

2000 NERC Compliance Enforcement Program



North American Electric Reliability Council

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Executive Summary

The 2000 NERC Compliance Enforcement Program Report presents the results of the second year of a four-year multi-phased Compliance Program for NERC and the Regional Councils. In the 1999 program, one of the primary purposes was to test the effectiveness of the compliance process along with testing the appropriateness and effectiveness of a limited number of standards, measurements, and compliance templates. The 2000 program continued with all but one of the measures used in the 1999 program and field-tested additional templates and processes. With the conclusion of the 2000 program, it is now possible to comment on the effectiveness of the program and to assess any improvement in compliance with the measures to the Standards used in both years of the program. The 2000 Program included compliance assessments of 57 measurements, which included 37 Planning Standard measurements and 20 Operating Policy measurements.

The Compliance Program Staffs continue to be encouraged by the fact that compliance with NERC Standards is the norm rather than the exception. In many cases, when non-compliance was determined, the sending of letters identifying non-compliance has led to improved performance. In other cases, where compliance is being shunned, only the reliability legislation now before the United States House of Representatives will give NERC the authority to enforce compliance.

Difficulties are also being encountered with several entities that are not members of a Region. Many of these entities may not be aware of NERC rules and others simply can avoid compliance because the Regions have no authority over their performance. Problems with the process are also evident. For instance, the time required to bring a compliance template to the Board of Trustees for approval is discouraging. A template introduced in 1998, was field tested in 1999, revised in 2000, and presented to the Board for final implementation in 2001 — a three-year process. A quicker way to implement a measurement technique needs to be found.

On a positive note, all NERC Regional Compliance Programs have developed extensive mechanisms and processes to implement the program. The NERC Regions are responsible for the implementation of the bulk of the Compliance Enforcement Program through the use of the compliance templates developed for the Operating Policy and Planning Standard measures. NERC has the responsibility to ensure the implementation of the measures as well as measure Regional performance. Technical task forces and subcommittees serve as experts to advise on these matters.

The compliance process includes the following four steps:

1. The collection of pertinent data
2. The review and assessment of compliance to a given Standard
3. Enforcement (either simulated or actual where allowed)
4. Mitigation (where warranted)

Components of the compliance process were implemented during the 2000 NERC Compliance Enforcement Program to varying degrees in the Regions based on whether actual enforcement actions were taken. The enforcement portion and its associated sanctions and awards were tested, but until legislative authority provides for enforcement penalties, it will be difficult to ascertain the effectiveness of compliance using enforcement matrices developed by NERC. Once legislation is passed, enforcement and mitigation will require further development and refinement.

During the course of the 2000 Program, a number of improvements were again made. Some related to refining the measurements and templates, while others had to do with the compliance process itself. The comments collected through the Public Comment Process on the standards, measurements, and templates

were referred to the appropriate Standards-making bodies, and comments relative to mechanisms and processes are presented in the “Lessons Learned” section of this report.

The compliance measurements and templates have proven to be effective tools in assessing compliance, but they are far from perfect. The field tests associated with each Phase of the Compliance Enforcement Program has highlighted deficient areas and led to improvements in the measurements and templates. The Program continues to demonstrate the need for field-testing the compliance templates prior to their approval.

All parties involved in the process, including those audited, believed that compliance with NERC and Regional Standards is vital to the preservation of the reliability of the interconnected electric system. It is extremely important for NERC and the Regions to continue efforts to improve the Compliance Enforcement Program if NERC and the Regions are to carryout their mission “to keep the lights on”.

Introduction

The North American Electric Reliability Council (NERC) Compliance Program is a program designed to measure and ensure compliance with the NERC reliability rules contained in the NERC Planning Standards and Operating Policies in order to provide for a reliable bulk electric supply and delivery system in North America. The program is being introduced over a four-year period using a multi-phased approach. In each of these annual phases of the program, a select number of measures to NERC Standards, implemented through their compliance templates, will be added to the program and 'field tested' prior to being adopted for formal compliance reviews. The measures to the NERC Standards that have been successfully "field tested" in previous years will continue to be in effect and subject to compliance assessment in succeeding years of the program. Once approved by the Standing Committees and the Board of Trustees, these measures will be eligible for full enforcement actions including sanctions once legislation is enacted and the program approved by the necessary regulatory bodies or if a contractual based program is developed. The objective of the compliance program is not to collect monetary sanctions, rather it is to encourage compliance to the policies, standards, and procedures necessary to preserve the reliability of the interconnected bulk power system.

This report presents the results from the second year of the multi-phased implementation of the NERC Compliance Program. This 2000 Compliance Program was expanded and included almost all the Planning and Operating measurements evaluated in the 1999 Program. Lessons learned from the 1999 Program were successfully incorporated into this year's program. In the spirit of striving for continuous program improvement, this report highlights this year's lessons learned, conclusions, and recommendations that will be considered in the 2001 Program.

2000 Compliance Program Measurements

The Regions, NERC subgroups, the Compliance Review Working Group (CRWG), the Compliance Subcommittee (CS), and the Compliance Managers Committee (CMC) conducted the NERC 2000 Compliance Program with the intention of further testing the Regional and NERC compliance processes as well as the NERC Standards and measurements.

Fifty-seven measurements were included in the 2000 Program. The 1999 Program consisted of 22 total measurements; 17 of which are carried over in the 2000 Program. These planning templates are listed in **Appendix A**, and the operating templates are in **Appendix B**. A brief description of each template including monitoring and submittal responsibilities are outlined.

Program Process

In all instances, the compliance process consisted of two main components: compliance assessment and enforcement. In many cases intermediate steps were followed to ensure that there were few disagreements on the findings of fact.

Compliance assessments

Compliance Assessments were carried out in a variety of fashions this year. With new staff positions added to the Regional Compliance Programs, some Regions utilized these resources to perform the audits and the processes. Other Regions continued to use independent auditors for actual audits of their members. NERC Planning Committee subgroups were also used to review the Regions.

The methods used for assessment also varied by Region. The use of self-certification procedures was used this year to facilitate the expanded number of measures in the program. Other methods included random audits, exception reporting, and investigations triggered by a specific event or complaint. In all cases, the results were then discussed with those being assessed to clear up any misunderstandings and to ensure factual correctness.

Enforcement

As was the case in the 1999 program, this aspect of the compliance program was difficult to assess its effectiveness, and will continue to be difficult to assess until the sanctions are enforceable by NERC and the Regions. However, with the heightened awareness in the program, it is encouraging that in some Regions the notification of non-compliance was enough incentive to result in necessary improvements. This was evident in the improvement (one-half the number of violations) in compliance with the measures that were in the 1999 program and carried forward into the 2000 program. The effectiveness of the NERC enforcement matrices is, at best, inconclusive at this time. The Compliance Subcommittee, Compliance Review Working Group, and the Compliance Managers Committee believe they need to review the matrices for consistency before they are included in the 2001 program.

WSCC began collecting penalties associated with their Regional compliance program in September 1999 and continued that effort into the 2000 program. This procedure will provide valuable insights to all Regions and NERC in determining the effectiveness of the actual sanctions.

The sanctions assigned to non-compliance are not intended to punish those with deficiencies, but rather to highlight problems, while adding an incentive to improve their performance. The sanctions are designed to increase, however, if the same non-compliance is repeated. As the compliance program evolves, the appropriateness of this philosophy will be determined and, if warranted, changes made.

In addition to identifying and levying the appropriate sanctions for non-compliance, those assessing compliance also have the responsibility to request mitigation plans from the deficient parties, along with overseeing the implementation of those plans. A deficient Region will likely be monitored by NERC on a more frequent basis until compliance to the violated NERC Standard is achieved.

Regional appeals and alternative dispute resolution processes are available to resolve issues associated with either the compliance review or enforcement processes. If resolution cannot be achieved at the Regional level, NERC will serve as the industry backstop to hear appeals and resolve disputes. For measures where NERC has monitoring responsibility, formal processes have not been developed beyond that of the NERC Dispute Resolution. The Compliance Review Working Group has handled disputes to date and while this has worked, it is clear that an independent forum is required for handling of these types of disputes as well as any disputes that cannot be resolved at the Regional level.

The Standing Committee's Task Group formed a small group to review the structure of the NERC Compliance Enforcement Program and made a report to the Board of Trustees in May of 1999. This report was labeled interim largely because enabling legislation was not in place. It is now apparent that NERC needs to move forward with its Compliance Enforcement Program and adjudicate mandatory compliance of issues absent legislation.

Lessons Learned

There were many new lessons learned during the 2000 Compliance Program. Some of these experiences were positive while others negative. In 2001, the Compliance Program will continue to build upon the

strengths noted and modify those areas that require improvement. The following are some lessons learned from the 2000 Program.

Program reporting requirements and manpower implications

Most Regions indicated that the reporting requirements, primarily of the Planning Standards, placed a large burden on the members who must report as well as the Regional programs themselves. The implication is that if the reporting requirements remain at their current level, there will be too many compliance templates to maintain a manageable program. It is felt that the reporting requirements of the program should focus on those measurements that could significantly affect reliability (results-based standards and not just measurement standards). The public comment process included in the *Process for the Development of NERC Standards* is also burdensome and time consuming to their members when there are templates as well as standards to be commented on. The Standards development process is very active and difficult to keep properly engaged with.

Exception reporting

The process of exception reporting needs to be reviewed and improved if it is to remain effective. This may include adding a self-certification process to corroborate the exception reporting process.

Communications

Numerous communication improvements have been made since the 1999 program. Roll-out seminars were held in all ten Regions and have been improved. In general, all forms of communication between the Regions and its members have been more effective. Compliance contacts in both the Regions and the members have been established and have generally been successful. Many Regions conducted on-site visits to promote improved communications with its members even prior to any requests for information or audits. Some isolated areas that require improvement have been noted. The process for establishing a data collection schedule and specific due dates should be reviewed and clarified as needed. Some Regions did not know the applicability of certain measurements to various entities. This resulted in many Level 4 non-compliant assessments due to a lack of any response. In most cases, the assessment was incorrect since the measurements did not apply to the entity. Additional clarity of template requirements and expectations is needed. Some of the Regions are expecting their Regional Compliance staff to track NERC data requests of their members. As a result, development of a communication path between the NERC Data Requestors and the Regional Compliance offices will be evaluated.

Timeliness versus quality

Separating the timeliness of data from the quality of such data submittals has been very beneficial. This was one major area of improvement this year. It helped in achieving better compliance with the requirements of the program and was successful in discouraging submissions that are incomplete or inaccurate but are on time.

NERC subcommittees

The NERC Subcommittees that are responsible for the NERC Compliance program have established cooperative relationships and worked extremely well with one another.

Self-certification

All Regions utilized the self-certification process extensively in 2000. This minimized the exchange of large quantities of data as happened in 1999. The use of this process still should be expanded where applicable. Executive-level signatures provided on the self-certification submittals proved to be most important in defining the level of attention the Compliance Program received. A Region effectively utilized a two-step process incorporating pre-reporting. Verification of adequacy, timing and thoroughness of self-certification needs to be focused. Some entities indicated that certain self-certification was not applicable to them but did not state the rationale behind such position. Other entities did not respond at all and were classified as Level 4 non-compliant.

Small entities

It was noted that small entities are struggling with the requirements of the program. The ability to provide data, the appropriateness of such data, and the applicability of the requirements are issues that need to be resolved. They also had difficulty in obtaining operator certifications.

Non-members

Some Regions are having serious difficulty obtaining responses from entities that are not members of the Region. The Regional Compliance Enforcement Programs are faced with non-responses from some non-members and do not have any authority, through Interconnection agreements or the like, to obtain compliance. This is a supportive example for the need for legislation, a change in Regional membership requirements, or the need for binding agreements of non-Regional members and the Control Area.

Sanctions

In some instances, the monetary simulated sanctions for quality violations were significantly lower than the sanctions that could have been levied for timeliness violations. It was felt that, in general, the monetary sanctions might be too low to encourage compliance. Planning and Operating measure enforcement sanctions are inconsistent.

Staffing

The establishment of Regional Compliance Managers, the Compliance Managers Committee, and NERC staff assigned to the compliance effort has had a positive impact on the overall program for 2000. There remains a need for enhanced staffing, in all of the Regions and in NERC, as the program grows.

Duplication

It is noted that duplication exists in measuring entities for CPS and DCS between the Compliance Program and the Resources Subcommittee.

Program flexibility

The change this year to establish one NERC Compliance reporting date, thus affording the Regions the flexibility to establish schedules with their respective members, has facilitated Regional program implementation.

Conclusions and Recommendations

The following is a compilation of conclusions and recommendations, based upon the experiences, knowledge gained, and lessons learned from the 2000 Compliance Program. These will be considered and, where applicable, used in the development and implementation of the 2001 Program.

- The relationship between the NERC Standards, Operating Policies, Compliance Templates, Reference Documents, Training Documents, etc. needs to be clarified and established with a focus on developing a single document that contains the rules or “organization standards” as defined in the consensus legislation. During the 2000 program and in the development of the proposed compliance templates for the 2001 program, entities being measured requested that specific information be provided as to what were the actual compliance requirements on which they were to be judged. With the Operating Policies, there is little information in the Policy itself. It is normally included in an appendix, reference document, or training document. While some applauded the efforts of the Compliance Subcommittee to provide the detail on how they were to be measured, others believed that since some detail came from documents only referenced in the Operating Policies, that they did not need to comply with all of the requirements shown on the compliance template. This creates a significant dilemma that must be resolved. The Compliance Subcommittee, the Compliance

Managers Committee, and the Compliance Review Working Group continue to work with the standards and assess their measurability by developing compliance templates that are specific and measurable.

- The Compliance Subcommittee, the Compliance Review Working Group and the Compliance Managers Committee groups support the efforts of the Standards Task Force, recently implemented by the Technical Steering Committee of the Standing Committees, to address the form and format of NERC Standards and the process used to develop them.
- Self-certification processes were introduced and used in a number of measures in the 2000 program. While the methods used to self-certify varied among the Regions, the self-certification process does work and should be utilized in the 2001 Program. The Compliance Managers Committee is reviewing the self-certification methods employed and is determined to adopt a consistent methodology.
- Spot-checking and auditing must be adequate and timely to confidently verify the results from self-certification. The Regional Compliance Managers need to discuss and compare each Regions review, spot check, and audit procedures.
- On-site reviews are encouraged as a means of reinforcing the compliance program. Reasons and rationale must be requested by the Region in cases where an entity indicates requirements are not applicable to them.
- In the 1999 NERC Compliance Program, the issue of receiving data or information in a timely fashion versus having data that is complete and free of errors was recognized as an issue that needed to be addressed. Regions employed several different methods to address this in the 2000 program. It was found that these efforts, to split the issue of timeliness and data quality, have proven to be very beneficial. However, it is clear that additional work is necessary to fully implement and accept this practice. While it remains important to have complete and accurate information and data in a timely fashion, the Regional and NERC programs also need to recognize the value of receiving a correction to information if an error is discovered. This becomes a balancing effort between those being measured and those who are doing the measuring. It may not be wise in some cases to penalize those who report errors in their data or information; however, chronic errors and corrections need to be addressed.
- The Compliance Program needs to be streamlined to make it more efficient for participants, the Regions, and NERC. As the program adds more measures, similarities, and duplication of reporting, requirements have been found between the Planning Standard and Operating Policy measures. The activities of the newly formed 'Principles' group will create the foundation necessary to accomplish this objective. The activities of the Control Area Criteria Task Force and the efforts to identify functions and certify certain entities will need to be coordinated with the NERC and Regional Compliance Enforcement Programs to avoid further duplication of efforts.
- Without the ability to actually levy sanctions, it is difficult to make an accurate assessment of those stated sanctions and determine whether they are sufficient to induce compliance. However, some experience is being gained in certain Regions where a contract based compliance program is in place. These experiences should be factored into the sanction enforcement matrices. The NERC Planning and Operating Enforcement matrices also need to be modified for consistency and appropriateness.
- The Compliance Subcommittee and the Compliance Review Working Group should be given the responsibility to implement new, and revise existing, compliance templates into the NERC Compliance Program. These two groups should seek input and receive consensus from the appropriate subcommittees that set the standards before posting any of the compliance templates for

public comments. These groups, along with the Compliance Managers Committee, should also review the quality of the compliance program and the results achieved. Program modifications and enhancements should be implemented to improve effectiveness.

- The dissemination of compliance information via the internet has worked well. The NERC Compliance web site, which is currently undergoing major change, should be made more user friendly and reflect the current status of the program in order to make it a more viable and useful tool.
- Clarity of documentation is paramount to a successful compliance program. Compliance process descriptions, training documents, and templates should be reviewed, modified and/or developed with sufficient detailed information, requirements, and expectations. Data retention requirements, including reset periods, need to be consistently identified and communicated for non-compliance.
- Implemented mitigation plans help identify improvements to the process and address the need to work with and provide information to participants about how to become compliant with the rules.
- Exception reporting was found at times to be unreliable or ineffective. Entities being measured may fail to report these exceptions. The process of exception reporting needs to be reviewed and improved. One possible method employed in one Region called for an exception report but backed that process up with a quarterly self-certification, supported by proof which may require audits, that no additional exceptions occurred.
- A number of measures in the 1999 Program related to the data necessary for, and the performance of, system studies. The NERC Compliance Program found that in 2000, more of these studies are being conducted to insure reliability and hence compliance to the standards has improved. Further, with other measures, the compliance program is finding that entities are allocating dollars to maintain and improve reliability. As a result, improved compliance statistics are seen for both Planning and Operations and it appears that there is a sharper focus on reliability standards and NERC requirements.
- Communication in the Regional programs as well as NERC has been enhanced and is more effective. This includes communication and cooperation between members and Regions as well as amongst the NERC subcommittees. However, there remains room for further improvements.
- During the 1999 Compliance Program, a need was identified for a “Compliance Coordinating Group”. After a number of discussions, that group was formed as planned and named the Compliance Managers Committee. This group has demonstrated its ability to come together to address issues, and improve the compliance process. This group will likely play a key role in defining and delivering the NERC/NAERO Compliance Program in the future and will need to further expand its role in the coming year by working closely with other NERC committees and subcommittees.
- During the 1999 program, some of the non-compliance was due to lack of responses from certain entities that were being measured. Through efforts to improve communications of the program and hold roll-out sessions in each Region rather than two or three national roll-outs, many more people were exposed to the NERC Compliance Program. As a result, the response rate to the program this year has improved over the 1999 program. The need to communicate the program and its expectations will continue. It is recommended that each Region again hold at least one Regional roll-out session for the 2001 NERC Compliance Program. In addition, NERC staff is investigating the possibility of developing a tutorial on the program that could be provided to those who could not attend the Regional roll-out session.

- While developing the 2000 Compliance Program, it became evident that there were overlaps between the Planning Standards and the Operating Policies and within these standards themselves. In an effort to improve the efficiency of the program, it was determined that the most effective way of identifying these overlaps and potentially identify any measures that may be missing, was to categorize the compliance measures and hence compliance templates under some broad categories or key reliability principles. These principles would need to encompass both planning and operating to the extent possible. As a result, the Compliance Subcommittee, Compliance Review Working Group, the Compliance Managers Committee, and the Planning Standards Subcommittee formed the Principles Working Group to develop the principles, categorize the templates, and review priorities of the templates. The work of the ‘Principles’ group to streamline the compliance process, primarily through the elimination of duplication and consolidation of appropriate requirements, is expected to be very beneficial and should continue with a high priority.
- In all regions, the self-certification process was implemented. In those that required an officer/executive level signature on the self-certification forms, it was found that there was a heightened awareness of the program. It is recommended that to heighten compliance program awareness and promote collaboration, officer/executive level signatures should be required on self-certification documents in all Regions.
- The Compliance Managers, who are implementing the program, are concerned about the efforts of NERC working group’s certification procedures for various entities and authorities. Presently, it is expected that Control Areas and Security Coordinators will need to be certified or re-certified in the near future. It is paramount that the efforts of these groups and the Compliance Program committees be coordinated to prevent duplication of efforts. The Compliance Program must determine the certification requirements of all applicable entities.
- The monitoring of CPS and DCS needs to be reevaluated to ensure there is no duplication of efforts with the Resources Subcommittee. This leads to the possibility of conflicting findings and results.
- Small entities, which may own a single generating plant or have a limited amount of transmission, are reporting that the compliance program is a significant burden to their organization. While compliance with the rules remains important for small and large alike, it may be necessary to develop a plan to assist those needing help in meeting the intent of the compliance program. Small entities should be measured for compliance while not creating a significant burden on their resources possibly with assistance from Regional compliance staffs.
- The Regional Compliance Programs, in attempting to measure compliance with the NERC Standards, are having difficulty with entities that may not be a member of their Region (or any Region). Many of these entities may not be aware that the NERC rules apply and others simply can avoid the program since the Regions have no direct authority over their response. This is a significant shortcoming of the program that is addressed in the consensus legislation. However, these entities are part of the overall interconnected system in North America, many of whom operate generation and are increasing in number and size, and pose a significant risk to reliability if they are not operating within industry recognized reliability standards. Strategies need to be identified to encourage Regional non-member entities to comply with the requirements of the NERC Compliance Program.
- In the 2000 Compliance Program, and with the formation of the Compliance Managers Committee, the need to share information regarding compliance among the Regions was identified as an issue. These confidentiality issues need to be addressed and the intent fully defined.
- The NERC Board of Trustees has set in motion the process to implement the NERC Compliance Enforcement Program on a contractual or voluntary basis allowing for actual sanctions often referred

to as “Plan B”. The Board also created several task forces to bring forth recommendations for such a transition. The Compliance Managers Committee, Compliance Subcommittee, and Compliance Review Working Group believe that implementation plans for the compliance program are needed to properly transition to NAERO or Plan ‘B’.

- In the 1999 Compliance Program, numerous dates were set to provide information to NERC. While this provided for a distributed workload for the NERC staff, it created confusion with multiple reporting dates. As a result of last year’s program, it was recommended that a single date for reporting on the Regional Compliance Programs be established, allowing flexibility in the Regions as to implementation dates within the Regions. This schedule flexibility offered by NERC afforded the Regions the ability to develop a schedule tailored to their individual needs. This was effective in the 2000 Program and will continue in the 2001 Program.

Program Results

The 2000 Program results demonstrate that, overall, NERC is approximately 90% in compliance with the 2000 Program measures. There were 683 total violations with corresponding simulated sanctions of \$812,500. Planning measure violations totaled 431 with \$378,000 in simulated sanctions, of which 191 were Level 4 violations. Operating measures had 252 total violations with \$434,500 in simulated sanctions, including 80 Level 4 violations. It is interesting to note that the 2000 Program Planning and Operating measure results demonstrate comparable 89 and 90% compliance rates, respectively. Overall, there were 3,208 self-certifications, 319 audits, 1,663 submittals, and 939 periodic reports made during the 2000 Program.

In 1999, there were a total of 496 violations carrying a simulated sanction of \$561,000. On a per measure basis, recognizing there is approximately two-and-a-half times the number of 1999 measures monitored in the 2000 Program, the 2000 Program demonstrates a marked improvement in overall compliance when compared to the performance in 1999.

Appendix C contains the statistics for all Levels of non-compliance for both Planning and Operating measures during the year 2000 (as of October 12th).

Future Plans

The measurements and corresponding templates for the 2001 Compliance Program are in the process of being finalized. Each Region will prepare and submit a Regional implementation plan to the Compliance Managers Committee for review and approval. These plans will then be presented to the Standing Committees for implementation. The initiation of the 2001 Program is expected on March 1, 2001.

NERC Compliance staff will conduct three randomly chosen Regional audit reviews of the 2000 Compliance Program. One audit is expected to be completed by the end of 2000; the remaining two will be conducted during the first quarter of 2001.

The 2001 Program will focus on the following:

Self-certifications will continue to be used extensively as a means of monitoring compliance. Officer/executive level signatures will be sought to add a heightened level of commitment and accountability to the self-certification process.

Verification processes that include spot checks, audits, and on-site reviews will be utilized more frequently throughout 2001; with plans more formally developed and delineated in the Regional implementation plans.

Separation of quality and timeliness issues should continue in 2001. Appropriate simulated sanctions need to be identified that are flexible to accommodate Regional needs while commensurate with NERC compliance principles and objectives.

On a high-priority basis, the Principles group needs to complete its work in developing functional principles to regroup and prioritize the Operating and Planning standards and templates.

Appropriate documentation forms need to be reviewed and modified accordingly to provide additional clarity to program requirements and expectations.

Mitigation plans will be reviewed for need, application, and improvement.

Plans will be crafted to assist small entities that are having difficulty in meeting the intent of the compliance program.

Strategies addressing Regional non-member entities will be developed to help foster compliance with the NERC Compliance Plan.

Implementation Plans will be produced to properly transition to NAERO or another enforceable program e.g. Plan 'B'.

The due process review procedures require a close look to evaluate efficiency.

TLR investigations will continue to be conducted where appropriate. The preliminary recommendations from the initial investigations will be finalized and implemented.

Security Coordinator and Control Area audits and certifications procedures need to be rolled into the Compliance Program during 2001. All NERC Security Coordinators will be audited during 2001.

Transmission Loading Relief (TLR) Investigations

As an integral part of the NERC Compliance Program, a procedure was developed to investigate transmission loading relief events in North America that are carried out by the NERC Security Coordinators in accordance with Policy 9. The NERC Operating Committee has requested the NERC Compliance staff to conduct routine investigations of significant events (e.g. TLR Level 5) that have taken place during the summer of 2000. The NERC Compliance staff completed five such investigations of events that occurred during May 2000. These reports are posted on the NERC Compliance web site. There are currently nine additional investigations in progress. The purpose of these investigations is to identify lessons learned, reliability impacts, and fairness in implementation.

As a result of these investigations, numerous issues dealing with authority, databases, Operating Security Limits (OSL), and Transaction Contribution Factor (TCF) etc., were identified. Presently, the Security Subcommittee and the Security Coordinator Working Group are addressing these important topics. The results of these investigations can be found on the NERC Compliance Web Site at www.nerc.com.

Planning Standard Measures/Templates

Planning Template	Brief Description of Measure	Monitoring Responsibility	Applies To
I A S1 M1*	Simulated system performance under normal normal (no contingency) conditions	Regions	Members
I A S2 M2*	Simulated system performance following loss of a single bulk system component	Regions	Members
I A S3 M3	Simulated system performance following loss of two or more bulk system components	Regions	Members
I A S4 M4	Simulated system performance following extreme events	Regions	Members
I B S2 M3*	Seasonal and ten-year self-assessment	NERC RAS	Regions
I B S2 M4*	Regional data submission- RAS Manual and NERC Planning Standards	NERC RAS	Regions
I C S1 M1*	Document, maintain and publish facility connection requirements	Regions	Members
I C S2 M2	Assessment of reliability impacts of new facilities	Regions	Members
I F S1 M1*	Regional plan requirements for installation of disturbance monitoring equipment	Regions	Members
II A S1 M2*	Steady-state data	Regions	Members
II A S1 M4*	Dynamics data	Regions	Members
II C S1 M1*	Methodology for electrical facility ratings	Regions	Members
II C S1 M2*	Electrical facility ratings (normal and emer.)	Regions	Members
II D S1-S2 M1*	Procedures that identify the scope and specificity of demand, net energy for load, and controllable demand-side data/reporting	Regions	Members
II D S1 M4*	Aggregated actual and forecast demand and energy data	Regions	Members
II D S1 M6	Indication whether non-member entities are included in actual and forecasted demand	Regions	Members
II D S1 M7	Uncertainties in forecast of customer demand and net energy for load data	Regions	Members
II D S1 M8	Consistency in actual and forecast demand	Regions	Members
II D S1 M10*	Interruptible demands and direct control load management data	Regions	Members
II D S2 M11	Report interruptible demands and direct control load management data to system operators and security center coordinators	Regions	Members
II D S2 M12	Document the effects of demand-side management programs in forecasting	Regions	Members
III A S1 M1	Assess adequacy of installed transmission protection system	Regions	Members
III A S3 M3	Transmission protection trip misoperations	NERC/IDWG	Regions
III A S4 M4	Protection system maintenance and testing	Regions	Members

Planning Template	Brief Description of Measure	Monitoring Responsibility	Applies To
III D S1-S2 M1	Functional adequacy and coordination of Regional UFLS requirements	NERC/IDWG	Regions
III D S1 M2	Consistency of entity and Regional UFLS	Regions	Members
III D S1 M3	UFLS data for dynamic simulations	NERC/IDWG	Regions
III D S1 M4	Regional assessment of UFLS program	NERC/IDWG	Regions
III D S1 M5	UFLS maintenance program	Regions	Members
III D S1 M6	Analysis of UFLS performance for events below the UFLS set points	Regions	Members
III F S1-S2 M1	Regional review process for SPSs	NERC/IDWG	Regions
III F S1-S2 M2	Compliance review of existing SPSs	NERC/IDWG	Regions
III F S1-S2 M3	Design review of new or modified SPSs	Regions	Members
III F S3 M4	Coordination of SPSs with other protection and control systems	Regions	Members
III F S4 M5A	Regional review process to monitor, notify, and analyze SPS misoperations	NERC/IDWG	Regions
III F S4 M5B	Document/notify of all SPS misoperations	Regions	Members
III F S1-S2 M6	SPS maintenance and testing program	Regions	Members

** measurement was introduced in the 1999 Program for “field trial”*

Operating Policy Measures/Templates

Operating Template	Brief Description of Measure	Monitoring Responsibility	Applies To
P1 T1 (OS 1)*	Control Performance Standard CPS-1 and CPS-2	Region	Member Entities
P1 T2 (OS 2)*	Disturbance Control Standard	Region	Member Entities
P2 T1	Formal policies and procedures to address the execution and coordination of activities that affect transmission system security	Region	Member Entities
P2 T2	Operating Security Limit Violation 30-minute return	Region	Member Entities
P3 T1	Tags are created by PSE	Region	Member Entities
P3 T2	Interchange Schedules can only be implemented between adjacent Control Areas	Region	Member Entities
P3 T3	Tags input into the IDC or provided to Sec. Coord.	Region	Member Entities
P3 T4	Notification requirements during transaction curtailments	Region	Member Entities
P4 T1	Adequate facilities for the system operators to monitor specific system parameters	Region	Member Entities
P4 T2	CA and Operating Auth. to provide system data to Sec. Coord.	Region	Member Entities
P4 T3	Sec. Coord. to exchange system data	Region	Member Entities
P4 T4	Coordination of Generation and Transmission outages	Region	Member Entities
P5 T1 (OS5&6) *	Operators must implement and communicate emergency plans	Region	Member Entities
P6 T1 (OS-3)*	Emergency Operation Plans developed and maintained	Region	Member Entities
P8 T1	System Operator Authority	Region	Member Entities
P8 T2	Operator Certification	Region	Member Entities
P9 T1	Sec. Coord. to perform next day study	Region	Member Entities
P9 T2	Sec. Coord. to take actions requested by other Sec. Coord.	Region	Member Entities
P9 T3	Sec. Coord. Authority	Region	Member Entities
P9 T4	Issuance of Energy Emergency Alerts	Region	Member Entities
P9 T4	Issuance of Energy Emergency Alerts	Region	Member Entities

**measurement was introduced in the 1999 Program for “field trial”*

2000 Program Results

Measurement Planning Standards	Phase Initiated	Monitoring Responsibility	In Full Compliance	Level 1	Level 2	Level 3	Level 4	Total Violations	Sanctions
I A S1 M1	Phase I	Regions	134	6	4	0	11	21	
I A S2 M2	Phase I	Regions	129	14	6	0	11	31	
I A S3 M3	Phase II	Regions	128	11	4	0	18	33	
I A S4 M4	Phase II	Regions	120	6	4	3	7	20	
I B S2 M3	Phase I	NERC/RAS	10	0	0	0	0	0	
I B S2 M4	Phase I	NERC/RAS	6	4	0	0	0	4	
I C S1 M1	Phase I	Regions	81	8	1	7	11	27	
I C S2 M2	Phase II	Regions	150	1	0	0	3	4	
I F S1 M1	Phase I	NERC	5	0	0	0	0	0	
II A S1 M2	Phase I	Regions	135	6	6	17	4	33	
II A S1 M4	Phase I	Regions	142	2	2	2	4	10	
II C S1 M1	Phase I	Regions	108	4	3	3	3	13	
II C S1 M2	Phase I	Regions	118	12	12	3	9	36	
II D S1-S2 M1	Phase I	Reg/NERC	39	0	1	0	1	2	
II D S1 M4	Phase I	Regions	215	1	5	0	5	11	
II D S1 M6	Phase II	Regions	155	0	0	0	4	4	
II D S1 M7	Phase II	Regions	130	4	0	0	5	9	
II D S1 M8	Phase II	Regions	185	0	0	0	9	9	
II D S1 M10	Phase I	Regions	170	0	1	0	2	3	
II D S2 M11	Phase II	Regions	121	0	0	0	4	4	
II D S2 M12	Phase II	Regions	151	4	0	0	4	8	
III A S1 M1	Phase II	Regions	142	2	5	5	12	24	
III A S3 M3	Phase II	IDWG	28	3	0	0	3	6	
III A S4 M4	Phase II	Regions	181	6	2	1	19	28	
III D S1-S2 M1	Phase II	IDWG	8	2	0	0	0	2	
III D S1 M2	Phase II	Regions	140	10	12	3	9	34	
III D S1 M3	Phase II	IDWG	9	0	0	0	1	1	
III D S1 M4	Phase II	IDWG	8	2	0	0	0	2	
III D S1 M5	Phase II	Regions	170	3	4	3	9	19	
III D S1 M6	Phase II	Regions	66	0	0	0	4	4	
III F S1-S2 M1	Phase II	IDWG	9	1	0	0	0	1	
III F S1-S2 M2	Phase II	IDWG	7	3	0	0	0	3	
III F S1-S2 M3	Phase II	Regions	59	0	0	0	5	5	
III F S3 M4	Phase II	Regions	69	1	0	0	4	5	
III F S4 M5A	Phase II	Regs/IDWG	8	2	0	0	0	2	
III F S4 M5B	Phase II	Regs/IDWG	58	0	0	0	2	2	
III F S1-S2 M6	Phase II	Regions	82	0	3	0	8	11	
Subtotal			3,476	118	75	47	191	431	\$378,000

Measurement <i>Operating Standards</i>	Phase Initiated	Monitoring Responsibility	In Full Compliance	Level 1	Level 2	Level 3	Level 4	Total Violations	Sanctions
P1 T1 (OS-1)	Phase I	Regions	617	11	2	0	9	22	
P1 T2 (OS-2)	Phase I	Regions	96	6	0	2	5	13	
P2 T1	Phase II	Regions	99	7	5	3	7	22	
P2 T2	Phase II	Regions	127	6	8	5	6	25	
P3 T1	Phase II	Regions	205	1	0	3	5	9	
P3 T2	Phase II	Regions	128	49	3	0	0	52	
P3 T3	Phase II	Regions	77	0	0	1	1	2	
P3 T4	Phase II	Regions	93	3	0	0	6	9	
P4 T1	Phase II	Regions	142	12	1	1	2	16	
P4 T2	Phase II	Regions	99	1	1	0	10	12	
P4 T3	Phase II	Regions	20	0	0	3	1	4	
P4 T4	Phase II	Regions	104	4	3	0	2	9	
P5 T1	Phase I	Regions	36	0	0	0	1	1	
P6 T1	Phase I	Regions	91	5	1	0	7	13	
P8 T1	Phase II	Regions	133	5	7	7	10	29	
P8 T2	Phase II	Regions	101	0	1	3	6	10	
P9 T1	Phase II	Regions	30	1	0	1	2	4	
P9 T2	Phase II	Regions	19	0	0	0	0	0	
P9 T3	Phase II	Regions	19	0	0	0	0	0	
P9 T4	Phase II	Regions	64	0	0	0	0	0	
Subtotal			2,300	111	32	29	80	252	\$434,500
Total			5,776	229	107	76	271	683	\$812,500