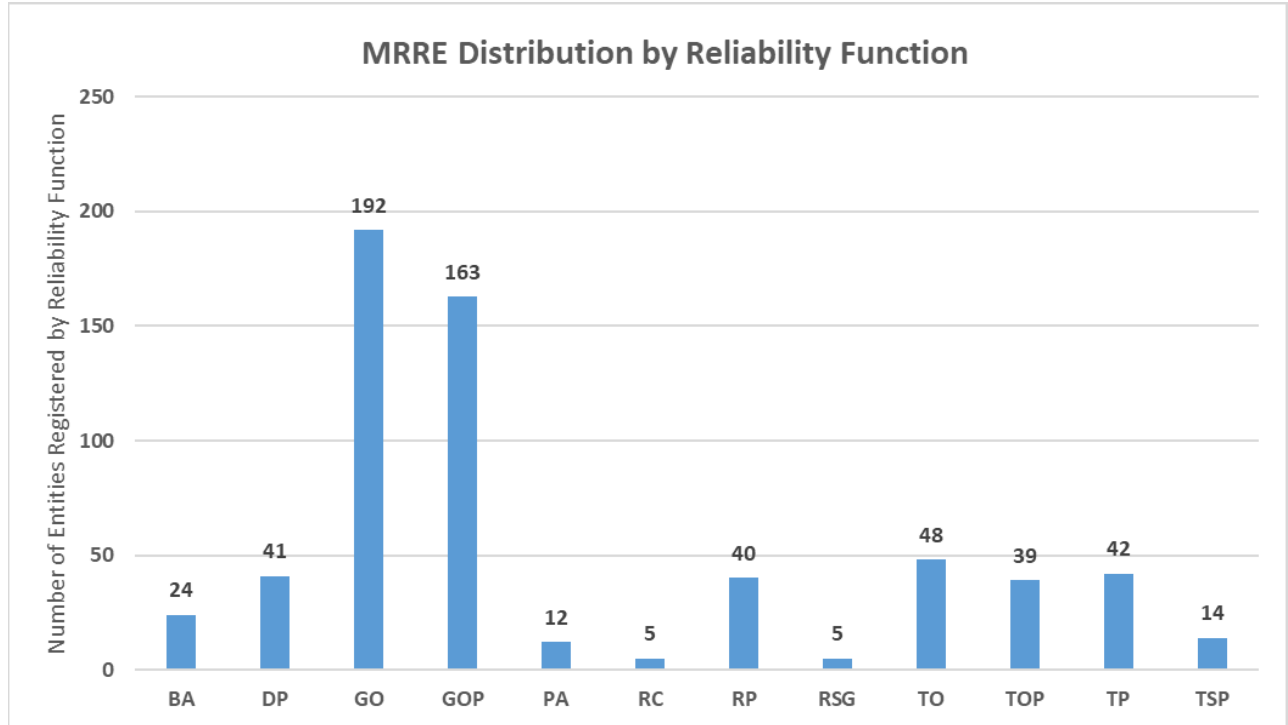[10] Appendix B includes further information on the MRREs participating in the Coordinated Oversight Program.

Figure B.2: Coordinated Oversight Distribution by Registered Function[11]

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[11] Each bar represents the number of registered entities by function in the Coordinated Oversight Program for MRREs.

Appendix C: Registration

Registration Change Activity by Function

Figure C.1 and Table C.1 depict Q3 2022 registration change activity by Regional Entity. Figure C.2 and Table C.2 depict Q3 2022 registration change activity by function.
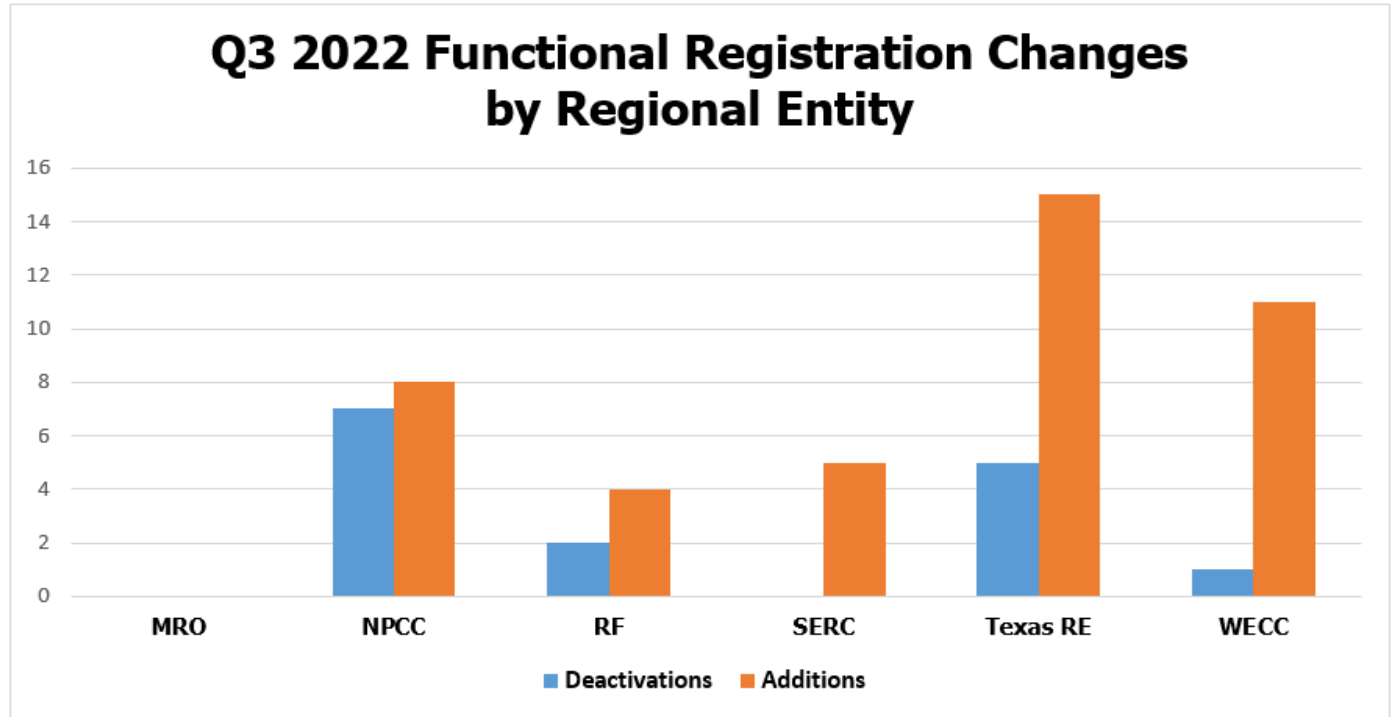

Figure C.1: Q3 2022 Functional Registration Change Activity by Regional Entity

Table C.1: Q3 2022 Functional Registration Change Activity by Regional Entity						
	MRO	**NPCC**	**RF**	**SERC**	**Texas RE**	**WECC**
Deactivations	0	7	2	0	5	1
Additions	0	8	4	5	15	11

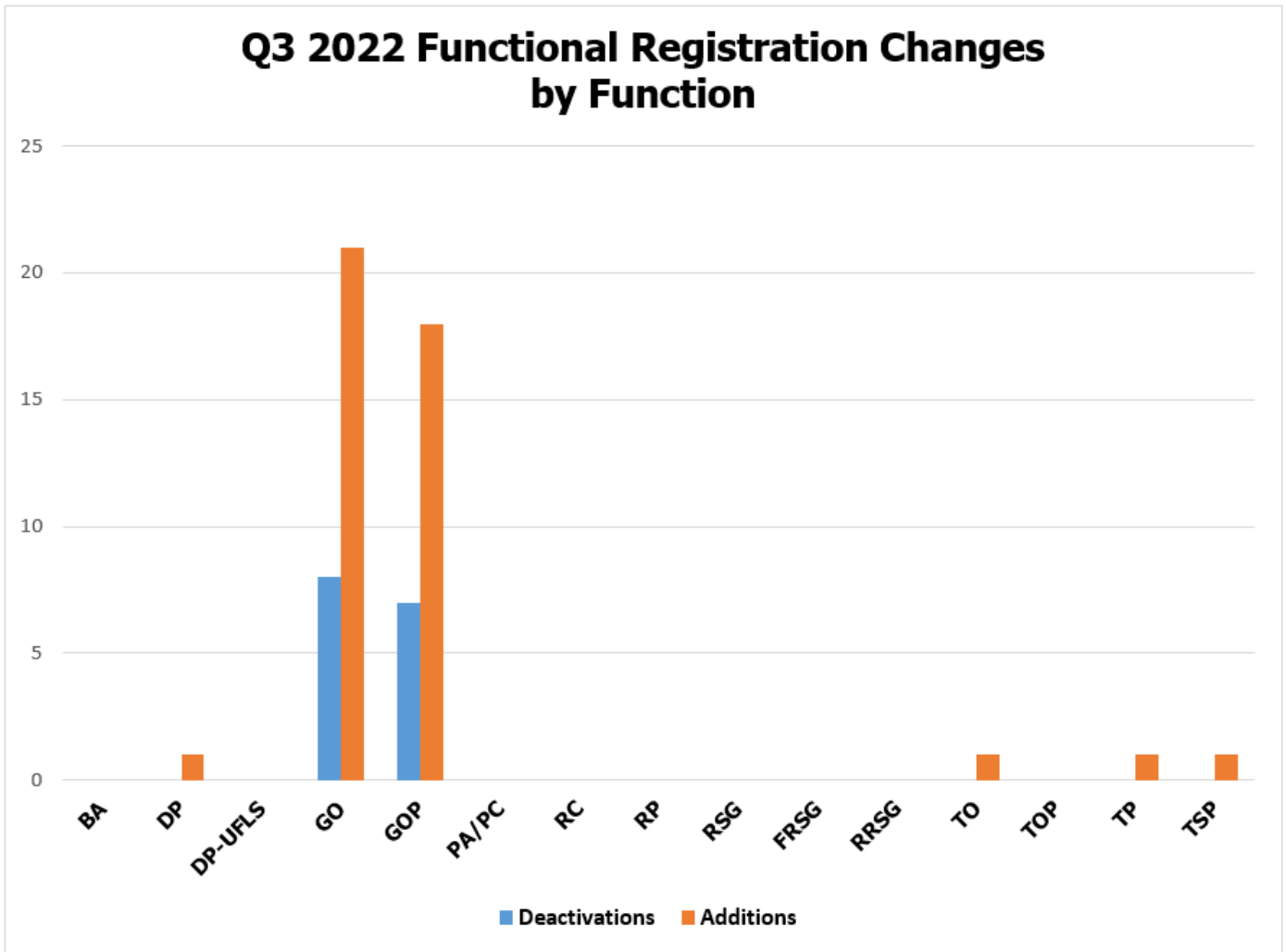**Figure C.2: Q3 2022 Registration Change Activity by Function**

Table C.2: Q3 2022 Registration Change Activity by Function						
	DP	**GO**	**GOP**	**TO**	**TP**	**TSP**
Deactivations	0	8	7	0	0	0
Additions	1	18	20	1	1	1

Table C.3 shows the basis for Q3 2022 registration deactivations. NERC seeks justification from each Regional Entity when approving functional registration deactivation.

Table C.3: Q3 2022 Registration Change Basis	
Compliance Responsibility Transferred to Another Registered Entity	10
Sold to Another Registered Entity	2
Determined to Not Meet Registration Criteria	3

Appendix D: Certification and Bulk Electric System

ERO Enterprise Organization Certification Utilization

Certification activities are responsive to the number of new entities requiring certification and the types of changes implemented to already-certified and operational entities. Program utilization metrics help to plan resource needs, including staff, travel, and training.

Figure D.1 identifies the number of new entity certifications completed by each Regional Entity during Q3 2022 and the number of new entity certifications where an onsite visit has been performed but the certification activity has not yet been concluded (in process). Figure D.2 identifies the number of reviews of changes to already-certified and operational entities completed by each Regional Entity during Q3 2022 and the number of certification reviews in process at the end of Q3 2022.
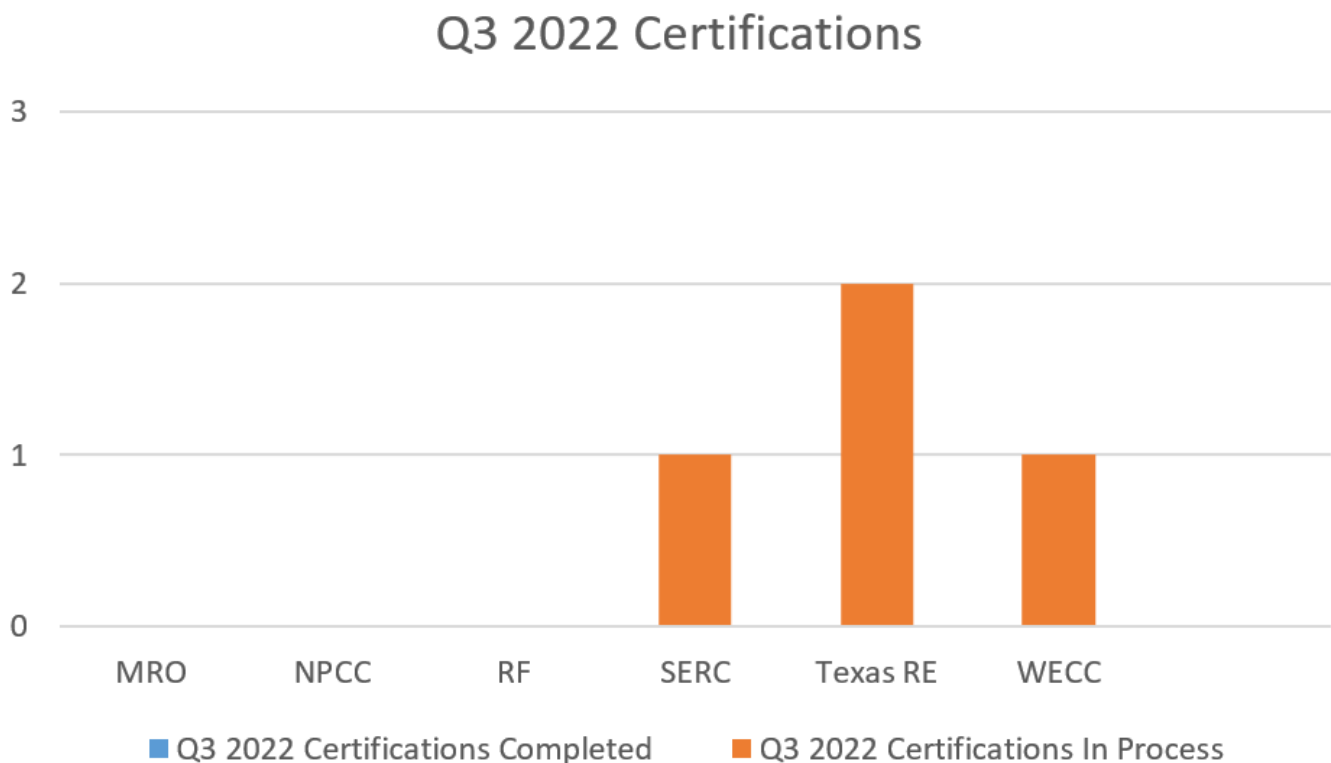

Figure D.1: Q3 2022 New Entity Certifications by RE

Table D.1: Q3 2022 Organization Certification		
Function	**Completed**	**In Process**
Reliability Coordinator	0	0
Transmission Operator	0	4
Balancing Authority	0	0

Q3 2022 Certification Reviews
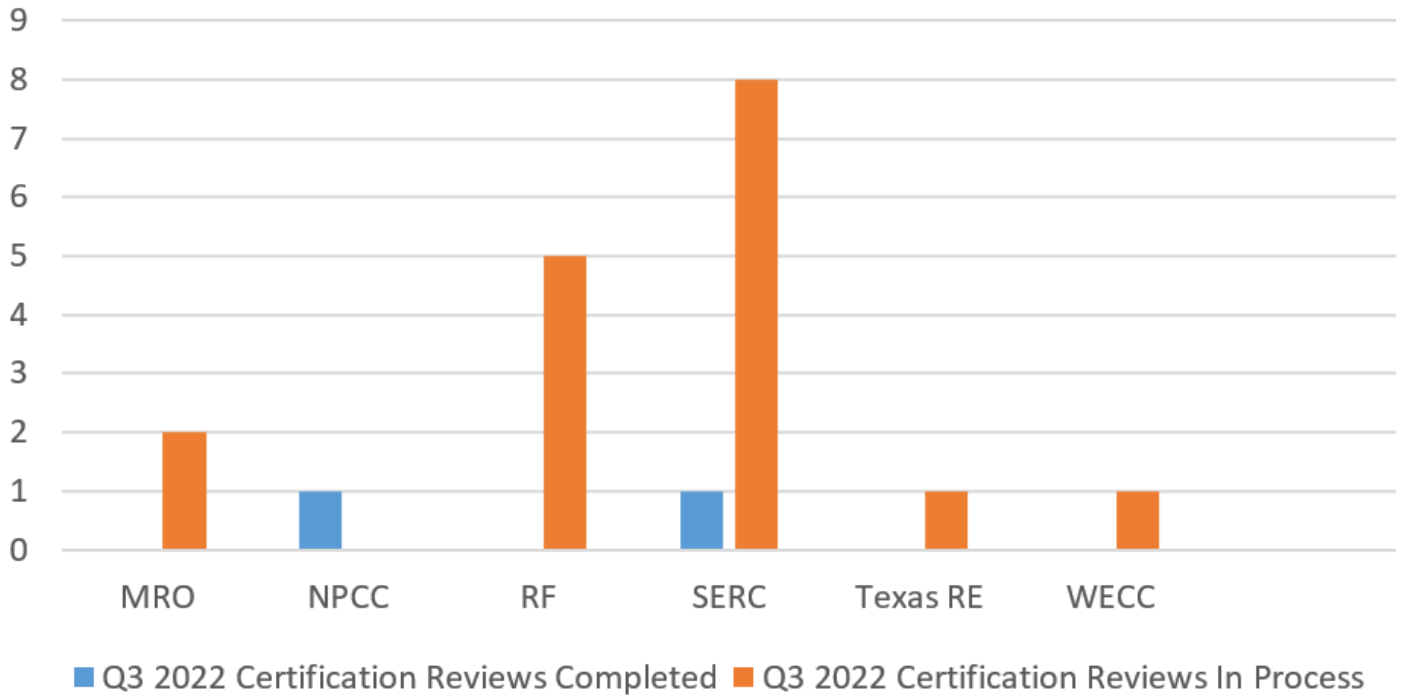
Figure D.2: Q3 2022 Certification Review Activity by RE

Table D.2: Q3 2022 Certification Review[12]		
Change Basis	**Completed**	**In Process**
Changes to a registered entity's footprint	0	2
Relocation of the Control Center	0	3
Changes to Supervisory Control and Data Acquisition (SCADA)/Energy Management System (EMS) System	2	10[13]

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[12] Some entities have multiple triggering events for certification reviews while some engagements have participation from more than one Regional Entity.

[13] One of these activities has the participation of three Regional Entities.