



continued need for the TFE, internal approval by senior managers, and regional approval through the Electric Reliability Organization (“ERO”).<sup>3</sup>

Order No. 706 also required that NERC submit an annual report to the Commission that provides a wide-area analysis of the use of TFEs and their effect on Bulk-Power System reliability.

The Commission stated:

The annual report must address, at a minimum, the frequency of the use of such provisions, the circumstances or justifications that prompt their use, the interim mitigation measures used to address vulnerabilities, and efforts to eliminate future reliance on the exception.... [T]he report should contain aggregated data with sufficient detail for the Commission to understand the frequency with which specific provisions are being invoked as well as high level data regarding mitigation and remediation plans over time and by region.<sup>4</sup>

In October 2009, NERC filed amendments to its ROP to implement the Commission’s directive in Order No. 706, proposing Section 412 (Requests for Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards)<sup>5</sup> and Appendix 4D (Procedure for Requesting and Receiving Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards). On January 21, 2010, the Commission approved NERC’s amended ROP.<sup>6</sup>

---

<sup>3</sup> *Id.* at P 222.

<sup>4</sup> *Id.* at PP 220-21.

<sup>5</sup> Section 411 in the currently effective ROP (January 2019).

<sup>6</sup> *N. Am. Elec. Reliability Corp.*, 130 FERC ¶ 61,050 (2010) (“January 21 Order”), *order on compliance*, 133 FERC ¶ 61,008 (2010) (“October 1 Order”), *order on reh’g*, 133 FERC ¶ 61,209 (2010), *order on compliance*, 135 FERC ¶ 61,026 (2011) (“April 12 Order”). The Commission requested further information and clarification regarding certain aspects of the TFE process. On April 21, 2010, NERC submitted its compliance filing in response to the January 21 Order. On October 1, 2010, the Commission issued an order accepting NERC’s April 2010 filing as partially compliant and directing further changes to the TFE Procedure. *See* October 1 Order. On December 23, 2010, NERC submitted a compliance filing in response to the Commission’s October 1 Order, which the Commission subsequently accepted. *See* April 12 Order.

On April 8, 2013, NERC filed revisions to Appendix 4D of the ROP to streamline the TFE approval process, reflecting NERC, Regional Entity, and industry experience processing TFE requests since the inception of the program. On September 3, 2013, FERC approved the proposed revisions and directed limited revisions to Appendix 4D, including modifications to: (1) specify a time frame for reporting Material Changes to TFEs upon identification and discovery; and (2) require the annual TFE report to include information on Material Change Reports and TFE expiration dates.<sup>7</sup> NERC submitted a compliance filing consistent with the directives from the September 2013 Order, which the Commission approved on January 30, 2014.<sup>8</sup> Sections 11.2.4 and 13 of Appendix 4D set forth the requirements for the annual TFE report, as modified in accordance with the September 2013 Order.

## **II. NOTICES AND COMMUNICATIONS**

Notices and communications with respect to this filing may be addressed to:

Marisa Hecht  
Counsel  
North American Electric Reliability  
Corporation  
1325 G St., N.W., Suite 600  
Washington, D.C. 20005  
202-400-3000  
marisa.hecht@nerc.net

Jeremy Withers  
Senior CIP Assurance Advisor  
North American Electric Reliability  
Corporation  
3353 Peachtree Rd NE, Suite 600 – North  
Tower  
Atlanta, GA 30326  
404-446-9798  
jeremy.withers@nerc.net

## **III. 2021 ANNUAL REPORT**

This section provides the TFE information required by Appendix 4D of the ROP. In accordance with Appendix 4D, NERC prepared the 2021 Annual Report in consultation with the Regional Entities. The Regional Entities provided regular reports to NERC regarding the types of

---

<sup>7</sup> *N. Am. Elec. Reliability Corp.*, 144 FERC ¶ 61,180 at PP 14, 17-18 (2013) (“September 2013 Order”).

<sup>8</sup> *N. Am. Elec. Reliability Corp.*, Docket No. RR13-3-001 (Jan. 30, 2014) (delegated letter order).

Covered Assets for which the Regional Entities have approved TFEs.<sup>9</sup> In addition, each Regional Entity provided information on the elements identified in Section 13 of Appendix 4D to be included in the 2021 Annual Report. NERC compiled and analyzed the TFE data provided by the Regional Entities in preparation for the 2021 Annual Report.

For the purposes of this report, any reference to the year 2021 refers to the TFE reporting period between July 1, 2020 and June 30, 2021. For the purposes of demonstrating trends, some figures or table may refer to previous TFE periods, such as 2020 and 2019.

The transition to the CIP cybersecurity Reliability Standards approved in Order No. 791,<sup>10</sup> commonly referred to as the CIP version 5 standards, resulted in a significant decrease to the number of TFEs. This decrease has enabled the Regional Entities to better evaluate the risk and impact of TFEs, and gain a more complete understanding of the value of the TFE process compared to the administrative burden it places on registered entities and Regional Entities. NERC continues to consider opportunities to modify or eliminate the current TFE process to reduce that burden in two ways. First, the NERC Align Project will normalize the tracking of TFEs between regions and greatly enhance the ability of NERC to monitor and report.<sup>11</sup> Second, multiple NERC standards drafting teams are considering ways to remove or minimize the need for TFEs in each requirement.

#### **IV. Correction to the 2020 ANNUAL REPORT**

---

<sup>9</sup> Appendix 2 of the ROP defines the term “Covered Asset” as “any BES Cyber Asset, BES Cyber System, Protected Cyber Asset, Electronic Access Control or Monitoring System, or Physical Access Control System that is subject to” a TFE.

<sup>10</sup> *Version 5 Critical Infrastructure Protection Reliability Standards*, 145 FERC ¶ 61,160 (2013) (“Order No. 791”), *order on clarification and reh’g*, 146 FERC ¶ 61,188 (2014). The CIP version 5 Reliability Standards approved in Order No. 791 became effective in the United States on July 1, 2016.

<sup>11</sup> NERC initiated the Align Project to advance its risk-based posture through platform alignment across NERC and the Regional Entities. Additional information on the Align Project may be found on the initiative webpage, <https://www.nerc.com/ResourceCenter/Pages/CMEPTechnologyProject.aspx>.

While preparing the 2021 Annual Report, NERC identified an error in the total number of CIP Applicable Entities reported in the 2020 Report. In the 2020 report NERC identified 1,470 CIP Applicable Entities. However, the correct number in 2020 should have been reported as 1,548. The reporting error was due to a miscalculation of the total reporting data received from each Regional Entity.

## Summary of 2021 TFE Data

The following is the summary of the TFE data reported by each Regional Entity for the elements identified in Section 13.1 of Appendix 4D:<sup>12</sup>

### 1. Frequency of use of the TFE Request process

*The frequency of use of the TFE Request process, disaggregated by Regional Entity and in the aggregate for the United States and for the jurisdictions of other Applicable Governmental Authorities, including (A) the numbers of TFE Requests that have been submitted and approved/disapproved during the preceding year and cumulatively since the effective date of this Appendix, (B) the numbers of unique Covered Assets for which TFEs have been approved, (C) the numbers of approved TFEs that are still in effect as of on or about the date of the Annual Report; (D) the numbers of approved TFEs that reached their TFE Expiration Dates or were terminated during the preceding year; and (E) the numbers of approved TFEs that are scheduled to reach their TFE Expiration Dates during the ensuing year.*

The data from this reporting period indicates that the number of registered entities that are engaging in the TFE program remains relatively stabilized. Figure 1 below shows a breakdown of the number of registered entities with approved TFEs within each region. There are 114 total registered entities with approved TFEs across the ERO Enterprise, a small decrease from the 116 registered entities in 2020.

---

<sup>12</sup> Unless stated otherwise, a table or reference to “2021” refers to the reporting period for this report: July 1, 2020 – June 30, 2021.

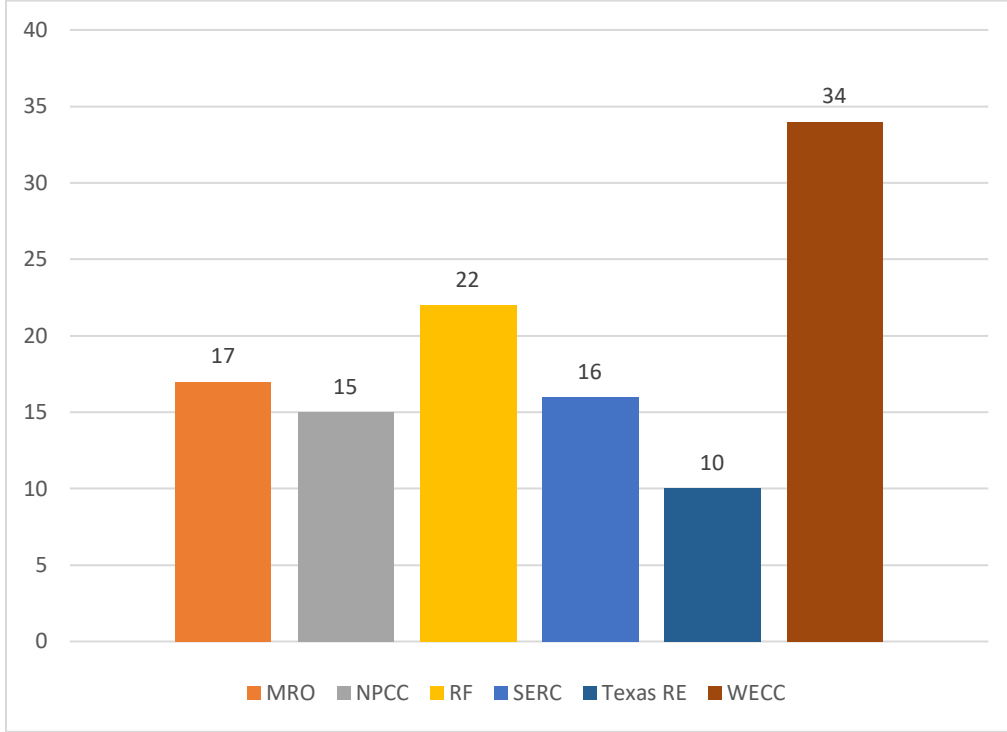


Figure 1: Number of registered entities by Region with approved TFEs as of 6/30/2021

Figure 2 depicts the number of registered entities, by Regional Entity, with TFEs over the last three reporting periods. The overall number of registered entities with approved TFEs has remained relatively consistent over the past three reporting periods. Among all six regions, the ERO Enterprise saw a small net reduction of registered entities with approved TFEs. MRO and Texas RE gained one registered entity each, SERC removed one registered entity, and RF removed two registered entities.

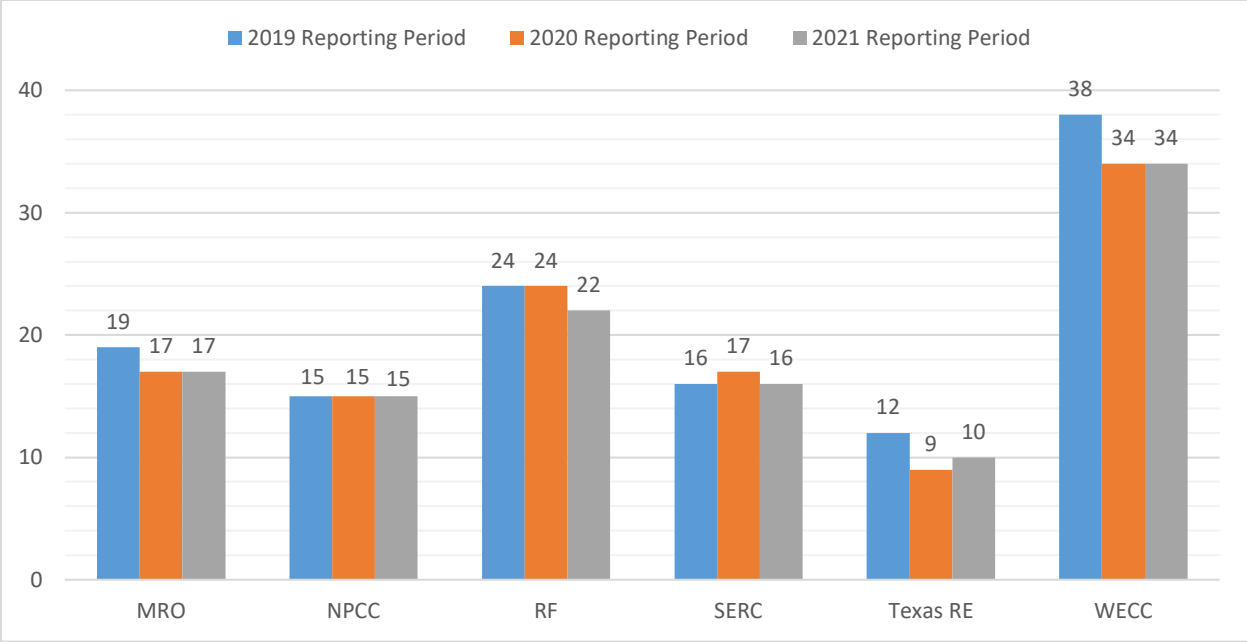


Figure 2: Three Year Trend of registered entities with Approved TFEs



The first set of columns in Figure 3 shows the number of registered entities subject to the CIP Reliability Standards over the last three reporting periods. The CIP Reliability Standards apply to the registered entities designated in Applicability Section 4.1 of CIP-002-5.1a through CIP-014-2 (e.g., Balancing Authority, certain Distribution Providers, etc.). From an industry-wide perspective, the number of “CIP applicable” entities in the U.S. (i.e., with registrations to which the CIP Reliability Standards apply) has increased from 1548 to 1577 in 2021.

The second set of columns in Figure 3 depicts the number of CIP applicable registered entities (i.e., those listed in the first column) that report having high or medium impact BES Cyber Systems (“BCS”).<sup>13</sup> As depicted in Figure 3, a decline in registered entities claiming high or medium impact BCS is noticed from 2019 to 2021 in this category. In 2021 a registered entity in the WECC region deregistered 18 registrations and merged them into one registration which contributed to the majority of the decline from 2020 to 2021. The third set of columns of Figure 3 shows the number of registered entities with high or medium impact BCS (i.e., those listed in the second column) that have approved TFEs.

---

<sup>13</sup> During the reporting period, only requirements applicable to high and medium impact BES Cyber Systems were subject to TFEs.

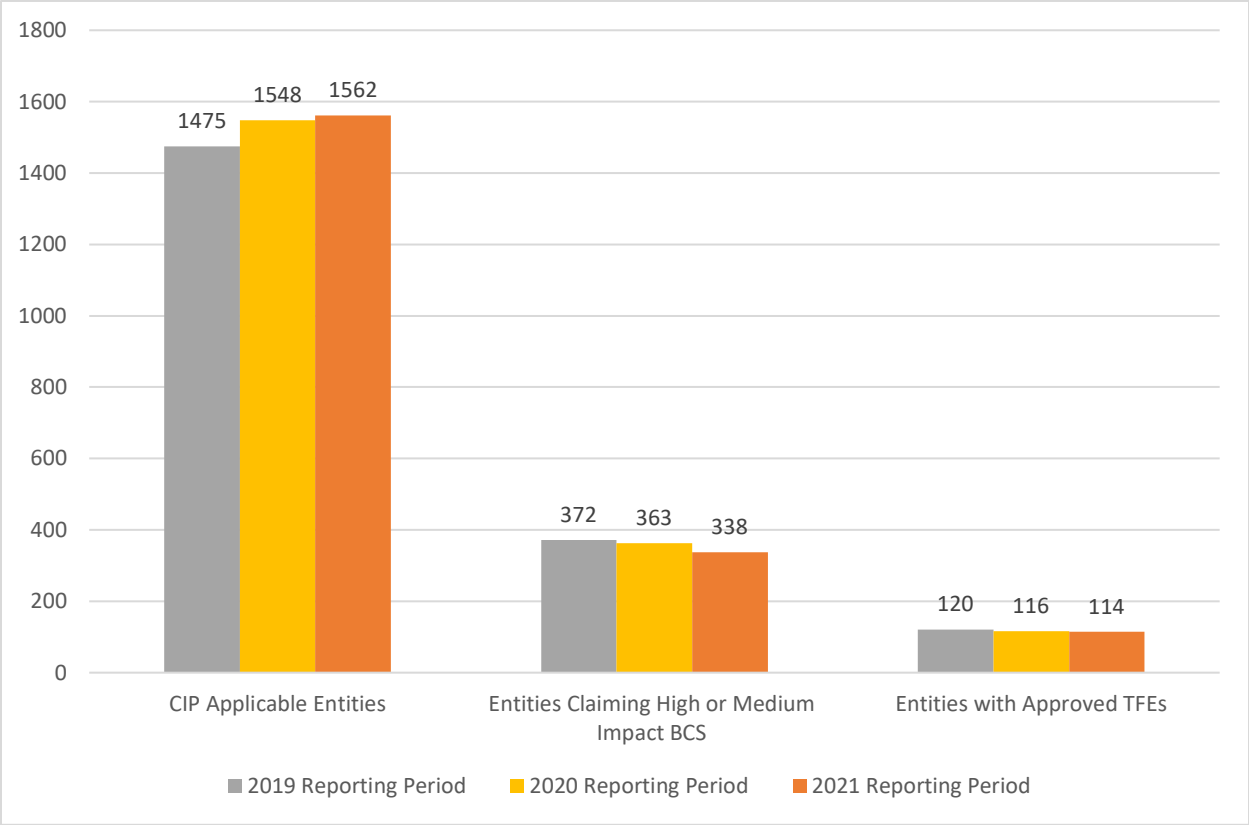


Figure 3: Frequency of TFE Program Use

Figure 4 depicts the percentage of CIP applicable registered entities with TFE activity (e.g., submissions of new requests, amendments, terminations, etc.) in 2020 and 2021. The numbers demonstrate an increase in percentage for all regions except for WECC. WECC observed a slight decrease in percentage of CIP applicable registered entities with TFE activity.

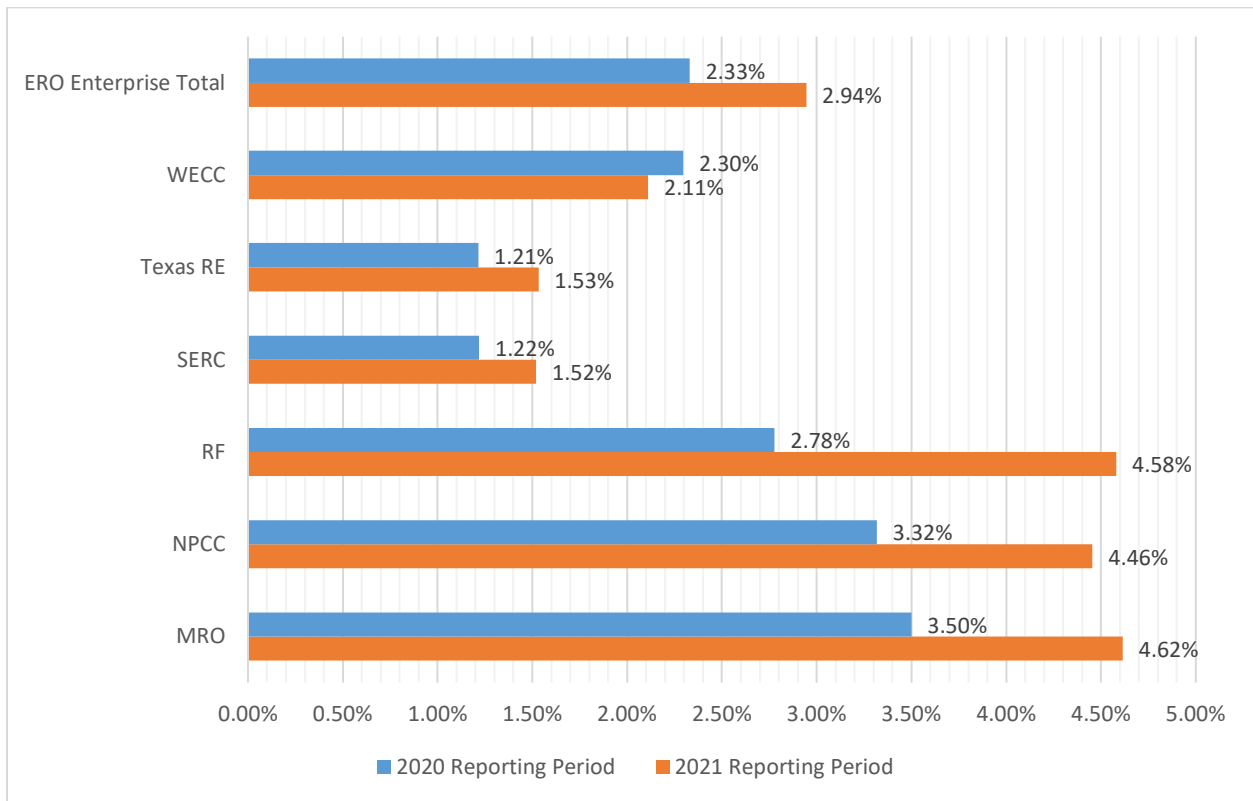


Figure 4: TFE Activities per Number of CIP Applicable registered entities

Figure 5 depicts TFE activity by comparing the number of registered entities with TFE activity (submittals, amendments, terminations, etc.) to the number of registered entities with high or medium impact BCS. An increase in TFE activity percentage occurred in 2021 compared to 2020. Overall, the ERO Enterprise activity increased 3.69% from 2020.

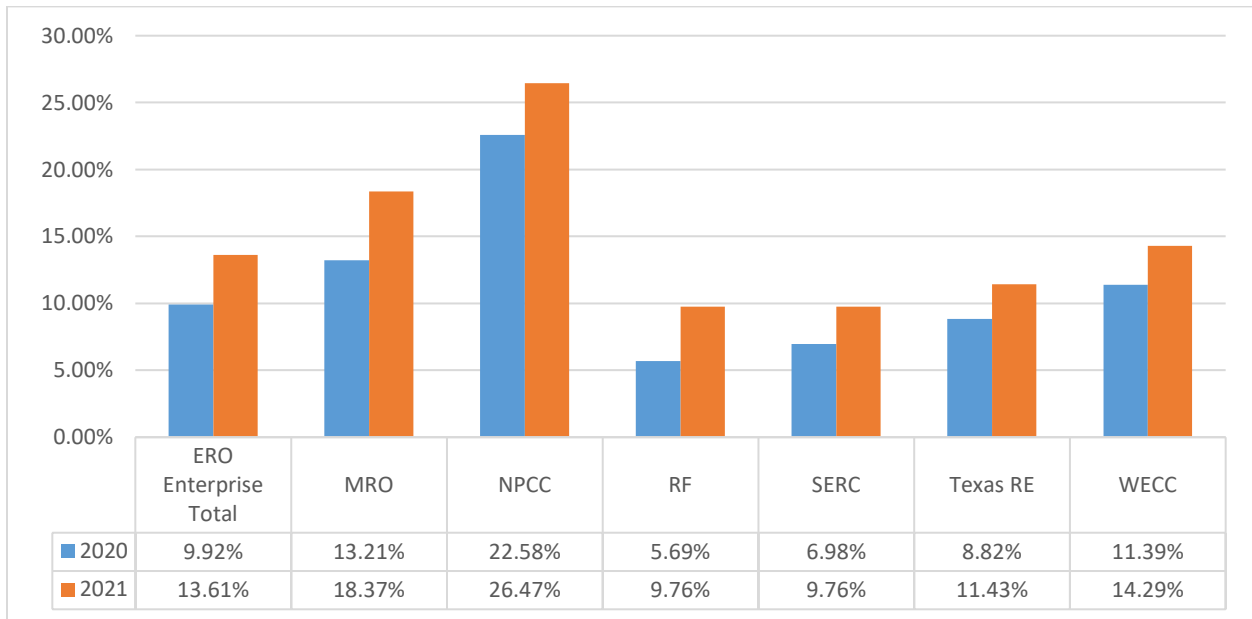


Figure 5: TFE Activity Compared to the Number of registered entities with High or Medium Impact BES Cyber Systems

Figure 6 depicts the percentage of registered entities with TFE program activity, compared to the number of registered entities with approved TFEs. This percentage has increased across all regions except WECC. RF experienced the largest percentage increase from 2020 to 2021 due to an increased number of terminations in 2021. Overall, the ERO Enterprise experienced a 7.23% increase in this category from 2020 due to an increase in the number of registered entities with TFE program activity and an increase in the number of registered entities with approved TFEs.

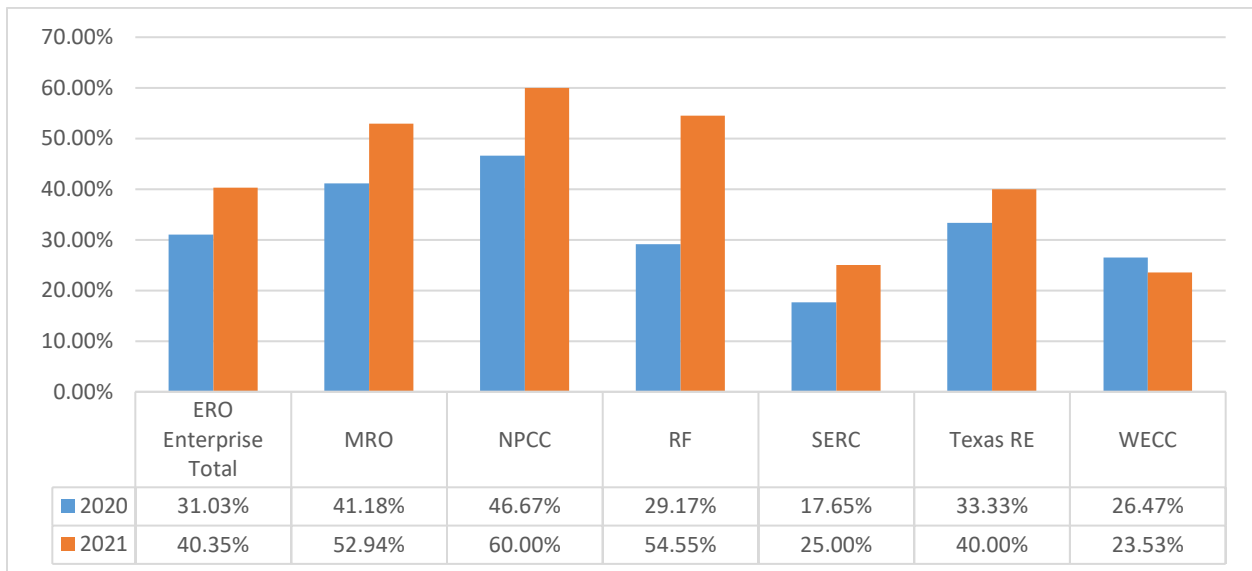
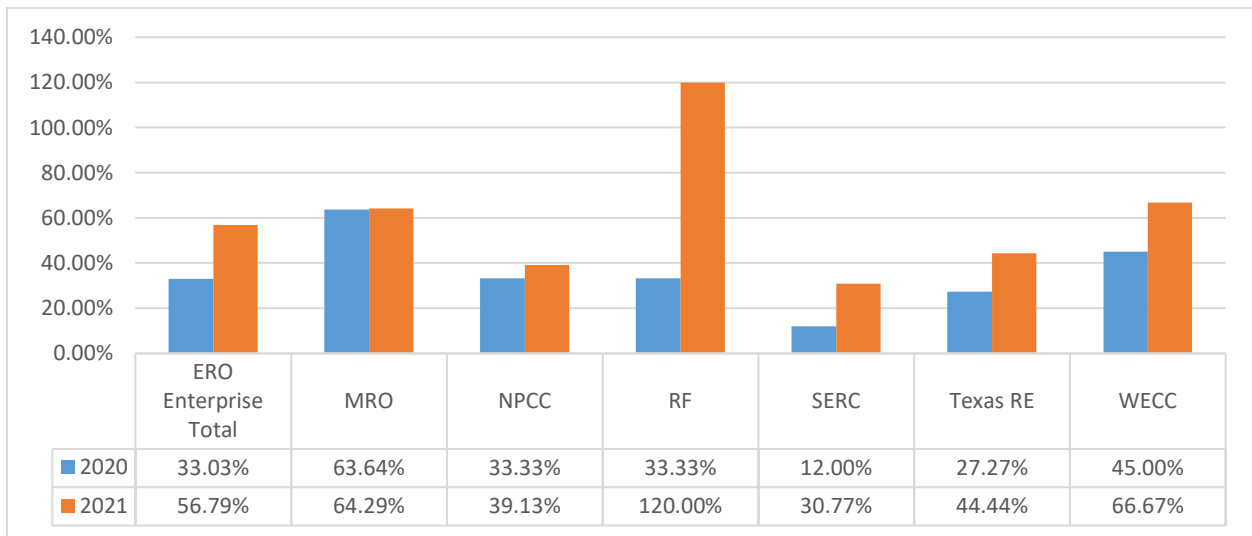


Figure 6: Percentage of TFE Interactions per Number of Registered Entities with Approved TFEs

Figure 7 depicts the percentage of registered entities with TFE program activity in 2021, compared to the number of TFEs approved in 2021. Overall, the ERO Enterprise noticed an increase in activity. RF noticed a large percentage increase due to the number of registered entities with activity compared to the number of 2021 approved TFEs being almost equal. Whereas, MRO noticed the largest percentage decrease due to the small number of registered entities with activity per large number of 2021 approved TFEs.



*Figure 7: Percentage of TFE Program Activity per 2021 Total Approved TFEs*

Figure 8 depicts the breakout of the 376 ERO Enterprise approved TFEs for each Regional Entity. For example, Texas RE managed 32 TFEs that were approved prior to 2021 and approved nine in 2021. This activity brought the total number of approved TFEs to 41 with the 2021 approved TFEs representing 24% of these TFEs. Registered entities in WECC continue to maintain the majority of total approved TFEs, while MRO contains the least.

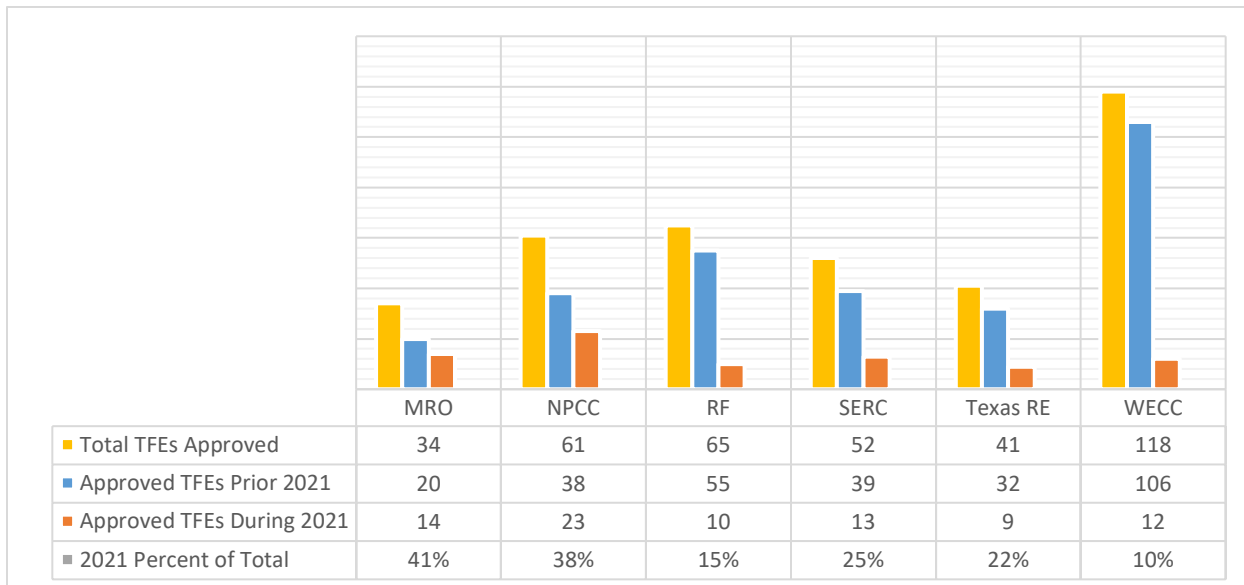


Figure 8: Total number of Approved TFEs

Registered entities submitted 130 TFE amendments in 2021. The ERO Enterprise noted 121 of the TFE amendments were approved, one disapproved, and eight remain in review as of the end of the reporting period. [Figure 9](#) provides a breakdown of TFE amendment activity by the ERO Enterprise in 2021. There are four amendments under review in SERC, two amendments under review in NPCC, one amendment under review in MRO, and one amendment under review in Texas RE as of the end of the reporting period. As shown below, Regional Entities approved the majority of the amendments submitted.<sup>14</sup>

<sup>14</sup> NERC notes that some amendments approved during this reporting period originated from a previous reporting period.

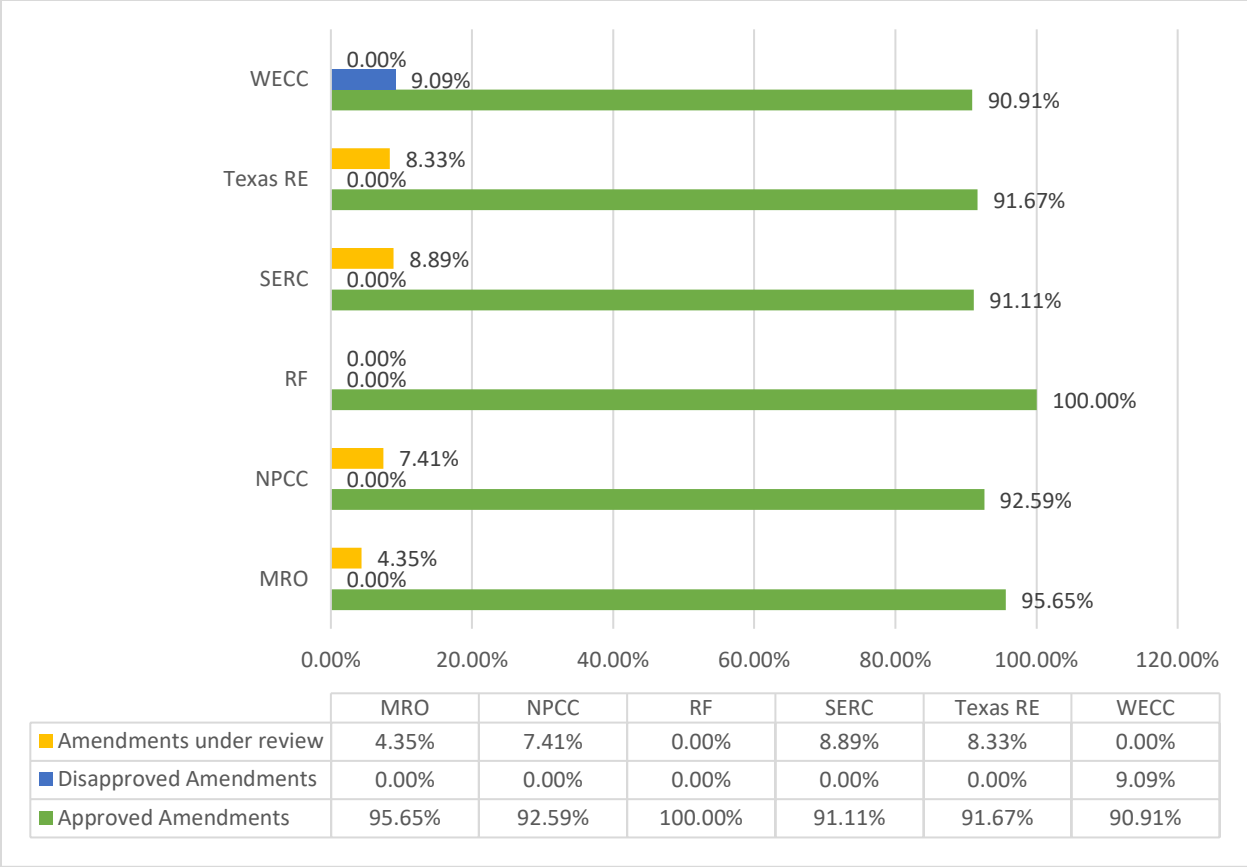


Figure 9: TFE Amendment Activity for the 2021 Reporting Period



Figure 10 depicts the minimum, mean, median, and maximum quantity of TFEs for each registered entity with an approved TFE as of June 30, 2021. As shown below, the ERO Enterprise mean average is 3.33 TFEs per registered entity that has an approved TFE (similar to the 3.41 mean average in 2020). The fewest number of TFEs a single registered entity has is one TFE. The largest number of TFEs for a single registered entity fell to 15 TFEs in 2021 from 28 in 2020; the registered entity with the largest number of TFEs is in the WECC region. MRO has the lowest mean average of 2.13 TFEs per registered entity that has an approved TFE.

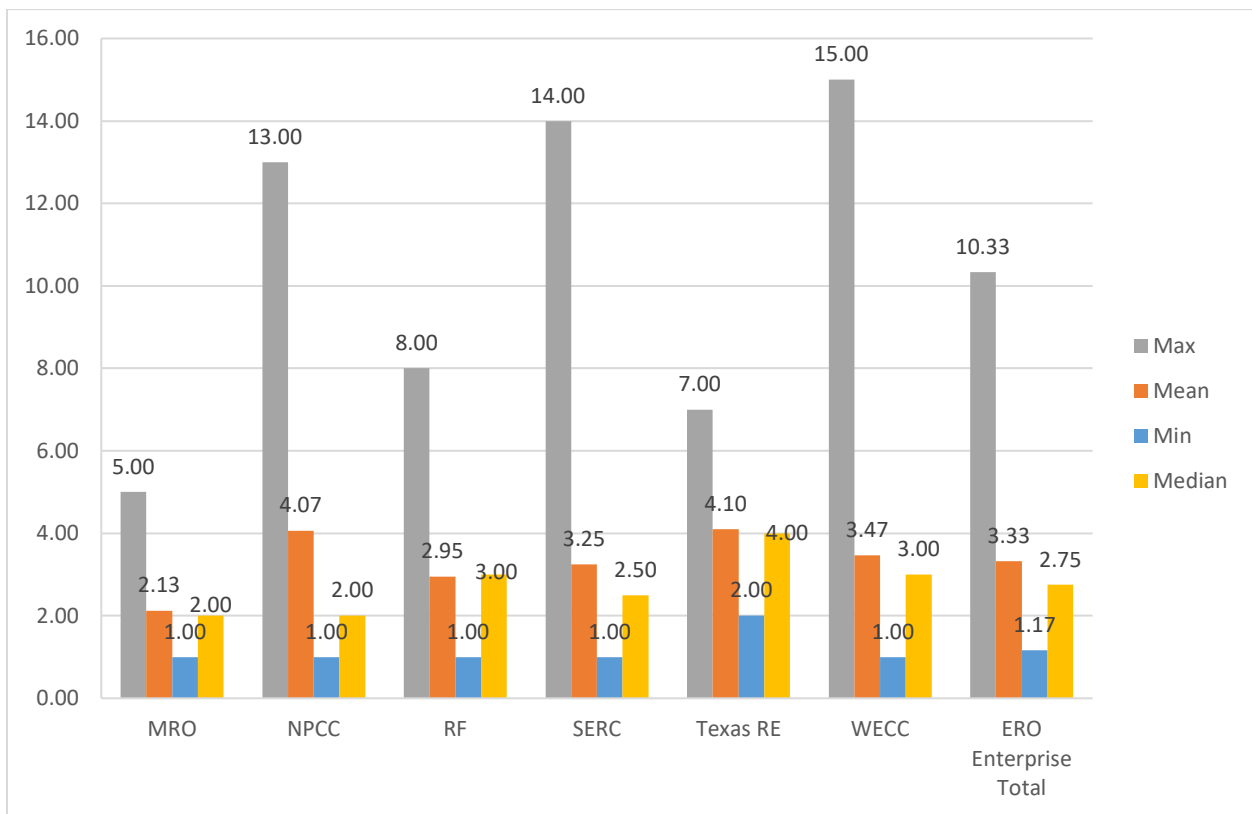


Figure 10: Average TFE Quantity per registered entity with an Approved TFE

Figure 11 depicts the percentage of TFE activity per approved TFE during the report period. The WECC region maintained the lowest percentage among the regions at 9.32%. This is due to the high number of approved TFEs in WECC compared to a small number of TFE activity.

In contrast, SERC had the highest percentage due to an almost equal number of approved TFEs and TFE activity.

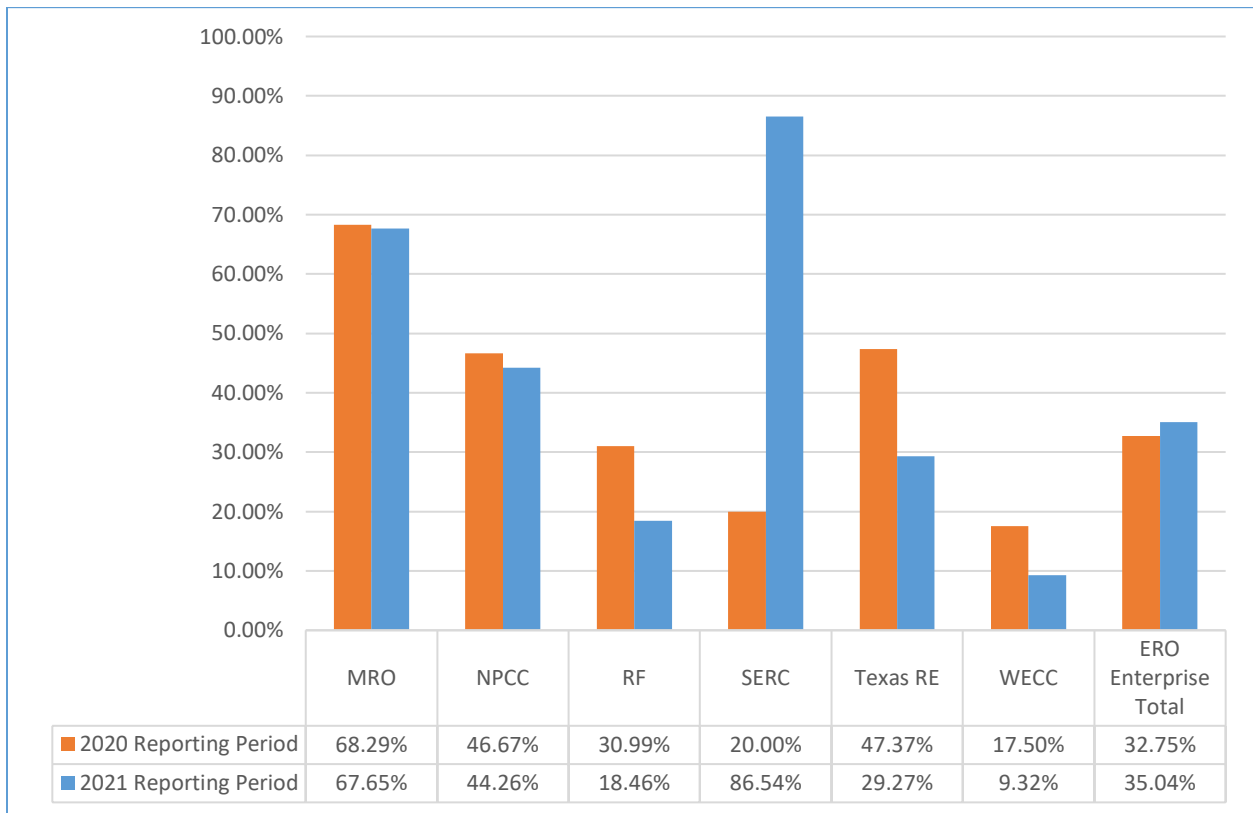


Figure 81: TFE Percentage per registered entities with TFE Activity

## 2. Categorization of the submitted and approved TFE Requests

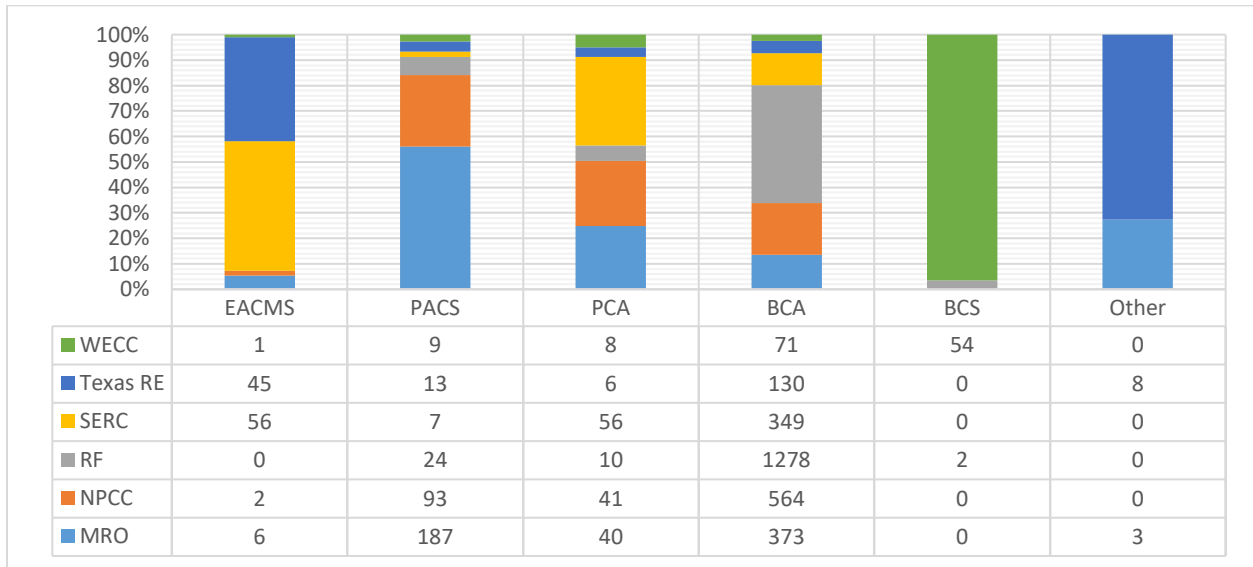
*Categorization of the submitted and approved TFE Requests to date by broad categories such as the general nature of the TFE Request, the Applicable Requirements covered by submitted and approved TFE Requests, and the types of Covered Assets that are the subject of submitted and approved TFE Requests.*

The total number of covered assets subject to TFEs continues to decrease. In 2019, the first year to use a revised asset categorization from the TFE Task Force, the total covered assets covered by TFEs was 19,801.<sup>15</sup> In 2020, the second year using the updated categorization, the total number of covered assets subject to TFEs decreased to 17,815. In 2021, the total number of covered assets subject to TFEs decreased to 11,299.

---

<sup>15</sup> To better align with the CIP standards, the TFE Task Force in 2019 changed the categorization of the assets within TFEs from “Network Data Communications,” “Relays,” “Workstation/server,” and “Other” to “Electronic Access Control and Monitoring System (EACMS),” “Physical Access Control System (PACS),” “Protected Cyber Asset (PCA),” “BES Cyber Asset (BCA),” “BES Cyber System (BCS),” and “Other.” The “Other” category remained for those assets that do not fall into the other categories. For instance, telecommunication modems, protective relays, remote terminal units (“RTUs”), satellite clocks, etc.

Figure 12 show the total number of assets within each asset category by Regional Entity for TFEs approved in 2021. The consistency across Regional Entities is that BES Cyber Assets remains the largest asset category.



*Figure 9: Numbers of 2021 Approved Assets with Asset Categories for Each Regional Entity*

Figure 13 shows the total number of assets within each asset category by Regional Entity. The consistency across Regional Entities is that BES Cyber Assets remains the largest asset category. In previous years, WECC reported a substantial amount of Cyber Assets categorized as other. These Cyber Assets consisted of 4,318 devices under one TFE, however the TFE was terminated in 2021.

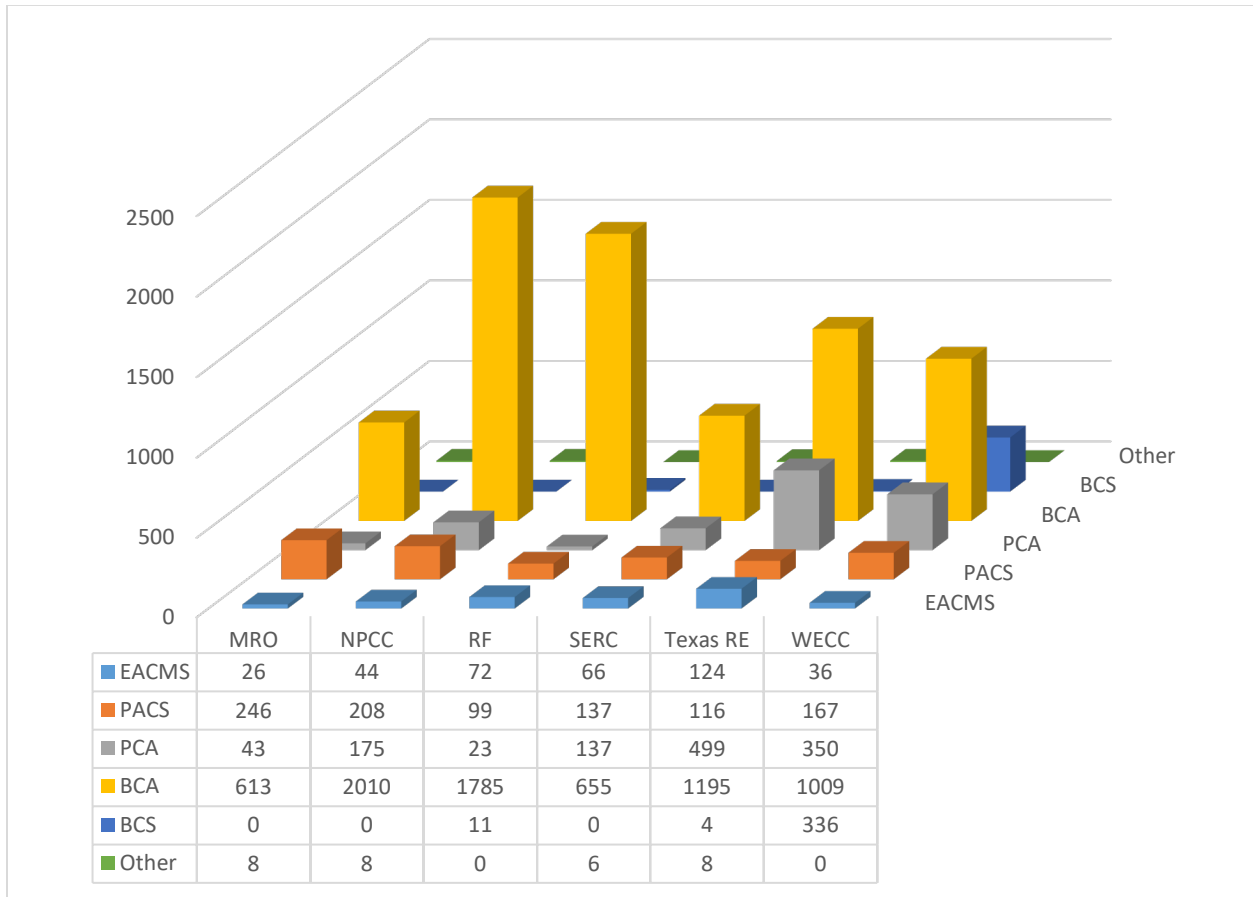


Figure 103: Number of Assets by Type and Region

Figure 14 displays the percentage of assets within each asset category and region, compared to the total number of assets covered by TFEs in the ERO Enterprise. Figure 14 is consistent with Figure 12 and Figure 13 with BCA category accounting for the largest percentage in each region.

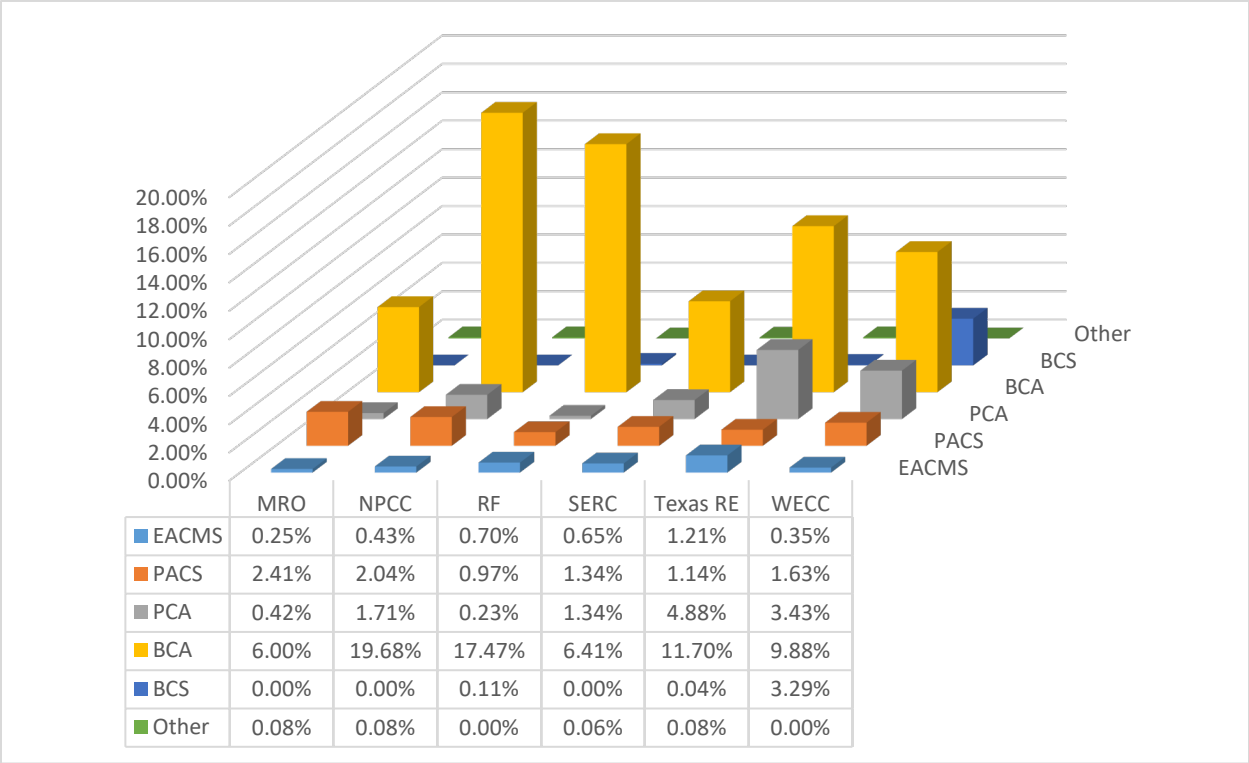


Figure 114: Percent of Assets by Type and ERO-wide

Figure 15 shows the total asset allocation broken out by Regional Entity by displaying the proportion of assets covered by TFEs in each region attributed to each category. Consistent with Figure 12, Figure 13, and Figure 14, the BCA category accounts for the largest percentage in each region.

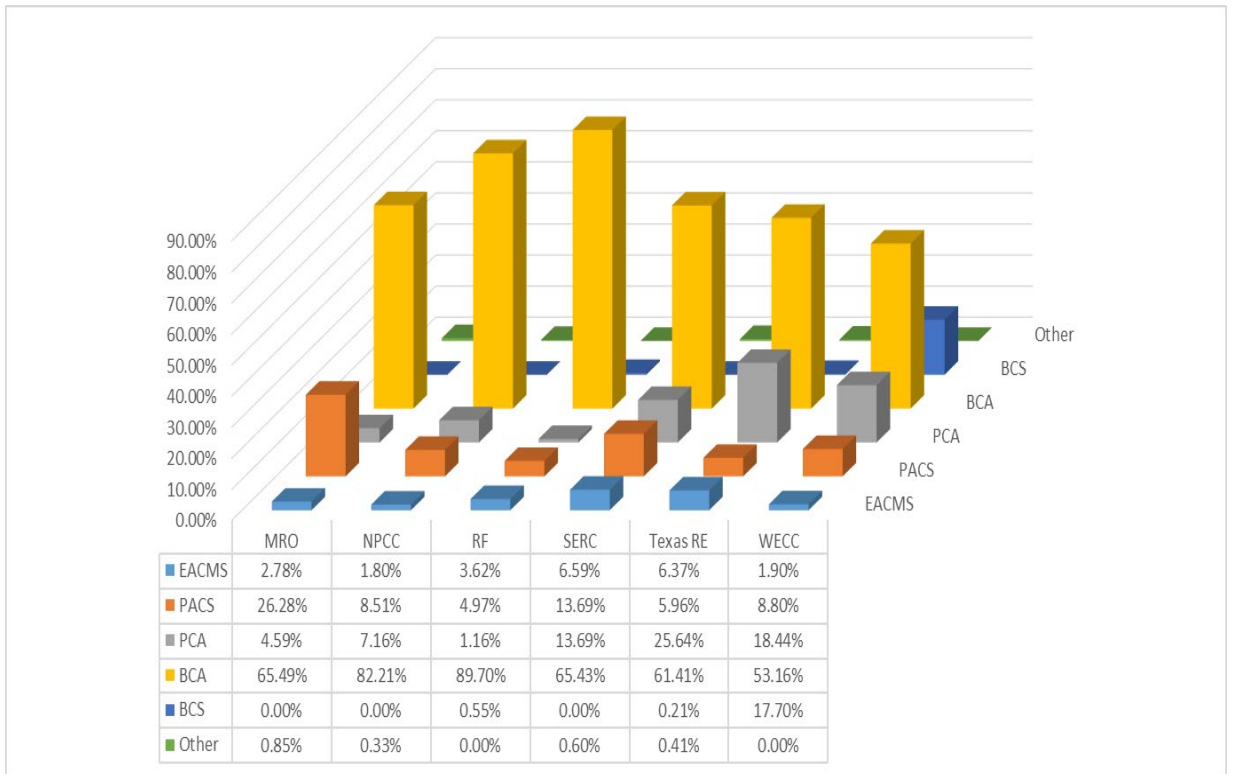


Figure 125: Percentage of Assets by Type in each Region

### 3. Categorization of the circumstances or justification

*Categorization of the circumstances or justifications on which the approved TFEs to date were submitted and approved, by broad categories such as the need to avoid replacing existing equipment with significant remaining useful lives, unavailability of suitable equipment to achieve Strict Compliance in a timely manner, or conflicts with other statutes and regulations applicable to the registered entity.*

The following are criteria that a registered entity may use to request a TFE:

- Not technically possible
- Operationally infeasible
- Precluded by technical limitations
- Adverse effect on bulk electric system reliability
- Cannot achieve by compliance date
- Excessive cost that exceeds reliability benefit

- Conflicts with other statutory or regulatory requirement
- Unacceptable safety risks

As in past years, registered entities tend to request a TFE based on one of the first three criteria listed above. To date, there have been no reports of Regional Entities approving TFEs based on the last two criteria.

#### **4. Categorization of the compensating measures and mitigating measures implemented and maintained**

*Categorization of the compensating measures and mitigating measures implemented and maintained by registered entities pursuant to approved TFEs, by broad categories of compensating measures and mitigating measures and by types of Covered Assets.*

The ERO Enterprise continues to evaluate the extent and effectiveness of compensating measures documented in TFE requests. The registered entities accomplish the majority of compensating or mitigating measures by compliance with requirements in related CIP Standards. As most TFEs relate to the same types of assets, the registered entities are applying the same mitigation measures for each of the TFEs to address the known risks.

#### **5. TFE rejection or disapproval**

*For each TFE Request that was rejected or disapproved, and for each TFE that was terminated, but for which, due to exceptional circumstances as determined by the Regional Entity, the TFE Termination Date was later than the latest date specified in Section 5.2.6, or 9.3, as applicable, a statement of the number of days the registered entity was not subject to imposition of findings of violations of the Applicable Requirement or imposition of Penalties or sanctions pursuant to Section 5.3.*

In 2021, three TFEs were disapproved in WECC. The disapproved TFEs consisted of two new TFEs and one amended TFE. The two new disapproved TFEs were for CIP-007-6 Requirement R4, Part 4.3 and CIP-006-6 Requirement R5, Part 5.7. The amended TFE disapproval was for CIP-007-6 Requirement R1, Part 1.1.



## **6. Compliance Audit results and findings concerning the implementation and maintenance of compensating measures and mitigating measures**

*A discussion, on an aggregated basis, of Compliance Audit results and findings concerning the implementation and maintenance of compensating measures and mitigating measures, and the implementation of steps and the conduct of research and analyses to achieve Strict Compliance with the Applicable Requirements, by registered entities in accordance with approved TFEs.*

Appendix 4D of NERC's ROP is part of the Compliance Monitoring and Enforcement Program ("CMEP") that forms the framework for Regional Entities to review and audit TFE requests. During a compliance monitoring engagement, the Regional Entity would not evaluate the registered entity on a particular requirement from the applicable Reliability Standard for which a TFE was accepted and approved, but instead evaluated against the alternative compliance obligations assumed by the registered entity (i.e., compensating and mitigating measures).

All Regional Entities continue to conduct compliance monitoring engagements where applicable approved TFEs are within the determined scope. Typically, during a compliance monitoring engagement of a registered entity, TFEs will be reviewed as applicable (i.e., based on relevant factors such as quantity, locations, etc.). Reviews include interviewing subject matter experts specifically about TFEs and sampling evidence pertaining to a TFE's mitigating and compensating measures, among other things. Regional Entities continue to report that registered entities are managing and maintaining their TFEs within the procedural requirements of Appendix 4D. Regional Entities and registered entities continue to process TFEs consistent with the CMEP framework.

## **7. Assessments of impacts on the reliability of the BES**

*Assessments, by Regional Entity (and for more discrete areas within a Regional Entity, if appropriate) and in the aggregate for the United States and for the jurisdictions of other Applicable Governmental Authorities, of the Wide-Area impacts on the reliability of the Bulk Electric System of approved TFEs in the aggregate, including the compensating measures and mitigating measures that have been implemented.*

The ERO Enterprise TFE Task Force, comprised of subject matter experts from each Regional Entity and NERC, reviews TFE requests to verify sufficiency and consistency of the requests' disposition. In addition, the ERO Enterprise TFE Task Force verifies the TFEs are available for review; CMEP staff performs the review when initially submitted or modified and during compliance monitoring engagements. The ERO Enterprise TFE Task Force reports that the use of TFEs has not had an adverse impact on BES reliability. The members of the ERO Enterprise TFE Task Force reported similar experiences (among different regions) with the execution and management of the TFE process and the manner in which it impacted BES reliability. Additionally, the ERO Enterprise TFE Task Force reports that a large majority of registered entities have implemented multiple compensating and mitigating measures for Covered Assets. In general, the mitigating and compensating measures implemented for approved TFEs in lieu of strict compliance with applicable CIP Reliability Standards have accomplished the stated alternate compliance objectives. As a result, the level of BES security achieved through the TFE process is comparable to strict compliance with the applicable Reliability Standards.

Figure 16 shows, by region, the number of TFEs for each requirement that registered entities submitted to the Regional Entities in 2021. The majority of the TFEs are for CIP-007-6 Requirement R5 Part 5.7. The majority of the approved TFEs are for CIP-007-6 Requirement R5, Part 5.6 and CIP-007-6 Requirement R5, Part 5.7. In contrast, CIP-005-6 Requirement R2, Part 2.1 and CIP-005-6 Requirement R2, Part 2.2 have only one TFE per requirement.

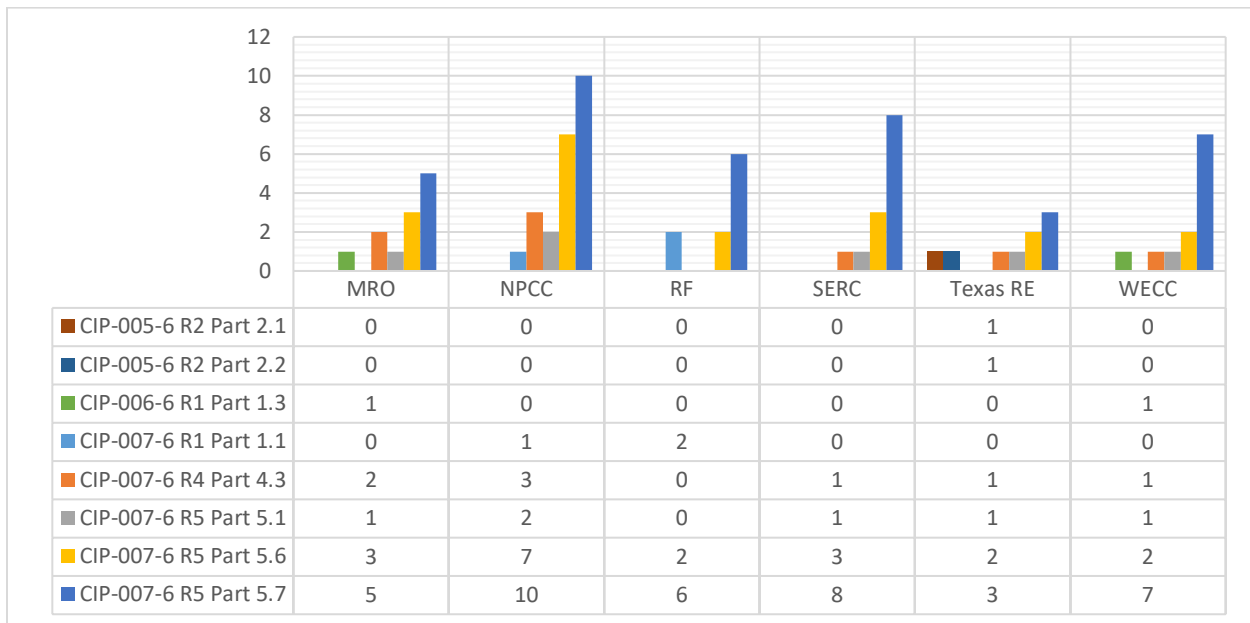


Figure 136: 2021 Approved TFE Breakout per Requirement and Part

Figure 17 demonstrates the same breakdown by Reliability Standard and requirement as Figure 16, but includes all active TFEs, not just those from the reporting period of 2021. As noted earlier, the majority of the approved TFEs are for CIP-007-6 Requirement R5, Part 5.6 and CIP-007-6 Requirement R5, Part 5.7. In contrast, CIP-005-6 Requirement R2, Part 2.1 and CIP-005-6 Requirement R2, Part 2.2 have only one TFE per requirement.

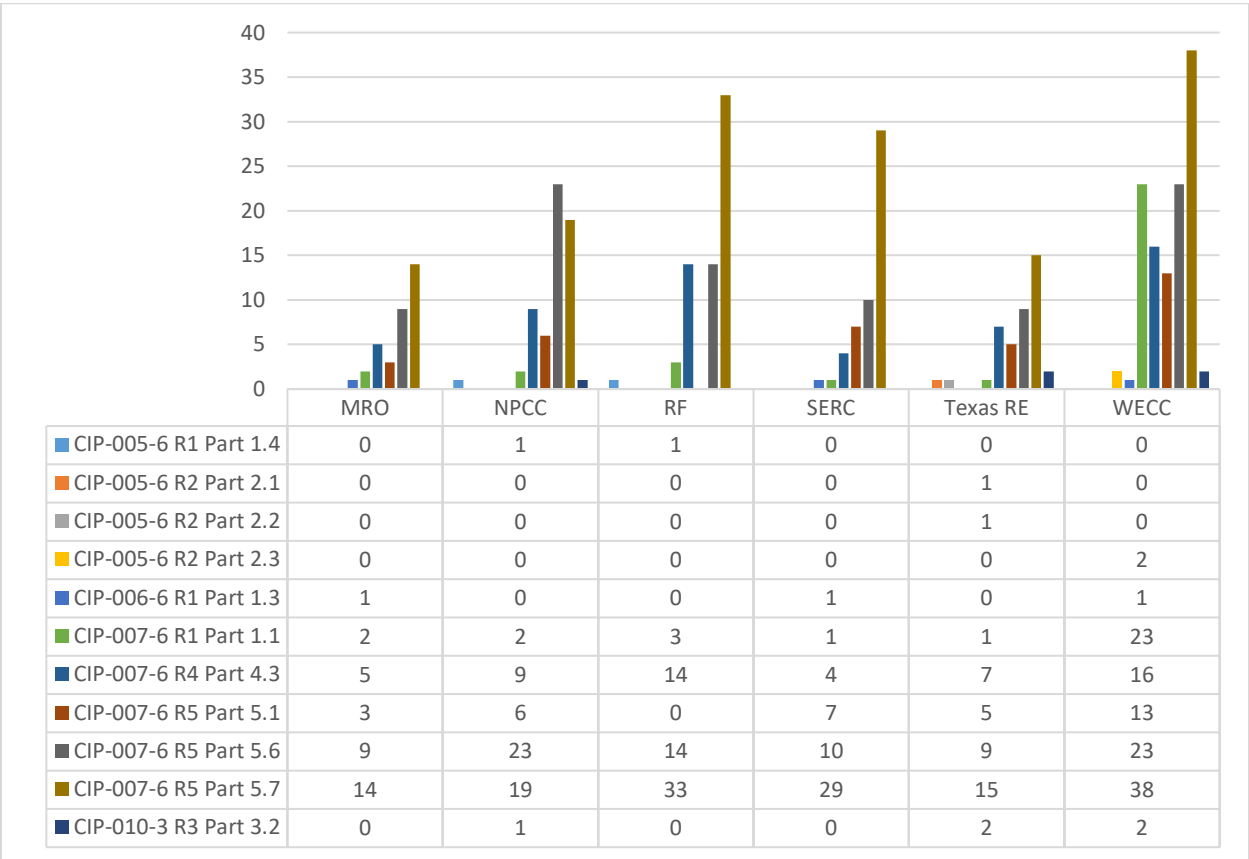


Figure 147: TFE Breakout per Requirement and Part

## **8. Efforts to eliminate future reliance on TFEs**

*Discussion of efforts to eliminate future reliance on TFEs.*

In the past, the value of a TFE was the safe harbor it provides when a registered entity could not achieve strict compliance to certain Reliability Standards. As referenced in Order No. 706, TFEs are rooted in the problem of legacy equipment and the economic considerations involved in the replacement of such equipment before the end of its useful life.<sup>16</sup> As registered entities increasingly move away from legacy equipment, the value of the TFE program, as currently constructed, is diminishing in comparison to the program's administrative burden. The decrease in the number of approved TFEs and the total assets covered by TFEs has allowed the level of effort required of the registered entity and Regional Entity to maintain and administer a TFE to decrease as well. If TFEs remain a part of the NERC CIP standards, in the next few years, the level of active TFEs may drop to a number low enough to once again allow review and maintenance as a part of the CMEP process. ERO Enterprise CMEP processes regularly assess general compliance with the CIP Reliability Standards and evaluate compensating and mitigating measures. The ERO Enterprise would likely find additional efficiency by reviewing TFEs in the context of the rest of the registered entity's compliance program, rather than separately. As the overall numbers dwindle, this may become an attractive option.

During quarterly meetings, the ERO Enterprise TFE Task Force focuses on TFE management, administrative processes, and approaches to making the processes more effective and efficient for the Regional Entities and registered entities. The ERO Enterprise TFE Task Force has stated that there may be opportunities to retain the same awareness and risk mitigation of the TFE program while reducing the administrative burden. For example, the ERO Enterprise could

---

<sup>16</sup> Order No. 706 at P 157.

allow a registered entity to maintain the exception without prior approval, provided that the registered entity could demonstrate during compliance monitoring engagements that: (i) the exception is reasonable; and (ii) the registered entity implemented appropriate mitigation measures in lieu of strict compliance. As the ERO Enterprise considers alternatives to the TFE program as presently constituted, it will consult with Commission staff. NERC will seek Commission approval for any proposed changes to the NERC ROP. Additionally, current standards drafting teams may propose changes to the TFE language as found in currently approved CIP Reliability Standards.

## **9. Material Change Reports**

*Data and information regarding Material Change Reports, including the number of Material Change Reports filed annually and information regarding the types of circumstances or events that led to Material Changes, as well as any additional information NERC believes would be useful.*

When registered entities modify the information associated with approved TFEs, the registered entity submits updates to the relevant Regional Entity via a Material Change Report (“MCR”). An MCR requires approval by the Regional Entity, which can then refer to the updated, current data when undertaking compliance monitoring activities (e.g., Compliance Audits, Spot Checks, Self-Certifications, etc.). Figure 18 shows the percentage of Material Changes per approved TFEs within each region. The majority of requested changes occur for asset count changes and administrative updates, such as changing the primary contact’s information. The 2021 average across the ERO Enterprise is just under 35%, when calculated as an average across the percentage of each region. Overall there were 130 TFE Material Changes submitted across the ERO Enterprise.

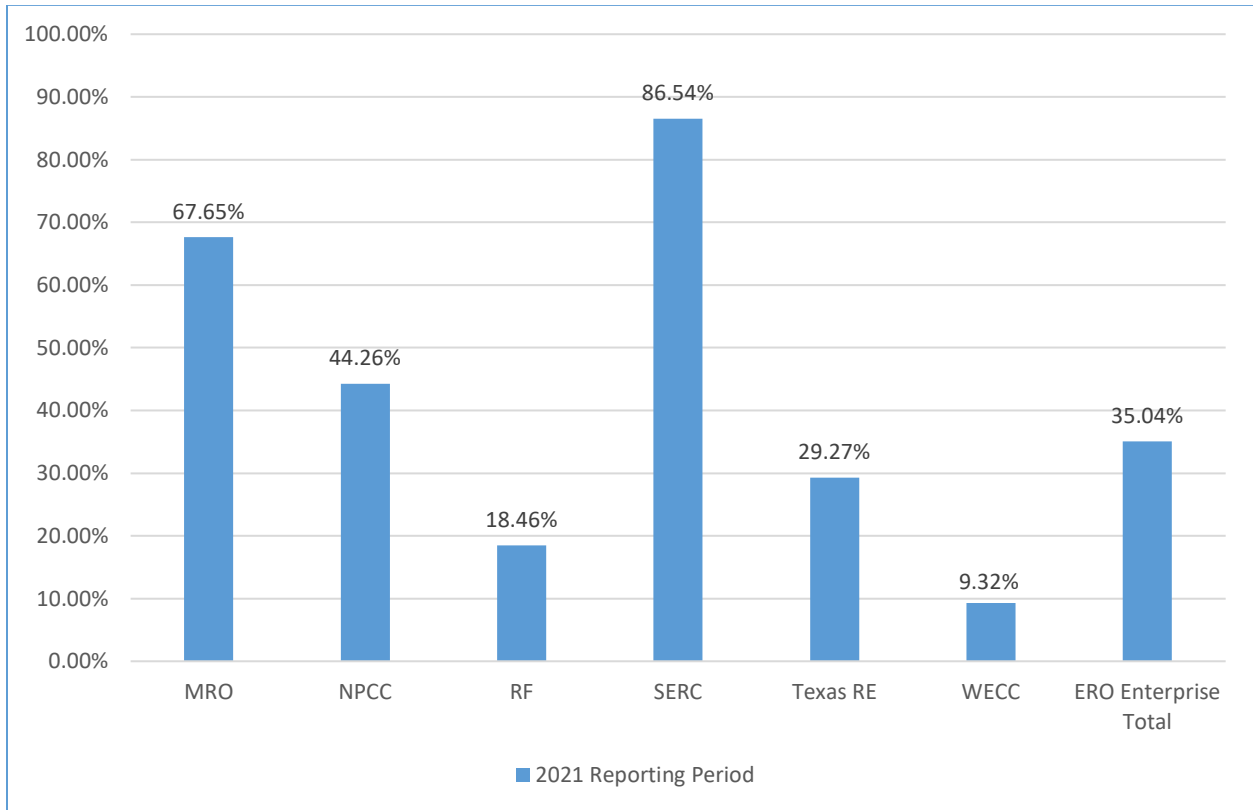


Figure 158: Percentage of Submitted Material Changes per Approved TFE

## 10. Additional information about TFEs and their TFE Expiration Dates

*Additional information about TFEs and their TFE Expiration Dates, including the number of TFEs by expiration year and CIP Standard requirement, the percentage of currently approved TFEs without TFE Expiration Dates, and the number of new TFEs approved without expiration dates annually.*

In its September 2013 Order, the Commission directed NERC to provide additional information in the annual TFE reports related to TFEs with and without expiration dates. As reported previously, most TFEs do not have expiration dates. During the 2021 TFE reporting period 17 TFEs were terminated (11 TFEs in RF and 6 in WECC).

In addition, three TFEs are scheduled to expire in the future, unless further amended by the registered entity. Two TFEs are planned to expire during the 2022 TFE reporting period (between July 1, 2021 and June 30, 2022) and the remaining TFE is scheduled to terminate after the 2022 reporting period. These TFEs cover a total of five assets for CIP-007-6 Requirement R5, Part 5.6 and CIP-007-6 Requirement R5, Part 5.7.

Figure 19 shows the breakdown of TFEs with future expiration dates.

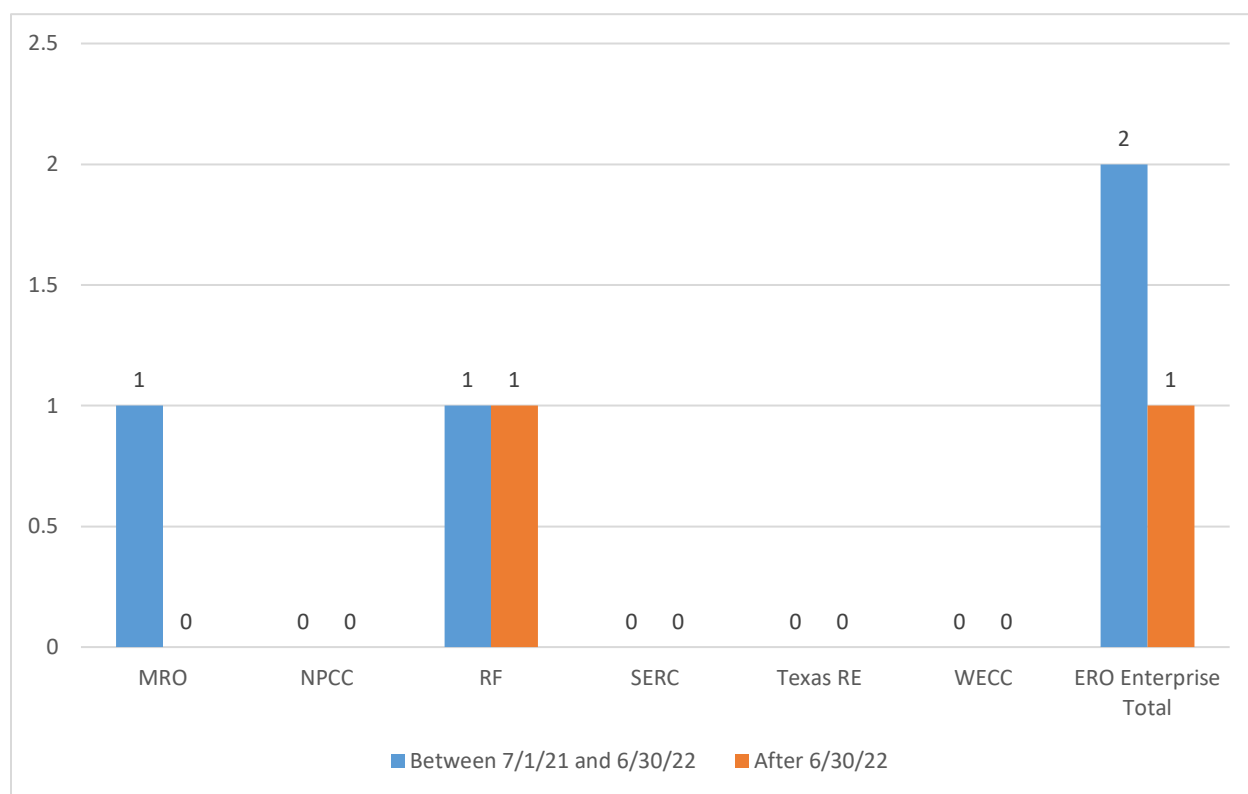


Figure 19: TFEs to Expire in Future

### 11. Consistency in Review, Approval and Disapproval of TFE Requests

Appendix 4D, Section 11.1 of the NERC ROP requires that NERC and the Regional Entities collaborate to assure “consistency in the review, approval and disapproval of TFE Requests. . . .” Also, as noted above, Section 11.2.4 of the Appendix 4D requires that NERC submit with each Annual TFE Report certain information concerning the manner in which Regional



Entities have made determinations to approve or disapprove TFE requests. The scope document for the ERO Enterprise TFE Task Force describes activities and deliverables that support this effort:

- Review Regional Entities' processes and performance in administering TFE Requests and Material Change Reports;
- Evaluate whether the administration of TFE activities among the Regional Entities yields consistent results;
- Assess compensating and mitigating measures described in TFEs for quality and sufficiency;
- Review approved and disapproved TFE Requests or Material Change Reports for consistency; and
- Monitor approved TFEs throughout their life cycle to determine whether they remain necessary and effective.

The ERO Enterprise TFE Task Force will continue to collaborate on these actions in 2021 and 2022. Additionally, the ERO Enterprise TFE Task Force continue to rigorously review the TFE data throughout the year in an effort to present the best information and analysis possible to FERC.

## V. CONCLUSION

For the foregoing reasons, NERC respectfully requests that the Commission accept the 2021 Annual Report.

Respectfully submitted,

*/s/Marisa Hecht*

Marisa Hecht  
Counsel  
North American Electric Reliability Corporation  
1325 G St., N.W., Suite 600  
Washington, D.C. 20005  
202-400-3000  
marisa.hecht@nerc.net

*Counsel for the North American Electric Reliability Corporation*

September 28, 2021