



NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

Princeton Forrestal Village, 116-390 Village Boulevard, Princeton, New Jersey 08540-5731

Review of the Future Role of NERC Committees

Report of the Executive Committees

**Draft Version 8.1
January 23, 2003**

Table of Contents

Table of Contents	i
Executive Summary.....	iii
Purpose	iii
Summary of Recommendations	iii
Challenges Affecting the Role of NERC Committees	iv
Executive Committees’ Understanding of NERC Mission	iv
Executive Committees’ Understanding of NERC Functions	v
NERC Organizational Framework	v
Technical Committee Organization Alternatives	vii
One Technical Committee Alternative.....	viii
Two-Committee Alternative.....	x
Assumptions about the Future.....	xi
Section 1 — Introduction	1
Purpose	1
Assumptions	1
Steps Taken to Assess the Role of NERC Committees.....	1
Section 2 — NERC Mission, Functions, and Resource Needs	4
Executive Committees’ Understanding of NERC’s Mission	4
Policy Issues.....	4
NERC Functions.....	5
NERC Function Descriptive Elements.....	6
Resource Needs Analysis	6
Section 3 — NERC Organizational Framework	7
Overview of Proposed NERC Organizational Framework	7
Stakeholders Committee.....	7
Dispute Resolution (Function 10)	8
Standards Development (Function 1).....	8
Interface to NAESB.....	10
Compliance and Certification (Functions 2 and 7).....	11
Adequacy and Reliability Performance Assessment (Function 4)	12
Critical Infrastructure Protection (Function 8)	12
Use of Staff Resources	13
Relative Roles of NERC, Reliability Regions, and RTOs	14
Section 4 — Majority Recommendation: Single Technical Committee	15
Description of Single Committee Framework.....	15
Justification for Single Technical Committee	17
Technical Committee Representation Model	19
Section 5 — Minority Recommendation: Two Technical Committees	22
Description of Two Technical Committees Alternative.....	22
Joint Technical Steering Group.....	23
“Committee of the Whole” Concept.....	23
Justification for Minority Recommendation.....	23
Minority Recommendation on Representation on Technical Committees.....	25
Other Committee Organization Alternatives Considered.....	25
Section 6 — Transition Plan	26
Transition Leadership.....	26
Formation of the Technical Committee(s).....	26

Formation of Subcommittees, Working Groups, and Task Forces	27
Parallel Transition Activities	27
Continuing Review	27
Appendix A — References.....	A-1
Appendix B — NERC Mission Statement References	B-1
Appendix C — NERC Function Elements	C-1
Appendix D — NERC Resource Types	D-1
Appendix E — Summary of Resource Needs Analysis by Function	E-1
Appendix F — One-Committee Strawman Scope and Organization.....	F-1
Appendix G — Two Technical Committees Strawman Scopes and Organizations	G-1
Appendix H — Committee Structure Alternatives Considered	F-1

Executive Summary

Purpose

The Executive Committees¹ have jointly completed an extensive review of how to adapt NERC's committees to support the organization's reliability mission going forward, in the face of challenges presented by a rapidly evolving electricity industry. The purpose of this report is to present to the Board of Trustees the Executive Committees' recommendations on the future scope, functions, organizational structure, and representation model of the NERC committees.

Summary of Recommendations

The Executive Committees offer the following recommendations to the Board of Trustees. Clear consensus was achieved on recommendations 1, 2, 3, 4, and 7. On the issue of the appropriate number of committees going forward, a majority² of the committee executives prefers one technical committee and a minority prefers two committees. The group has chosen to present for discussion in this report both the majority and minority views regarding recommendations 5 and 6.

The Executive Committees recommend that the Board:

1. Adopt the ten NERC functions described in Appendix C as a guiding reference for updating the scopes and functions of NERC committees and other NERC resources.
2. Direct the integration of the dispute resolution functions of NERC from the several programs in effect today to a single program that meets the needs of the standards development, compliance, and certification functions, and other NERC activities, while recognizing the unique characteristics of each.
3. Direct the integration of various aspects of compliance assessment, monitoring, and enforcement – and organization and personnel certification – into one coordinated program, distinct from but coordinated with the technical committee(s).
4. On an interim basis, retain the Critical Infrastructure Protection Advisory Group (CIPAG) as an advisory group reporting to the Board. Periodically review the CIPAG scope and organization, with a preference in the future toward integrating the critical infrastructure protection function into the technical committee(s).
5. [*Majority Recommendation*] Direct the integration of NERC's volunteer industry experts into one technical committee reporting to the Board.
 [*Minority Recommendation*] Direct the reorganization of the volunteer industry experts into two technical committees in the areas of a) operating reliability, and b) planning and adequacy.
6. [*Majority Recommendation*] Adopt a technical committee representation model identical to that of the Stakeholders Committee.
 [*Minority Recommendation*] Assign each technical committee to propose for Board approval a representation model to meet its unique resource requirements.

¹ The Executive Committees of the Operating, Planning and Market Interface Committees formed a joint group to work on this initiative. Three executives from the Critical Infrastructure Protection Advisory Group and the Chairman of the Regional Managers were added, bringing the group to 20 members.

² With the three CIPAG executives abstaining, a majority (13 members) prefers one technical committee, while a minority (4 members) recommends consolidation from three committees to two. This report presents the pros and cons of each option for the Board to consider.

7. Direct the technical committee(s) to submit for Board approval in June 2003, and initial implementation in July 2003, an updated scope document and plan for reorganizing to achieve assigned responsibilities.

Challenges Affecting the Role of NERC Committees

The Executive Committees began this effort in March 2002 as a result of the Board of Trustees directive in February adopting an open, weighted-segment voting model for the setting of bulk electric system reliability standards. One consequence of this decision is that NERC's technical committees no longer manage the development of NERC standards or approve standards. The Executive Committees saw this significant change as an opportunity for a more thorough review of the role of the committees. In addition to the changing committee role introduced by the new reliability standards process, the Executive Committees identified the following challenges currently facing the NERC committees and their volunteer participants:

- How to effectively implement the Board's actions and principles of February 2002 focusing NERC's mission on reliability? What committee functions are essential to achieving NERC's reliability mission?
- How to retain the industry's best reliability expertise on the NERC committees?
- How to make the most efficient use of increasingly strained industry resources that must participate in NERC, the North American Energy Standards Board (NAESB), Federal Energy Regulatory Commission (FERC) proceedings, emerging Regional Transmission Organizations (RTOs), and other activities at the federal, state, provincial, and local levels?
- How to coordinate and integrate the work of the committees across technical areas such as bulk electric system operations, planning and analysis, and physical and cyber infrastructure protection? A symptom of this need is the trend in recent years toward multiple committees debating and approving the same initiatives. Many subgroups have come to expect to present their results in multiple committee forums.
- What is the committee role in supporting the development of NERC reliability standards?
- What is the committee role in supporting the coordination of NERC reliability standards with the development by NAESB of related business practice standards and communications?
- Can the compliance and dispute resolution functions be made more effective by integrating them from several dispersed subcommittees into one combined program reporting to the Board?
- What committee and subgroup representation models will best ensure stakeholder interests are balanced and industry expert resources are applied efficiently and effectively?
- How can regions – both regional reliability councils and regional operating entities – continue to be effectively integrated into NERC committee activities going forward?
- How can the NERC committees be best postured going forward to adapt to changing work assignments and priorities in a time of significant uncertainty in the transformation of the electricity industry?

Executive Committees' Understanding of NERC Mission

In considering the role of the committees, the Executive Committees first began with a review of NERC's mission and functions, examining recent actions of the Board, as well as historical perspectives of NERC's mission and functions. The Executive Committees' understanding of the NERC mission going forward³ is as follows:

- Develop, monitor, and enforce standards for a reliable North American bulk electric system.

³ The Executive Committees are aware that the Board is conducting its own strategic planning review and defer to the results of that initiative as they become available.

- Assess and encourage the adequacy of the North American bulk electric system.
- Address any matters that may affect the reliability of the North American bulk electric system.
- Promote the near-term reliability and long-term adequacy of the North American bulk electric system.
- Accommodate the evolution of transparent, non-discriminatory markets and market-based solutions for reliability.
- Serve the interests of the public and represent the reliability concerns of the North American bulk electric system.
- Provide international and regional perspectives in its work.
- Be an open, fair, inclusive, and balanced organization.
- Achieve excellence in its results.

Executive Committees' Understanding of NERC Functions

The Executive Committees identified the following list of ten major functions of NERC as best reflecting their understanding of what NERC does⁴ and recommend that the function descriptions in Appendix C be used as a guiding reference for updating the scopes and functions of NERC committees and other NERC resources:

1. Set standards for the reliable operation and planning of bulk electric systems.
2. Monitor, assess, and enforce compliance with standards for bulk electric system reliability.
3. Provide education and training resources to promote bulk electric system reliability.
4. Assess, analyze, and report bulk electric system adequacy and performance.
5. Coordinate reliability standards and reliability matters with Reliability Regions and other organizations.
6. Coordinate the provision of applications (tools), data, and services necessary to support the reliable operation and planning of bulk electric systems.
7. Certify reliability service organizations and personnel.
8. Coordinate critical infrastructure protection of bulk electric systems.
9. Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.
10. Administer procedures for appeals and conflict resolution for reliability standards development, certification, and compliance, and other matters related to bulk electric system reliability.

NERC Organizational Framework

The Executive Committees developed the conceptual framework for the NERC organization shown in Figure 1 as a basis for assessing alternatives for the scope, organization, and representation models for NERC committees. Although several specific adaptations of the framework are proposed in this report for near term implementation, the framework itself provides a guiding model for organizing NERC resources. Note the numbers reference the functions listed above.

In the proposed framework, the Stakeholders Committee retains its current role as a policy advisory group to the Board. Dispute Resolution (Function 10) is consolidated from the several programs in effect today in various committees to a single program, reporting through the NERC General Counsel to the Board, that meets the needs of the standards development, compliance, and certification programs, and other NERC activities.

⁴ No priority is implied by the order of the list – the group assumes NERC does all these functions.

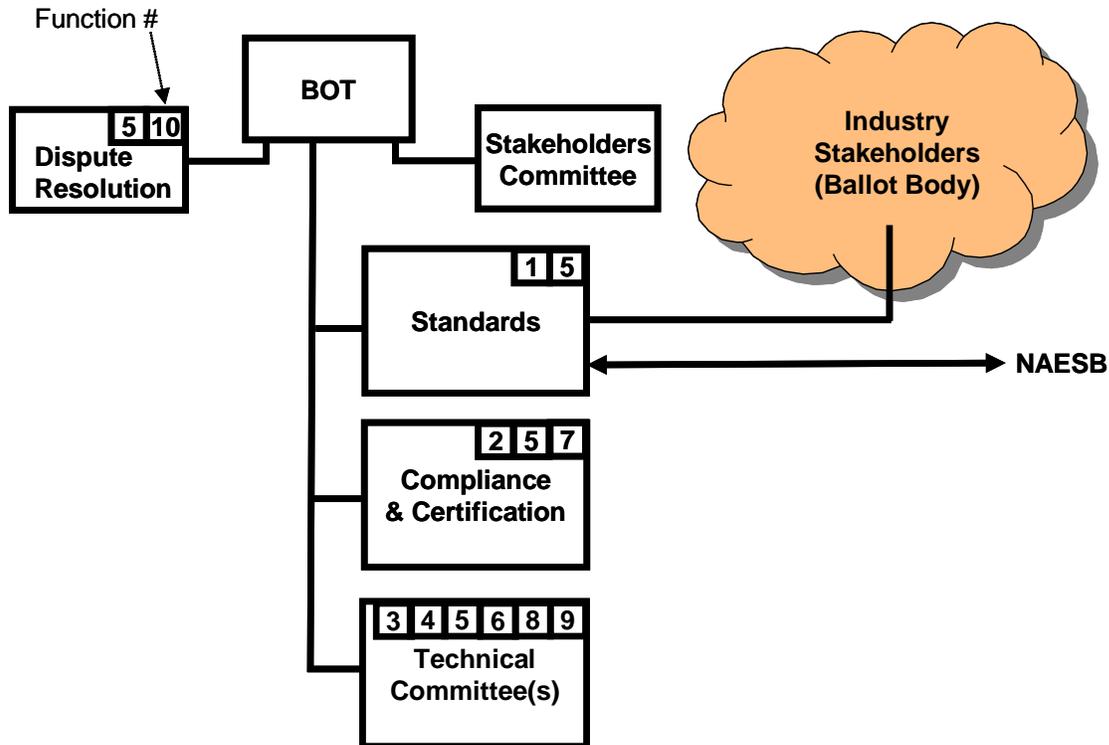


Figure 1 – NERC Organizational Framework for Reviewing the Role of NERC Committees

The Standards Committee⁵ is responsible for Standards Development (Function 1) and is accountable to the industry stakeholders through a registered ballot body. The Board provides oversight to ensure the standards process remains open, inclusive, fair and balanced. The Standards Committee manages the standards process in accordance with the standards process manual and assures the integrity of the standards process. The Standards Committee remains objective and impartial and does not advocate for the scope and content of reliability standards. Instead, the industry stakeholders, through the ballot body and technical committee(s), actively promote the development of standards by submitting Standards Authorization Requests (SARs), commenting on SARs and draft standards, and providing resources to assist in the drafting of SARs and standards. The Standards Committee coordinates standards work priorities (based on stakeholder inputs) and availability of resources. The Standards Committee is also responsible for facilitating the standards process interface with NAESB, recognizing that the entire organization shares responsibility for the successful coordination between NERC and NAESB in accordance with the current Memorandum of Understanding between the two organizations.

In the NERC organizational framework, the Executive Committees have merged Compliance (Function 2) and Certification (Function 7) from the several groups that exist today under the Operating and Planning Committees into a separate program, distinct from the technical committees. This consolidated grouping integrates various aspects of compliance assessment, monitoring, and enforcement, and organization and personnel certification.

Finally, the framework recognizes the importance of continuing active involvement of industry volunteers in the NERC committees. The bulk of this report focuses on the technical committee portion of the framework.

⁵ The current name for this group is Standards Authorization Committee. The Executive Committees have adopted Standards Committee as being a more accurate title for the group responsible for overall management of the standards process.

Technical Committee Organization Alternatives

The Executive Committees conducted a deliberate and thorough analysis of many alternatives for organizing NERC's committees of volunteer experts. In the end, the group was unable to reach unanimity on a single recommendation. In an initial December 11 poll, a majority (11 of 18 Executive Committee members) preferred that industry volunteer expert resources be managed through a single Technical Committee. This includes areas of operations, planning, market interface, and critical infrastructure protection. However, this majority view was countered by two persisting minority views that apparently would not be resolved by further debate.

The first minority view is that the CIPAG should remain separate from the technical committee(s) because of its unique responsibilities and interfaces, and the continuing importance of maintaining the high visibility of this NERC initiative both within and outside of NERC. After extensive deliberation of this issue, and recognizing that the enduring model of one technical committee that includes infrastructure security may have to be delayed for a transition period, the Executive Committees agreed by a vote of 17 to 1 on January 9 to resolve this conflict on an interim basis by recommending that CIPAG remain as a separate advisory group reporting to the Board for now. The Executive Committees agree to this position with the understanding that:

- It is an interim approach imposed by necessity and should be subject to periodic Board review of the CIPAG scope and organization.
- Security guidelines or other requirements developed by the CIPAG that affect the bulk electric industry, whether intended to be voluntary or mandatory, should be reviewed by the appropriate technical committee(s) prior to Board approval
- Close coordination between CIPAG and the technical committee(s) must become and remain a priority for all.

The second minority view is regarding a preference for two technical committees in the areas of operating and planning, in lieu of going to one technical committee. Both alternatives are presented in this report, along with justifications for each and process measures to mitigate concerns that have been expressed for each. Regarding the technical committee organization, in the final vote of members on January 9 a majority (13) recommended establishing a single technical committee. A minority (4) recommended two technical committees with the following scopes: a) operating reliability and b) planning and adequacy.

A third alternative was raised by some supporting one committee that if multiple committees are adopted, then a market committee would also be required, resulting in three committees. This committee would not be the same as today's Market Interface Committee, but would rather have market participant representation and be assigned to review the market impacts of work by the operating and planning committees. In the final vote, a majority said they could accept this three-committee alternative, but no member chose this option as a preference and it therefore has not been developed in this report.

Tables 1 and 2 below are provided to give the Board an understanding the level of support across the Executive Committees, the existing standing committees, and the Regional Managers for the one-committee and multi-committee options. The CIPAG executives abstained from this vote, since it excluded from consideration the disposition of the CIPAG. When the members were asked if they could accept (live with) each approach, 15 of 17 members indicated they could accept the one-committee alternative and 5 of 17 said they could accept the two-committee alternative. The three committee alternative (operations, planning, and market) did not receive any votes as a preference, although 11 members indicated they could live with this third alternative.

Table 1 — Final Vote of Executive Committees on January 9, 2003

	One Technical Committee	Two Technical Committees (Operating and Planning)	Three Technical Committees (Operating, Planning, and Market)
OC Executives	5 Prefer + 1 Can Accept	1 Prefers + 3 Can Accept	0 Prefers + 4 Can Accept
PC Executives	2 Prefer + 1 Can Accept	3 Prefer + 1 Can Accept	0 Prefers + 3 Can Accept
MIC Executives	5 Prefer + 0 Can Accept	0 Prefers + 1 Can Accept	0 Prefers + 3 Can Accept
CIPAG Executives	Abstain	Abstain	Abstain
RM Executives	1 Prefers + 0 Can Accept	0 Prefers + 1 Can Accept	0 Prefers + 1 Can Accept
Executives Total	13 Prefer + 2 Can Accept	4 Prefer + 6 Can Accept	0 Prefers + 11 Can Accept

A straw poll of the standing committees was conducted during the November 2002 meetings. At that time the primary alternatives were one technical committee or three committees (operations, planning, critical infrastructure protection). The results of the committee polls are consistent with, although not as sharply differentiated between the majority and minority views as, that of the Executive Committees.

Table 2 — Straw Polls of Committees and Regional Managers November 18-21, 2002

	One Technical Committee	Three Technical Committees (Operating, Planning, CIP)
OC⁶	19	10
PC	3	17
MIC	22	1
Regional Mgrs.	8	2
Committees Total	52	30

It is noteworthy that there was no support from any quarter to continue with the three existing NERC committees unchanged. The question is not whether to modify the current committee organization, but how far to move from where they are today. A few voices in this process have suggested a need to go slow in making the proposed changes to the committee organization at this time, but the vast majority urges the changes be made as soon as practical. Without near-term changes, the NERC committees will be increasingly tested to: retain quality volunteer participation in the face of competing demands, focus priority on relevant work that supports NERC's reliability mission, and effectively integrate results and resolve differences.

One Technical Committee Alternative

The single Technical Committee recommendation of the majority is shown in Figure 2. The principal elements of the majority recommendation are:

- a. Single Technical Committee** — Integrate the volunteer industry expert resources into one Technical Committee reporting to the Board.
- b. Technical Committee Representation Model** — Adopt a Technical Committee representation model that replicates that of the Stakeholders Committee.
- c. Technical Committee Functions** — Assign to the Technical Committee the responsibilities of promoting adequate and reliable North American bulk electric systems, as described in Functions 3, 4, 6, 9, and the relevant portions of function 5, and advising the Board on such matters.

⁶ The OC further asked how many were opposed to one committee (10) and how many were opposed to multiple committees (9).

- d. Technical Committee Resource Management** — Empower the Technical Committee, with Board oversight, to continuously adapt its technical subgroup structure, assign work scopes and priorities, and flexibly determine each subgroup’s membership needs based on requirements for functional expertise and competencies, and the balancing of stakeholder interests.
- e. Transition Schedule** — Direct the initial transition of the committee organization to be completed by July 1, 2003 in accordance with the schedule detailed in Section 6 of this report.

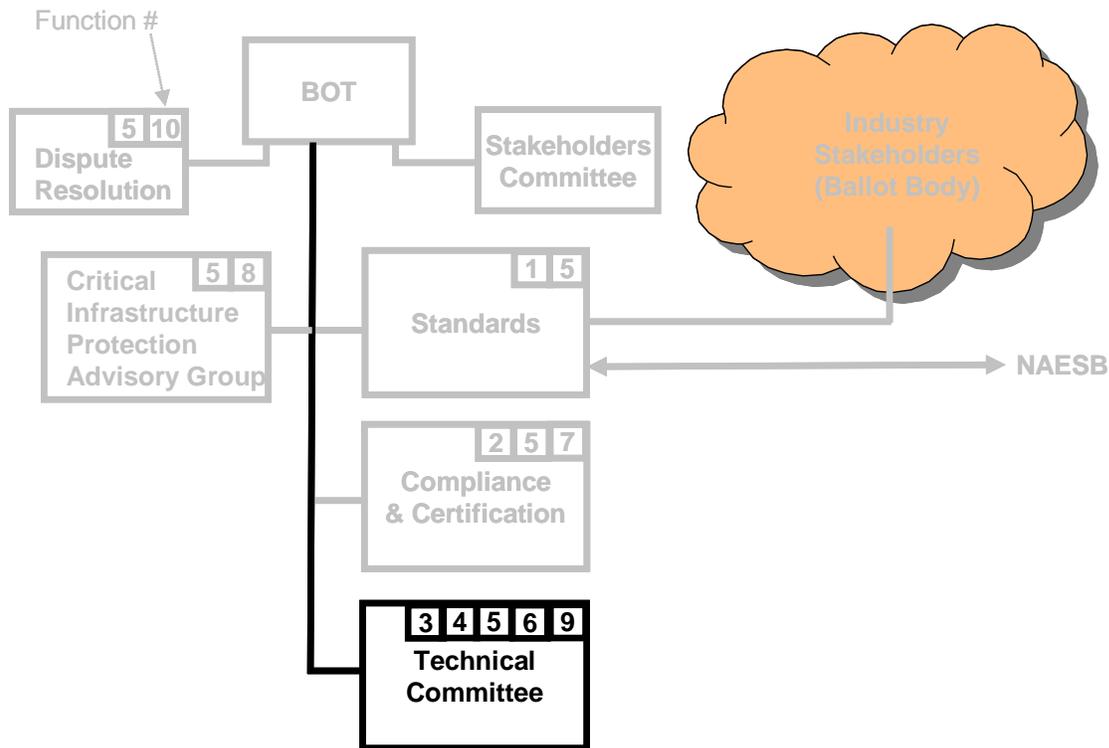


Figure 2 — Majority Recommendation for a Single Technical Committee

The benefits of the single Technical Committee approach are:

- Stronger coordination of work priorities and integration of results across operating, planning and adequacy, and security issues
- Single point of approval for technical results
- Reduced duplication of work and overlap of work scopes
- Smaller, more technically focused subcommittees
- Consolidation of the number of industry volunteers needed and more efficient use of industry volunteer experts

The majority believes that the following disadvantages expressed by commenters regarding the single Technical Committee can be mitigated through effective committee management and procedures (mitigation measures are described in Section 4):

- Filtering of the diversity of views
- Difficulty of managing a larger number of subgroups reporting to a single committee

- Technical experts that are not interested in hearing the details of each others' subject matter (e.g. planners versus operators)
- Net loss in the number of reliability experts participating on NERC committees
- Disruption of current work initiatives caused by a large step change in committee structure

Two-Committee Alternative

The minority two-committee recommendation is shown in Figure 3.

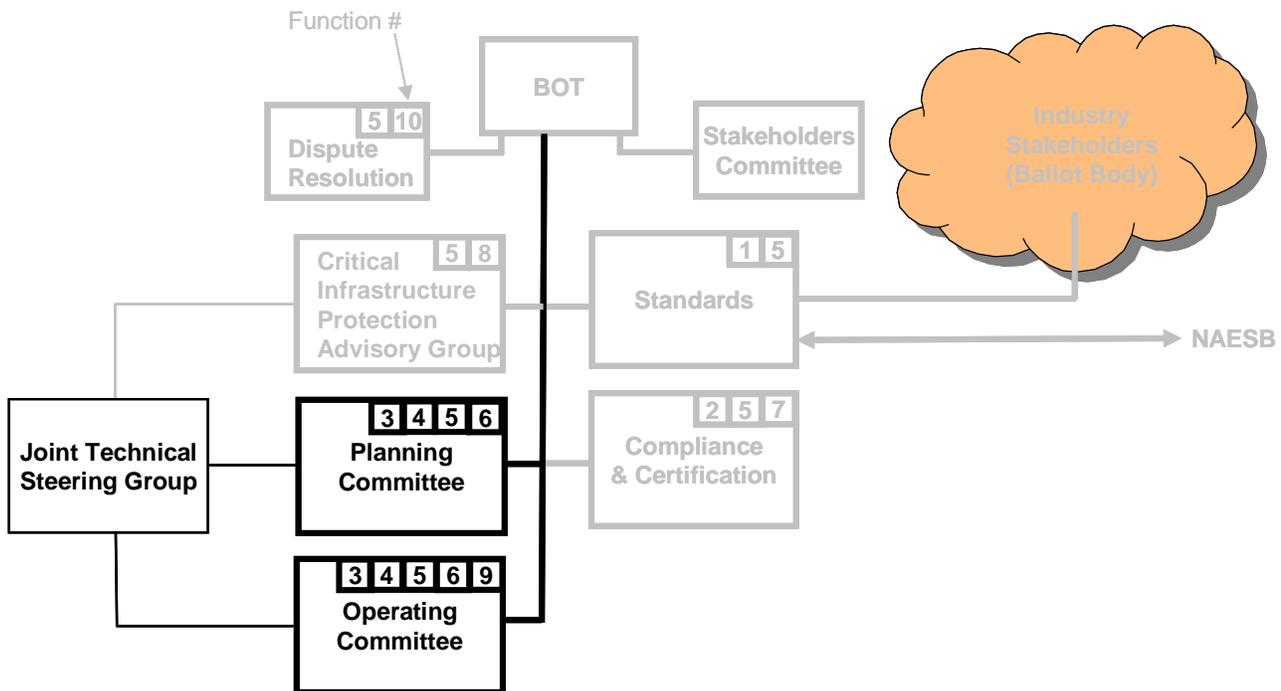


Figure 3 — Minority Recommendation for Two Committees and Joint Technical Steering Group

The principal elements of the minority recommendation in favor of two technical committees are:

- Two Technical Committees** — Align the volunteer industry expert resources into two technical committees reporting to the Board in the following areas of responsibility: i) operating reliability, and ii) planning and adequacy.
- Technical Committee Representation Models** — Assign each technical committee to propose for Board approval a representation model to meet its unique resource requirements. Approaches that may be considered include a Functional Model representation for operating reliability, and asset ownership representation (similar to today's committees) for planning and adequacy.

The next three elements of the minority recommendation (allocation of functions to the committees, adaptive management of subgroups, and the transition timeline) are equivalent to elements **c.**, **d.**, and **e.** of the majority recommendation, except as applied to two committees rather than one. Finally, the minority recommendation would add a sixth element instituting stronger coordination of interrelated work among the committees through a joint executive steering group shared by the committees and the CIPAG:

- Joint Executive Steering Group** — Strengthen the role of a technical steering group to coordinate work among the committees, expanding the technical steering group to include the executive committees of each committee. The technical steering group would also include CIPAG executives to ensure close coordination of critical infrastructure protection with operations and planning.

The proponents of the minority recommendation argue that largely the NERC committees are working well and just need tuning to address the changed role with respect to standards development and compliance, and to review the scope documents and subcommittees in light of the NERC functions outlined in this report. The minority argues further that:

- A less abrupt organizational change will also be less disruptive to ongoing work
- Expert volunteers will not be interested in discussing detailed technical issues in areas with which they are not familiar
- A one-committee approach will reduce the total number of volunteers with reliability expertise; multiple committees will encourage greater overall participation
- A one-committee approach only helps those with general knowledge of reliability who would have fewer meetings to attend to protect their business interests; but does not benefit the reliability experts

Both the majority and minority recommendations are intended to be consistent with the guiding organizational framework presented in this report, including separate standards development, compliance enforcement and certification, and dispute resolution functions. A key issue with either the one-committee or two-committee approach is assuring the merchant interests that have been so well represented in the Market Interface Committee for several years now are integrated into the new committee or committees. Both options also recognize that several functional areas may benefit from increased use of NERC staff or other resources in lieu of industry volunteers, without diminishing the benefits of volunteer participation.

Assumptions about the Future

The Executive Committees recognize that the industry is in a state of rapid change and have therefore developed a robust framework that can work effectively and adapt in a variety of credible future scenarios. The recommendations of this report are intended to guide organizational changes that are clearly needed over the next one to two years, while building from the strong existing foundation of the NERC organization. The Executive Committees recognize that adaptability will continue to be a necessity in the future as NERC pursues its reliability mission and strategic goals. The Executive Committees recognize that several key factors remain uncertain and will drive the need to continue reviewing the role and effectiveness of the NERC committees going forward:

1. Reliability legislation.
2. Funding alternatives.
3. NERC relationship with NAESB.
4. Roles of reliability regions and other regional organizations (e.g. ITPs, RTOs, ISOs, ITCs, etc.)
5. Market design initiatives.
6. Regulatory framework for assuring long term adequacy of electricity infrastructure.

Section 1 — Introduction

Purpose

The Executive Committees began this initiative in March 2002, as a result of the Board of Trustees directive in February adopting a weighted-segment voting model for the setting of bulk electric system reliability standards. The new standards process, based on the principles of the American National Standards Institute (ANSI), is designed to be open, inclusive, balanced, and fair. One significant consequence is that standing committees are no longer responsible for developing and approving NERC reliability standards and recommending them to the Board for adoption. The materials considered by the Board in February did not define specific changes to the committees but suggested that the committees review their roles in light of the new standards process. Sensing the additional burden of the challenges noted in the Executive Summary, the Executive Committees set out to complete a thorough review the role of the committees, including assessment of the scope, functions, organizational structure, and representation model of the NERC committees.

Assumptions

Recognizing several key externalities were beyond the scope of this initiative, the Executive Committees assumed that the proposed committee framework must:

- Support NERC’s mission and functions, as set by the Board.
- Support and enable the Board-approved open process for developing reliability standards.
- Be effective with or without reliability legislation.
- Be neutral to how the organization is funded and how cost obligations of NERC functions are allocated.
- Accommodate a wide range of possibilities in the roles of Reliability Regions⁷ and Regional Transmission Organizations (RTOs), and the relationships between them.

In completing this work, the Executive Committees recognized that NERC, like the wholesale electric industry, is in a period of significant change and uncertainty. The group attempted to assure the proposals in this report are consistent with relevant visions of the future, such as the recent actions and principles of the NERC Board, the proposed FERC Standard Market Design, the Electric Reliability Panel Report, and the Integration Conference Final Report. At the same time, the group recognized that visions of the industry’s future will continue to evolve. This report provides a roadmap that sets the NERC committee organization on a sound path, while acknowledging the likelihood that changes will be needed along the way.

Steps Taken to Assess the Role of NERC Committees

The standing committees began discussing this organizational assessment at their meetings in March 2002. As a result of the committee discussions, a joint initiative of the three Executive Committees was started, with Paul Barber serving as chairman. In their first meeting in April, the Executive Committees reviewed the existing committee scopes, finding that many of the existing committee function descriptions would need to be updated. Envisioning this initiative as an opportunity to affect positive change, the Executive Committees decided in this first meeting to conduct a more thorough “clean slate” assessment of committee resource needs. As shown in Figure 4, the group followed a systematic approach to allow mission and function to drive the definition of resource needs and organization alternatives.

⁷ The term “Reliability Region” is used throughout this report to reference Regional Reliability Councils or successor organizations that coordinate reliability standards development and compliance enforcement on a regional basis.

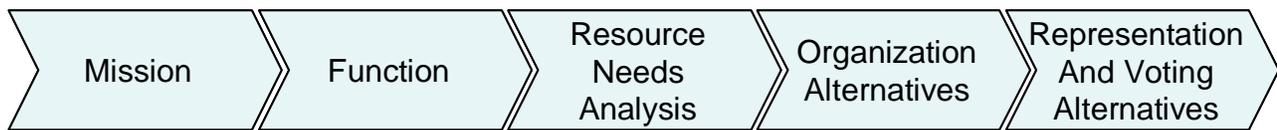


Figure 4 — Executive Committee Analysis Approach

Recognizing it was first necessary to understand the broader context of NERC’s organizational purpose, the assessment started with a review of NERC’s mission and functions and then focused in more closely on the role and resource needs of the NERC committees. The Executive Committees analyzed existing NERC documents, such as the Certificate of Incorporation, the Bylaws, the Electric Reliability (Blue Ribbon) Panel Report, and the February 2002 Board resolutions and principles on the role of NERC. A list of references is provided in Appendix A and historical statements of mission are shown in Appendix B.

With this background, the group brainstormed the key elements of NERC’s mission and identified ten major functional areas of NERC. The group refined and expanded the level of detail in the function descriptions, as shown in Appendix C. This work was not intended to propose a reshaping of what NERC does, but was simply a means of clearly articulating the group’s understanding of NERC’s mission and functions, today and going forward, for the purpose of establishing a logical basis for assessing committee resource needs and constraints. Section 2 addresses the Executive Committees’ understanding of NERC’s mission and functions.

At a second meeting in May, the Executive Committees reviewed the resource needs and constraints associated with performing each of the ten NERC functions. At this stage the resource needs were assessed one function at a time. The group noted that some functions may be suitable for committees of volunteers and others, such as the compliance enforcement program, may have special requirements for independence or confidentiality that constrain committee participation. Section 2 and Appendices D and E describe the resource needs analysis the group conducted.

In June, Chairman Barber reviewed the group’s progress with the Board of Trustees. The Board noted the relationship of this committee-sponsored initiative with its own strategic review process and indicated that the function descriptions will help in the NERC budget planning process. Later in June, the Executive Committees met to analyze alternatives for structuring resources, including committee organization and representation. The group sought alternatives that would support the NERC mission and each of the ten functions, and at the same time provide an efficient integration of resources across functions.

The proposed organizational framework was presented to the standing committees in July, with each committee as well as individual members and observers providing substantive inputs. The Executive Committees met again in August to address these comments. The group worked extensively on five key issues that received significant interest: representation and voting model, committee role in standards development, interface to NAESB, role of the Market Interface Committee, and interface with Regional Reliability Councils and RTOs. The proposed organizational framework resulting from these discussions is presented in Section 3.

Draft Version 3 was posted for public comment for a period from August 20 to September 6. Fifteen sets of comments were received, in addition to comments by the MIC as it met on September 4–5. On August 27–28, the committee chairmen participated as invited observers in a Board strategic review meeting and received feedback from Board members on several aspects of the proposed framework. The Executive Committees developed two more drafts in September. Chairman Barber presented Draft 5 in a progress report to the Stakeholders Committee and Board on October 7–8. Draft 6 incorporated feedback from the Stakeholders Committee and Board, as well as additional work by the Executive Committees later in October.

Draft 7 was posted from December 20 to January 7 to allow a final round of public comments before finalizing the report. Comments received are being provided for the Board to consider along with the final report. This current Draft 8.1 has been prepared for Board approval.

Section 2 — NERC Mission, Functions, and Resource Needs

Executive Committees' Understanding of NERC's Mission

The Executive Committees reviewed the NERC mission statements provided in the reference documents listed in Appendix A and prepared the following articulation of the group's understanding of the mission. The group did not seek to revise the NERC mission, but simply to share its understanding of "what NERC does" as a context for analyzing the role of the committees and resource needs and constraints. The Executive Committees note that the Board has initiated a strategic review process and recognize that an updated mission statement may soon be available. However, from the participation of the committee chairmen in the Board strategic review retreat on August 27–28, it appears that the Executive Committees' understanding of NERC's mission provides a reasonably valid starting point for the committee framework proposed in this report. Appendix B provides several historical statements of the NERC mission, as it is described in corporate documents and other references.

The Executive Committees understand NERC's mission is to:

- Develop, monitor, and enforce standards⁸ for a reliable North American bulk electric system⁹.
- Assess and encourage the adequacy of the North American bulk electric system.
- Address any matters that may affect the reliability of the North American bulk electric system.
- Promote the near-term reliability¹⁰ and long-term adequacy of the North American bulk electric system.
- Accommodate the evolution of transparent, non-discriminatory markets and market-based solutions for reliability.
- Serve the interests of the public and represent the reliability concerns of the North American bulk electric system.
- Provide international and regional perspectives in its work.
- Be an open, fair, inclusive, and balanced organization.
- Achieve excellence in its results.

Policy Issues

In completing this review of the NERC mission, the Executive Committees noted the need for policy clarifications in four areas. Although assumptions regarding these issues were made in developing the proposed organizational framework, the Executive Committees have retained these policy questions for the purpose of seeking Board guidance in implementing the transition to the new committee organization.

⁸ 'Reliability standard (or standard)' means a requirement for the operation of existing bulk power system facilities and the design of planned additions or modifications of such facilities to the extent necessary to provide for reliable operation of the bulk power system, but it does not include any requirement to expand such facilities or to construct new transmission or generation capacity. (Draft legislation language.)

⁹ 'Bulk electric system' means facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof), including high voltage transmission lines; substations; control centers; communications, data and operations planning facilities; and electric energy from generation facilities to the extent necessary to maintain transmission system reliability. The term does not include facilities used in the local distribution of electric energy. (Draft legislation language.)

¹⁰ 'Reliable operation' means operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance or unanticipated failure of system elements. (Draft legislation language.)

1. Is the bulk electric system a) a transmission network for the delivery of electricity and related services; b) an integrated network combining transmission and generation resources necessary to provide reliable delivery of electricity and related services; or c) both a delivery network and an adequate supply of electricity resources to meet end use customer needs (more succinctly put — is resource supply adequacy part of bulk electric system reliability)?
2. What is the meaning of the term “adequacy”? With whom do the obligations lie for the development of systems and resources that are needed to operate reliably in the future (future adequacy)? NERC’s role related to adequacy references terms such as ‘assess’, ‘encourage’, and promote — are these the appropriate terms?
3. Should NERC assert a stronger leadership or advocacy role in support of the reliability of North American bulk electric systems?
4. Use of the terms “promote” and “encourage” imply specific meanings that need to be further clarified. Is one word preferred over the other, or are both appropriate, in describing the various elements of NERC’s mission?

NERC Functions

The Executive Committees identified the following list of ten major functions of NERC. First an outline of functions was developed through a “clean slate” brainstorming session. The group then worked from the outline to draft a concise statement describing each function. Once again, the group was not redefining what NERC does, but was simply documenting its understanding of NERC functions in clear, logical terms. There is no priority implied in the order of the list – the group assumes that NERC does all ten functions.

Table 3 — List of NERC Functions

No.	Function
1.	Set standards for the reliable operation and planning of bulk electric systems.
2.	Monitor, assess, and enforce ¹¹ compliance with standards for bulk electric system reliability.
3.	Provide education and training resources to promote bulk electric system reliability.
4.	Assess, analyze, and report bulk electric system adequacy and performance.
5.	Coordinate reliability standards and reliability matters with Reliability Regions and other organizations.
6.	Coordinate the provision of applications (tools), data, and services necessary to support the reliable operation and planning of bulk electric systems.
7.	Certify reliability service organizations ¹² and personnel.
8.	Coordinate critical infrastructure protection of bulk electric systems.
9.	Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.
10.	Administer procedures for appeals and conflict resolution for reliability standards development, certification, and compliance, and other matters related to bulk electric system reliability.

¹¹ The Executive Committees acknowledge that NERC’s compliance enforcement role is nascent at the time of this report, but expect this role to be further developed as a result of reliability legislation or on an alternative basis adopted by the Board.

¹² A reliability service organization means an entity that is providing one or more of the reliability service functions defined in the Functional Model.

NERC Function Descriptive Elements

Recommendation 1 — Adopt the ten NERC functions described in Appendix C as a guiding reference for updating the scopes and functions of NERC committees and other NERC resources

The detailed elements of each function are provided in Appendix C. To the extent possible, the Executive Committees strived to use proactive statements in these functional elements. That approach has caused some to comment that several elements are expansive of NERC's role. Examples of elements most frequently drawing such comments include: "operate reliability support applications (tools)," "maintain system models," or "provide reliability-related education and training resources." The Executive Committees stress that in no way does the affirmative nature of the function elements stated in Appendix C imply that NERC is an exclusive provider of a particular activity. These activities are intended to be provided within the scope and authorities of NERC, as needed to promote reliable bulk electric systems, and as approved by the Board through its funding justification process.

Resource Needs Analysis

The Executive Committees discussed the types of resources that would be needed to support each of the functions described in Appendix C. It was apparent from the discussion that not all NERC functions are appropriate as committee activities and some functions have specialized resource requirements. To provide a consistent guide for analyzing resource needs, the group developed a list describing the different types of NERC resources needed by NERC, shown in Appendix D.

Using these classes of resources, the Executive Committees then assessed the resource needs to achieve success in each of the ten NERC functions. A summary of the resource needs analysis by function is provided in Appendix E. Once the analysis of resource requirements was completed for each function individually, the group looked across functions to identify patterns and relationships. The group noted that some functions lend themselves to committees of volunteer industry experts and other functions may have unique constraints that necessitate other organizational approaches. This analysis led to the organizational framework described in the next section, distinguishing functions that can be attributed mainly to committees of industry volunteers from other NERC functions with unique resource requirements.

Section 3 — NERC Organizational Framework

Overview of Proposed NERC Organizational Framework

The Executive Committees propose the organizational framework shown in Figure 5¹³ as the best fit for achieving NERC’s reliability mission and functions. By consolidating the number of direct reports to the Board, this simple approach emphasizes a) an efficient use of industry volunteers and other NERC resources, and b) effective coordination of work and integration of results. This framework establishes a foundational distinction between functions which should be addressed by the technical committee(s) and functions that have unique organizational requirements that are best managed separately from the technical committee(s). Majority and minority recommendations regarding the technical committee(s) are provided in the next two sections, while descriptions and enabling recommendations related to other functions are presented in this section.

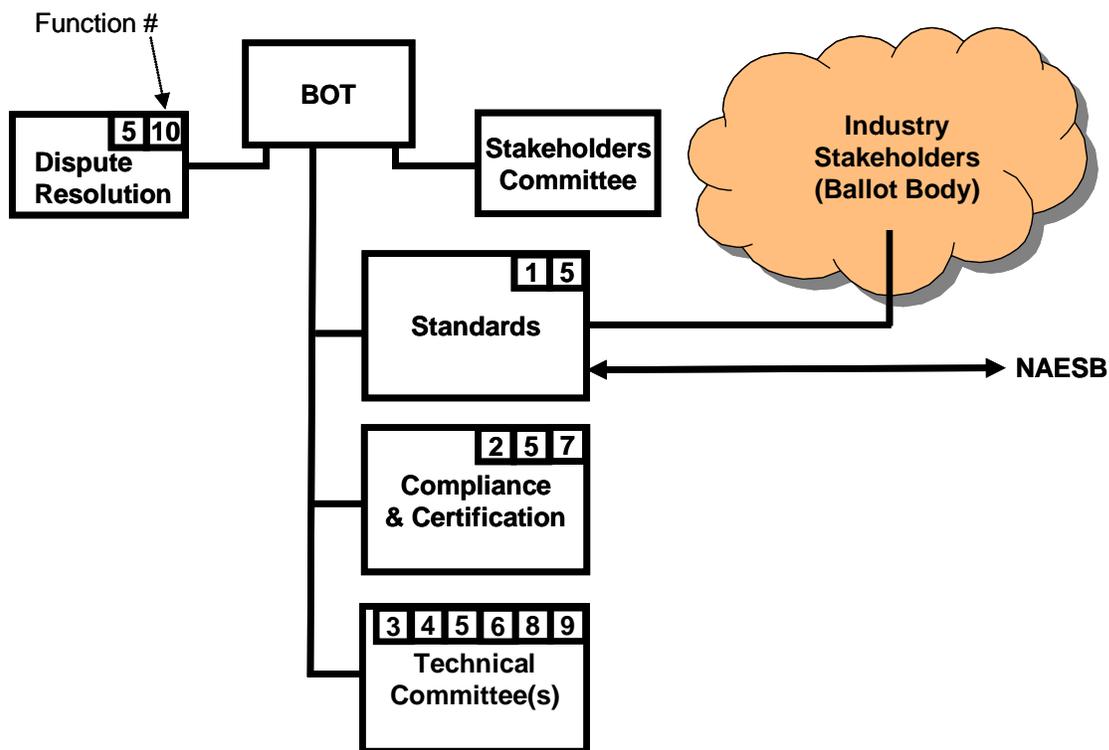


Figure 5 — NERC Organizational Framework for Reviewing the Role of NERC Committees

Stakeholders Committee

The proposed organizational framework retains the current role of the Stakeholders Committee as a senior executive group, representing a balance of stakeholder views, whose role is to advise the Board on policy issues¹⁴. The Stakeholders Committee also serves other corporate governance responsibilities assigned in the NERC Certificate of Incorporation and Bylaws.

¹³ This figure is identical to Figure 1 in the Executive Summary. It is repeated here for easy reference.

¹⁴ The Executive Committees acknowledge the high value placed by the Board in continuing to receive advisory inputs from the Stakeholders Committee on policy matters relevant to NERC, and have assumed this role will continue.

The Executive Committees stress that consolidating the number of technical committees to one or a small number is not intended to say that the Stakeholders Committee should become the technical committee or vice versa — these are very distinct roles. The Stakeholders Committee should continue to provide executive advice on policy issues relevant to NERC. When practical, policy issues affecting the work of the technical committee(s) should be debated and resolved in advance of the technical committee work to provide proper guidance ahead of time.

The technical committee(s), while not intended to have a policy advisory role like that of the Stakeholders Committee, is (are) nonetheless collectively well-informed of policy issues and at the same time considerably expert on technical matters of reliability. With the roles of the Stakeholders Committee and technical committee(s) clearly distinguished this way, the Board should be able to inherently trust the policy advice of the Stakeholders Committee and the technical results and advice of the technical committee(s).

Dispute Resolution (Function 10)

Recommendation 2 — Direct the integration of the dispute resolution functions of NERC from the several programs in effect today to a single program that meets the needs of the standards development, compliance, and certification functions, and other NERC activities, while recognizing the unique characteristics of each.

The Dispute Resolution process (Function 10) is a specialized activity designed to provide NERC-related conflict or dispute resolution. Based on confusion apparent in some public comments, the Executive Committees clarify that this function is limited to resolving conflicts arising within NERC processes, and is not intended to supercede regional dispute resolution programs or be available as a service to resolve conflicts outside of NERC. This function should be consolidated from the several programs in effect today to a single program that meets the needs of the standards development, compliance, organization and personnel certification, and other NERC functions. This function should be staff-administered, under the direction of the NERC General Counsel, and report directly to the Board.

This consolidation will streamline the number of procedures and personnel needed to support the dispute resolution function. More importantly, it will elevate the stature, credibility, and trust in the dispute resolution process by having it centrally coordinated under the oversight of NERC General Counsel and the Board, as compared to the several programs that are currently managed through various subcommittees. It is important to recognize, however, that each NERC function may have unique procedural requirements for dispute resolution (personnel certification dispute resolution, for example, is different from standards development or compliance enforcement disputes). Integration of the dispute resolution function must continue to accommodate these required procedural differences, while strengthening the various programs through consolidation.

The success criteria for Dispute Resolution (Function 10) include:

- Independent of all other functions.
- Fair and trusted process, with Board oversight.
- Documented procedures addressing all aspects of the program.
- Addresses the dispute resolution needs and criteria across all ten NERC functions, as described in Function 10 (see Appendix C).

Standards Development (Function 1)

Standards Development (Function 1) is based on the Board-approved open standards process. The Executive Committees have assumed throughout this initiative that the new standards process would continue forward in its current direction. This report, therefore, does not recommend any changes to the standards development program, but rather focuses on clarifying the role of the technical committee(s) in standards development.

The Standards Committee, assisted by NERC staff, manages the standards development process and is accountable to the industry stakeholders, represented by a registered ballot body. The Board also provides oversight to ensure the standards process remains open, inclusive, fair and balanced. The Executive Committees suggest that the Standards Committee should also be responsible for facilitating the standards coordination interface with NAESB, but defer making a formal recommendation here since that issue is being addressed through a separate initiative.

The Standards Committee should be objective and impartial with regard to the scope and content of reliability standards and should not advocate for specific standards. Instead, the industry stakeholders, individually or through committees or associations, actively promote the development of standards by submitting Standards Authorization Requests (SARs), commenting on SARs and draft standards, and providing resources to assist in the drafting of SARs and standards. Focusing the Standards Committee on process matters avoids the potential for a conflict of interest if the standards activity is also responsible for the number, scope, and content of the standards to be developed, harking back to the days when NERC standing committees controlled both the content and due process for NERC standards. Although the Standards Committee is not an advocate for the scope and content of standards, it does actively coordinate standards work priorities (based on stakeholder inputs) and available resources. The Standards Committee ensures the standards development workload is commensurate with resources available and coordinates the interrelationship between various standards efforts.

This approach enables the technical committee(s) to advocate for reliability standards and to act as participants and users of the standards development process¹⁵. The technical committee(s) can therefore propose standards, offer technical resources into the standards process for the drafting of SARs and standards, comment on draft SARs and standards, and facilitate the implementation of standards. The technical committee(s) can inform the standards process in areas requiring reliability expertise by providing inputs and comments. The technical committee(s) can also assess the effectiveness of standards and propose revisions or new standards to address reliability issues. The technical committee(s) maintain the Functional Model and propose standards as needed to implement the Functional Model and enable the planning and operation of a reliable bulk electric system.

A small minority believes strongly that there should be complete separation of the technical committee(s) from the standards process, to the extent that the technical committee(s) should not ever take any formal actions as a body in support of developing a standard (except perhaps to request a standard). Most, however, support active involvement of the technical committee(s), as described above and consistent with the current version of the Reliability Standards Process Manual.

A key challenge is to also actively engage the broader registered ballot body in the standards process, including standards development, education, and debate. An informed electorate is essential to the standards process. Many comments received by the Executive Committees note that the electronic nature of the new standards process is not conducive to face-to-face sharing of views and informed debate. The technical committee(s) and subgroups can provide one medium for education and debate, and their meetings are of course open. However, it may also be appropriate for the Standards Committee to design broader forums for education and debate of proposed standards, as a complement to the technical committee meetings. Additionally, NERC may choose to host stakeholder interest forums to promote the education and debate of reliability issues. The Executive Committees expect that any such NERC forums would be self-directed and self-funding, and that the scopes would be NERC-approved. Industry associations and other industry stakeholder organizations may wish to independently facilitate the participation of particular interest groups in the NERC standards process, and should be encouraged to do so.

The success criteria of Standards Development (Function 1) include:

¹⁵ The description of the Technical Committee(s) role in support of standards development is consistent with that provided on Page 10 of the Reliability Standards Process Manual (June 14, 2002), although that reference is specifically to subcommittees, working groups and task forces.

- Stakeholder-driven, consensus-based, open standards process that is trusted by industry stakeholders.
- Well-managed process efficiently applies industry volunteer, staff, and other resources.
- Standards process operates independently of other functions, although important interfaces are established.
- Standards Committee and Standards Process Manager are accountable to the Board and the registered industry stakeholders for an open, inclusive, balanced, and fair standards process that is impartial and objective regarding the number, scope and content of standards.
- Standards process is guided by ANSI principles and maintains ANSI accreditation.
- Performs all elements listed in Function 1 (see Appendix C) and implements the Reliability Standards Process Manual, as well as other activities directed by the Board.

Interface to NAESB

The Executive Committees note that a Memorandum of Understanding (MOU) has been executed between NERC and the NAESB Wholesale Electric Quadrant (WEQ). The Executive Committees defer to the results of that separate initiative regarding how best to implement the NERC-NAESB interface. The NERC-NAESB interface did, however, receive substantial discussion and comment during this review of the role of the committees, and a few key points from that discussion affecting the role of the Technical Committee(s) are presented here.

The Executive Committees believe that the NERC-NAESB interface can be most effective if it is implemented at multiple levels, as suggested in Figure 6. A successful NERC-NAESB bridge requires a solid foundation based on policy, process, and technical expertise on both sides of the bridge. At the policy level, the two boards should interact directly. The Executive Committees suggest that the Standards Committee be given the responsibility for facilitating the standards process interface with NAESB (including NERC's portion of the Joint Interface Committee). The Standards Committee already has responsibility for managing the NERC standards process and the interface with NAESB is a key element NERC standards development. A written procedure and criteria should guide the coordination process.

To achieve success, however, many distributed interactions will be required between various technical groups in NERC and in the NAESB WEQ, shown in the third interaction level below. Finally, the Executive Committees note the need for a joint dispute resolution process as a backstop for the interface.

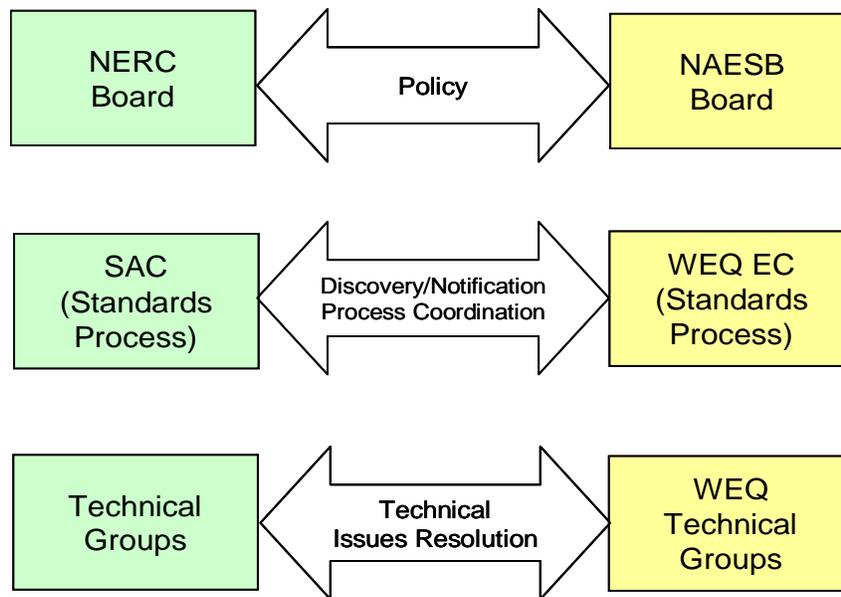


Figure 6 — NERC-NAESB Interface Defined at Multiple Levels

Compliance and Certification (Functions 2 and 7)

Recommendation 3 — Direct the integration of various aspects of compliance assessment, monitoring, and enforcement — and organization and personnel certification — into one coordinated program, distinct from, but coordinated with, the technical committee(s).

The Compliance and Certification program (Functions 2 and 7) incorporates today's compliance monitoring, assessment, and enforcement programs, as well as organization certification and personnel certification programs under a single umbrella, merging activities that exist in several subgroups today under the Operating and Planning Committees. A single process advisory committee is recommended to provide stakeholder inputs to the process and procedures for compliance and certification. The Executive Committees recognize that compliance, organization certification, and personnel certification may have sufficiently unique requirements to warrant the need for distinct advisory groups. The personnel certification process, for example, is one area in particular in which governance and oversight requirements should be reviewed to ensure consistency with the criteria of the National Organization for Competency Assurance.

Compliance monitoring, assessment, and enforcement functions are coordinated at multiple levels by NERC staff and Reliability Regions, with Reliability Regions having a significant role in implementing the program. Performance criteria, certification criteria, measures, and data requirements are developed in cooperation with the consensus-based standards process, but are enforced independently through the compliance program. Inputs from the Technical Committee(s) may be sought on matters requiring reliability expertise.

The success criteria of Compliance and Certification (Functions 2 and 7) include:

- Coordinated at multiple levels by NERC staff and Reliability Regions.
- Separate from other functions, including technical committee(s) and Standards Committee.
- Accountable to the Board for compliance monitoring, assessment, and enforcement.
- Process advisory group(s) guide compliance process and procedures but not specific compliance actions.

- Personnel certification is consistent with, as appropriate, criteria of the National Organization for Competency Assurance.
- Performs all elements of Functions 2 and 7 (see Appendix C) and other activities directed by the Board.

Adequacy and Reliability Performance Assessment (Function 4)

Assessment has unique requirements that caused the Executive Committees to seriously consider making it an activity independent of the technical committee(s). In the end, however, it was decided to include the Reliability Assessment function in the technical committee scope. The overriding consideration for this recommendation is that the technical committee framework provides the best forum to apply the industry's reliability expertise and to coordinate reliability assessment issues between planning and operations.

The Executive Committees caution, however, that the Board should pay special attention to assuring the assessment results reported retain a high degree of objectivity and impartiality. The concern is one of ensuring that the results are not watered down or diminished through a stakeholder process in which the cumulative effect of all participants protecting their interests is a "least common denominator" statement of current and future reliability issues. The Board needs a frank assessment and forecast of reliability performance and the technical committee(s) should be encouraged to report that way, while recognizing there may be regional or stakeholder differences that need to be considered.

Although its title may indicate this function would be similar to today's Reliability Assessment Subcommittee activities, the Executive Committees envision a broader scope here. This function incorporates both near-term operating reliability assessments as well as longer-term adequacy reports. Unlike the compliance function that measures performance against known standards, the reliability assessment function is more generally scanning for current and future reliability issues. In concept, the technical committee acts as the reliability "radar" for the Board, providing a feedback mechanism to assess current reliability performance and future expected performance. Reliability assessment requires a unique combination of expertise, much of it provided by the technical committee(s) and Reliability Regions, but also must remain objective and impartial. Some elements of this process may require confidentiality.

Critical Infrastructure Protection (Function 8)

Recommendation 4 — On an interim basis, retain the CIPAG as an advisory group reporting to the Board. Periodically review the CIPAG scope and relationship with the technical committee(s), with a preference in the future toward integration of the CIPAG into the committee organization.

The Executive Committees heard substantial debate whether the critical infrastructure protection function should be part of the technical committee framework or not. A majority of the committee executives believe that, ultimately, critical infrastructure protection needs to be integrated into the technical committee(s). This view is justified by the increasing importance of coordinating security issues with system and market operations, and planning. These members believe that critical infrastructure protection must be taken within a broader view of asset and risk management and that security decisions must be closely integrated with operations and planning of electric systems. Incorporating critical infrastructure protection into a broader, stakeholder-based committee framework would also provide greater assurance of a balancing of interests and priorities.

However, strong arguments were received for separating the critical infrastructure protection function from the technical committee(s). NERC's role in electricity sector security is broader than the bulk electric system. NERC provides numerous governmental and industry interfaces in support of the electricity sector in addressing both physical and cyber security needs for electricity infrastructure. The CIPAG leadership itself advocated to the Executive Committees that the critical infrastructure protection function should remain separate and not be merged into a single committee with other technical issues. Their arguments were that CIPAG has unique characteristics that make it distinct from a technical committee. The operation of the Electricity Sector

Information Sharing and Analysis Center (ES-ISAC) and coordination of national security efforts with governments in both the United States and Canada are high priorities for NERC. Numerous commenters noted that CIPAG must have the significant visibility that results from having top industry and government physical and cyber security experts reporting directly to the NERC Board.

The final outcome of this debate is that the Executive Committees acknowledge that CIPAG currently has unique responsibilities and interfaces outside of the usual NERC community, including government agencies, law enforcement, etc., and that NERC's role in security needs to retain a heightened visibility, particularly in the near term. The Executive Committees acknowledge that the CIPAG should remain as an advisory group reporting to the Board, on an interim basis subject to periodic review.

Irrespective of the organizational direction to be taken for the security function, CIPAG does not have a strong record of integrating its work with the standing committees, and the standing committees have not historically given security issues sufficient priority. This situation must change immediately, through more formal coordination procedures and by elevating the priority of the interface between the CIPAG and the technical committee(s).

Use of Staff Resources

Figure 7 introduces another organizational framework concept — that some NERC functions require a greater degree of staff involvement, while others are more self-directed by industry volunteers. The diagram suggests with dashed lines a conceptual representation the relative amounts of staff support required for each activity. The staff support, and corresponding accountability through the President of NERC to the Board, is greatest in the areas of reliability support services (Function 6), followed by compliance and certification (Functions 2 and 7), and then standards development (Function 1). Critical Infrastructure Protection is shown in two parts: one part is an advisory committee and the other part is the operation of the ES-ISAC. The technical committee(s) and subcommittee activities also require staff support resources, but depend mostly on volunteer resources for direction and accountability. In all areas (except perhaps Dispute Resolution because it is not anticipated to have a standing committee) there is a chain of accountability to the Board from the committee structure, concurrently supported by staff accountability to the Board through the President of NERC.

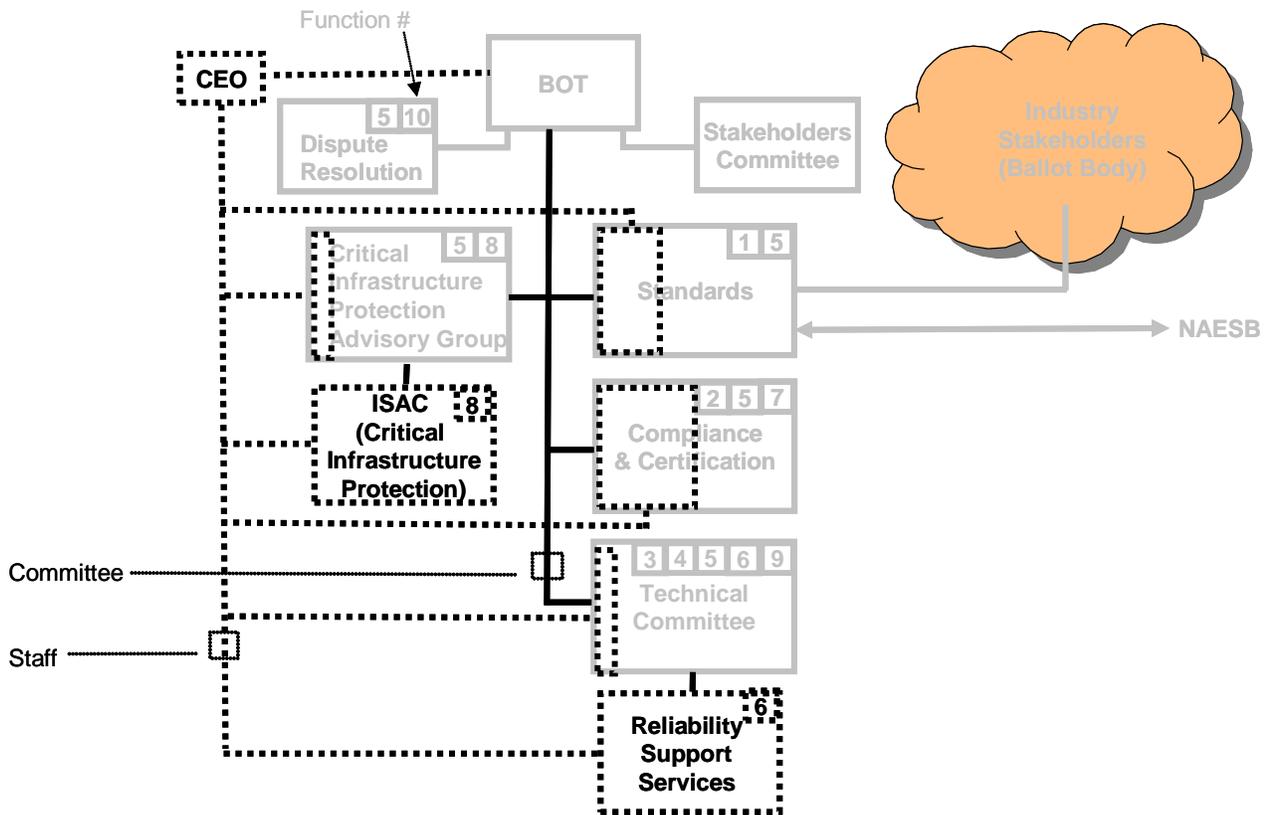


Figure 7 — Proposed Organizational Framework Showing Committee and Staff Accountability

Relative Roles of NERC, Reliability Regions, and RTOs

A final issue in the overall NERC organizational framework is the relative roles of NERC, Reliability Regions, and RTOs in support of NERC’s reliability functions. This issue requires continuing work beyond the scope of this initiative. To a large extent, the outcomes of the Reliability Region and RTO relationships will be determined outside of NERC. However, NERC should identify the principles and criteria for coordinating with regional entities to achieve its reliability mission and functions.

Some view an RTO as a “doer”, i.e., a provider of market, transmission, and reliability services, a system operator and planner. RTOs are anticipated to provide a number of reliability services in the Functional Model. The Functional Model is currently being reviewed to ensure consistency with emerging regulatory policy, such as FERC’s Standard Market Design. To the extent one views the RTO as a “doer” in the provision of reliability services, one could argue that Reliability Regions should serve as independent entities for compliance monitoring, assessment, and enforcement. Others counter that RTOs have regulatory obligations for developing market and reliability protocols and monitoring performance. The concept of “layered” compliance monitoring and enforcement, involving Reliability Regions and RTOs, needs to be discussed further.

This report has broadly identified the roles of Reliability Regions and RTOs in the definitions of functions and in the representation models. One of the challenges is the sometimes incongruous mapping of Reliability Regions and RTOs. Where there is one Reliability Region with an equivalent footprint of an RTO and when several RTOs are within a Reliability Region, this issue seems tractable. When the Reliability Region-RTO boundaries are incongruous, the problem becomes much more complex. There is also an issue that not all operating systems will be part of an RTO.

Section 4 — Majority Recommendation: Single Technical Committee

Majority Recommendation 4 — Direct the integration of NERC’s volunteer industry experts into one Technical Committee reporting to the Board.

Description of Single Committee Framework

The Technical Committee would coordinate, manage, and integrate the work of volunteer resources across various areas of content expertise relevant to NERC’s mission. The Technical Committee would promote adequate and reliable North American bulk electric systems by performing the following functions in support of NERC’s mission, and by advising the Board on such matters:

- Provide Reliability Education and Training (3)
- Assess Adequacy and Performance (4)
- Coordinate (Reliability Matters) with Other Organizations (5)
- Advise Reliability Applications, Data, and Services (6)
- Facilitate Reliable Real-Time Operations (9)

Through the provision of comments and technical expertise, the proposed Technical Committee also supports standards development (Function 1), as well as compliance and certification (Functions 2 and 7), but does not control these three functions and does not approve standards or compliance and certification actions. A preliminary “strawman” outline of a scope document for the Technical Committee is provided in Appendix F, so that a possible implementation of this proposal can be visualized.

This proposal is more than simply a collapsing the existing committees into a single committee — a new approach is proposed in which the Technical Committee assumes a stakeholder-based managerial role and subcommittees are elevated in stature from their current status in the NERC organization and become more focused and accountable in assigned technical areas. The Executive Committees stress that referring to the first tier groups as subcommittees does not in any way diminish the importance of these expert groups — the subcommittees provide the forums where work gets done and products are created.

The Technical Committee coordinates subcommittee and subgroup work up front to ensure all the pieces will fit together in a coherent plan, and integrates the results from various work groups. The Technical Committee resolves differences between subcommittees, to the extent possible, and reports any unresolved differences to the Board. The Technical Committee provides a diverse membership forum for stakeholders to indicate priorities, debate and resolve issues, and approve results. It is important that the Technical Committee membership is collectively well informed in both technical and policy issues.

As shown in Figure 8 below, the Technical Committee forms subcommittees and other subgroups around NERC functions or areas of expertise (or both). The Technical Committee and each subcommittee may also have working groups and task forces as needed to accomplish assigned work, but establishment of these additional subgroups must be coordinated across subcommittees and approved by the Technical Committee. When an initiative spans two or more subcommittees, a single subgroup may be formed with representation from the applicable technical areas, rather than creating separate and redundant subgroups.

A preliminary “strawman” for organizing subcommittees under the Technical Committee is provided in Appendix F. This organization would align subcommittees, to the extent practical, with the applicable NERC functions outlined in Appendix C. For example, a subcommittee could focus on adequacy and reliability performance assessment. Subcommittees may also be formed based on the Functional Model, resulting for

example in a subcommittees focused on balancing, interchange, transmission operations, and reliability authority issues.

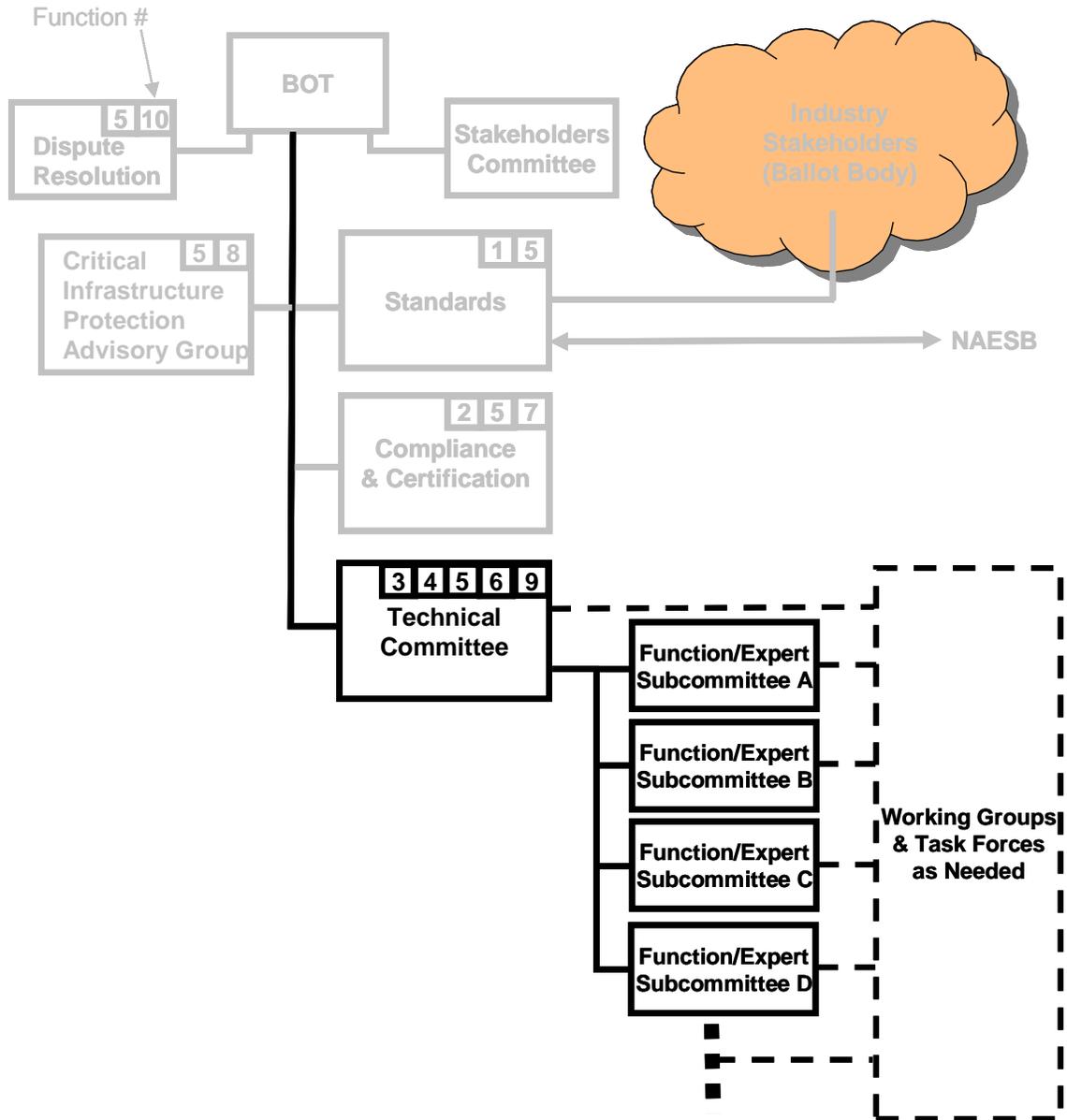


Figure 8 — Proposed Organizational Framework Showing Expanded View of Technical Committee

Under the single Technical Committee alternative, the Executive Committees would propose to continue working to flesh out the subcommittee organization, starting from the outline in Appendix F, and refine the associated scope documents. A final plan providing an effective grouping of subcommittee resources, addressing needs for expertise and function, would be presented to the Board in June 2003. Although stakeholder interests are also to be considered, it is not as critical in this one-committee model to have all segments represented on all subcommittees and subgroups as it is in today’s committee model, since ultimately work would be coordinated and approved by the Technical Committee. The Technical Committee should be empowered, with Board oversight, to periodically reassess and adapt its subgroup structure, assign work scopes and priorities, and determine each subgroup’s membership needs based on requirements for functional expertise and the balancing of stakeholder interests.

Justification for Single Technical Committee

The majority believes that going to a single Technical Committee will achieve the following benefits:

- Provides better integration of NERC results across the areas of bulk electric system operations, planning and analysis, and recognizes the industry trend toward closer coordination across these areas.
- Provides a single point of approval for committee products, including determination of priorities, consensus, and minority views to be presented to the Board. Provides a single point of accountability in serving the needs of the Board and reliability stakeholders with regard to technical matters of reliability.
- Improves coordination, prioritization, and integration of work among subgroups. With a single Technical Committee there would no longer be a need for a separate Technical Steering Committee to coordinate among committees, although the Technical Committee may choose to have its own executive steering function.
- Provides greater flexibility and adaptability in assigning and organizing resources. Allows the Technical Committee, as a management group, to adapt its resources to meet evolving priorities.
- Provides for a consolidation of demands on industry volunteer resources by allowing them to participate on the Technical Committee and more selectively on subcommittees in which they have technical expertise or particular interests. This issue is particularly acute with smaller entities that do not have sufficient resources to cover various NERC technical committees, NAESB, regional market activities, and other forums.
- Subgroups can be smaller and more technically or functionally oriented without requiring a full set of stakeholder representatives in each subgroup. Unlike today's committee model, the proposal to focus a robust stakeholder representation on the Technical Committee allows the subcommittees and subgroups to be populated with volunteers with strong expertise or interest in a particular area.
- Allows a smaller overall number of subcommittees and subgroups by consolidating groups with similar or related scopes serving different committees today. The potential for duplication of effort or redundant scopes is reduced. The Technical Committee maintains a work plan to ensure all technical subgroups are focused on assignments and not creating additional work that is of a lower priority or not coordinated. Common work scopes, such as maintaining the Functional Model, can report in one place to the Technical Committee, rather than being the responsibility of several committees as is the case today.
- Making a more sweeping change to reach a new vision in the committee organization now can minimize the overall effort and difficulties of a protracted transition.
- A small minority of the Executive Committees believes there should be a clear and unequivocal separation between the Technical Committee and standards development, and strongly prefers the one-committee option because multiple committees would absorb more reliability expertise away from the SAR and standard drafting teams.

The Executive Committees note the proposal for one Technical Committee is not without challenges of its own. To ensure the best possible success, the Executive Committees note here several essential nonstructural measures that can be taken to mitigate any potential disadvantages of the one-committee alternative. A similar approach is taken in the next section for the two-committee alternative.

Table 4 — Measures to Mitigate Disadvantages of One-Committee Option

Potential Disadvantage of One-Committee Option	Nonstructural Measures to Mitigate Disadvantages
<p>Some argue that a single Technical Committee may filter results and prevent the Board from hearing a diverse range of views on technical matters — that the one-committee model diminishes the checks and balances provided until now by the Operating, Planning, and Market Interface Committees.</p>	<p>The Technical Committee must be held accountable by the Board for representing consensus and minority views, as exemplified in this report. Committee written procedures must explicitly ensure that the Technical Committee identifies, works to resolve, and reports to the Board alternative views of its members and subgroups. The committee officers must assure a culture in committee activities that strongly promotes respect for and retention of minority views. The Stakeholders Committee provides an additional sounding board of stakeholder views. The NERC appeals process should include a provision to allow consideration of appeals regarding committee process.</p>
<p>Some argue that such a committee has too broad a scope. Members may be interested only when their topics of expertise arise (operators are not concerned with planning and vice versa). The committee's agenda will be long and it is doubtful that all committee members will remain suitably engaged due to the diversity of issues that will have to be covered. Since the single committee would be comprised of members having various expertise, all of whom are not knowledgeable on all the issues, the committee could spend excessive time debating issues. This inefficient process could compromise the ability to staff the single committee with knowledgeable volunteers.</p>	<p>Technical Committee members should be recruited who are at a senior management level (with technical or market backgrounds), providing a broader understanding of technical and policy matters. Agendas and assignments should be structured so that the technical details are worked on at the subcommittee level by the true technical experts. The subcommittees should be charged with being able to document and explain technical issues in a way that is logical and understandable to senior managers from a diverse range of technical and business backgrounds from various stakeholder segments. Detailed technical work is intended for the subcommittees.</p>
<p>The one-committee approach does not allow enough "seats at the table" to continue the engagement of a sufficient number of technical experts.</p>	<p>Once again, the pool of valuable technical expertise must be applied at the subcommittee levels as well as at the committee. The committee scope document must include some general qualifications for committee members to ensure a diverse range of expertise and competencies are available on the committee. The objective is to allow a more efficient use of industry volunteer resources without leaving gaps in expertise and competencies on the committee.</p>
<p>One technical committee will necessarily spend most if not the preponderance of its time on operating issues. Operating issues, by their very nature, appear without notice, are not possible to schedule and often have dire consequences if not dealt with promptly. Planning issues, however, generally require lengthy consideration, and often have multiple solutions that must be sifted in order to achieve an optimum outcome.</p>	<p>The committee officers must be charged by the Board to effectively balance near-term and long-term issues. Committee agendas should be structured such that minimum amounts of time and resources are allocated to major areas of responsibility, including operations and planning, as well as market and security related issues.</p>

Some may use the Technical Committee as the one-stop place to oppose results, without contributing positively to the work of the subcommittees. The Technical Committee could become a debating forum that slows down the technical work of subcommittees.	With a diverse Technical Committee membership, this tactic should not be successful unless a majority of committee members are convinced by such arguments. The committee officers must be in command of parliamentary procedures to ensure individual members or blocks of members do not unduly disrupt committee business.
Transition to a single Technical Committee could be disruptive to existing work and momentum that various groups have established on existing initiatives.	The transition plan to be approved by the Board in June 2003 should describe how key ongoing work will be transitioned into the new committee organization. Subcommittee membership requirements and recruiting must be conducted to ensure continuity of expertise.

Technical Committee Representation Model

Majority Recommendation 5 — Adopt a Technical Committee representation model identical to that of the Stakeholders Committee.

Many alternatives were considered for staffing of the Technical Committee. None were seen as perfect and none were without objection. In the end, however, the majority recommendation is to adopt the same membership model as is used in the Stakeholders Committee¹⁶. In addition to the segment and geographic representation provided by this model, it is expected that qualifications for membership will emphasize diverse expertise across operating, planning, and market perspectives. The intention is that regulatory entities would have the option of being voting or non-voting members, as they do on the Stakeholders Committee.

Meetings, of course, should remain open and active participation by observers encouraged. Technical Committee members should be encouraged to concurrently serve on subcommittees and subgroups, although that would not be a requirement. The nominating process should also consider balancing technical expertise and functional responsibilities in addition to stakeholder segment representation.

Several issues on representation are noted here from committee discussions and the comments from others:

- The Executive Committees considered increasing the number of stakeholder representatives to three per segment to allow a broader diversity of expertise across operations, planning, and markets. However, comments were received that adding a third stakeholder seat without changing the number of regional council seats effectively reduces their representation compared to today's technical committees from 11 of 35 to 10 of 46-52 voting members. Comments were also received regarding the manageability of a larger sized committee. With these arguments, the Executive Committees were persuaded to recommend the Stakeholders Committee representation model exactly, recognizing that committee representation will continue to be an evolving issue. Going with the smaller committee model requires extra care in staffing of the committee to assure the balance and completeness of expertise necessary to competently dispatch the business of the committee. This addresses the numerous comments that the committee would be too large and that regional representation would be diminished by going to three members per stakeholder segment.
- Some have suggested that end use customers have less to offer on technical issues related to bulk electric system reliability and should not be afforded two segments. End use customers argue this representation is minimal and should actually be increased. The Executive Committees believe that the

¹⁶ The Stakeholder Committee membership model is defined in the NERC Bylaws.

involvement of end-use customers is critical to NERC in that they can bring another important perspective to technical issues and recommend the two segments (large and small end users) be retained.

- Some note the lack of functional orientation of the stakeholder segments in this model and would prefer something more along the lines of the Functional Model. Others, such as cooperatives, and state and municipal entities would lose their distinct seats and oppose that approach.
- Regulators have provided comments that they must have the option of being voting members. This option has been incorporated into the proposal since it is a part of the Stakeholder Committee model.

The Technical Committee membership would then be as follows:

Table 5 — Technical Committee Representation Model

Technical Committee Representation (36 – 42)
Chairman (1) and Vice Chairman (1)
Reliability Regions (10)
Canada (4: 1 East, 1 West, 2 At Large)
Stakeholders (20) <ul style="list-style-type: none"> • ISO/RTO (2) • Investor-owned Utility (2) • Federal (2) • Transmission Dependent Utility (2) • State/Municipal Utility (2) • Cooperative (2) • Merchant Electricity Generator (2) • Electricity Marketer (2) • Large End-use Electricity Customer (2) • Small End-use Electricity Customer (2)
Government/Regulatory (0 – 6) (May elect to be voting or non-voting members) <ul style="list-style-type: none"> • U. S. State (2: 1 West and 1 East or ERCOT) • U. S. Federal (2) • Canada Federal (1) • Canada Provincial (1)

On the subject of regional representation, the Executive Committees received comments noting the importance of representation by Reliability Regions (and some comments noting this representation is unnecessary). It is also recognized that RTOs and other emerging regional entities play an important reliability role and should have representation. Regional representation is important for the following reasons:

- The NERC organization was historically built and continues to operate today on a regional foundation.
- Regions represent the geographic diversity of the electricity infrastructure in North America.
- Region-specific requirements and measures are necessary to implement NERC standards.
- Regions are responsible for implementing and enforcing compliance with NERC standards.
- Regions coordinate the recruitment and involvement of industry experts in NERC activities.
- Regions represent a broad spectrum of industry stakeholders, some who do not have sufficient resources to directly participate in NERC committee activities.
- Regions continue to fund NERC's reliability functions.

The Executive Committees received strong, although not unanimous, support for fixed committee membership rather than the alternative of allowing whoever shows up to vote (with votes balanced by segment). A standing membership provides continuity and accountability for achieving work targets.

The representation model of area expert subcommittees and other subgroups should be flexible (subject to approval of the Technical Committee and Board oversight) to accommodate the needs within each functional area for expertise and balancing of stakeholder interests. In the formation of these expert groups, there must be recognition that resource constraints are becoming tighter. More must be done with less people. Within each subcommittee, there should be an emphasis on organizing subgroups that are smaller and leaner than today's committee structure, while remaining focused on achieving the ten functions in support of the NERC mission.

Section 5 — Minority Recommendation: Two Technical Committees

Minority Recommendation 5 — Direct the reorganization of the volunteer industry experts into two technical committees in the areas of a) operating reliability, and b) planning and adequacy.

Description of Two Technical Committees Alternative

In addition to the majority proposal for a single Technical Committee, the Executive Committees considered numerous options for organizing committee resources. Of these alternatives, a strong minority view converged around a two-committee model, shown in Figure 9, with the two committees addressing areas of operating reliability, planning, and adequacy. This two-committee alternative is presented here for the Board to consider as a recommendation of a minority of the committee executives, with comments from the standing committees and others reflecting a similar breakdown of preferences between the one-committee and two-committee models. A preliminary strawman outline of scope documents and organization for the two Technical Committees are provided in Appendix G so that this alternative can better be visualized.

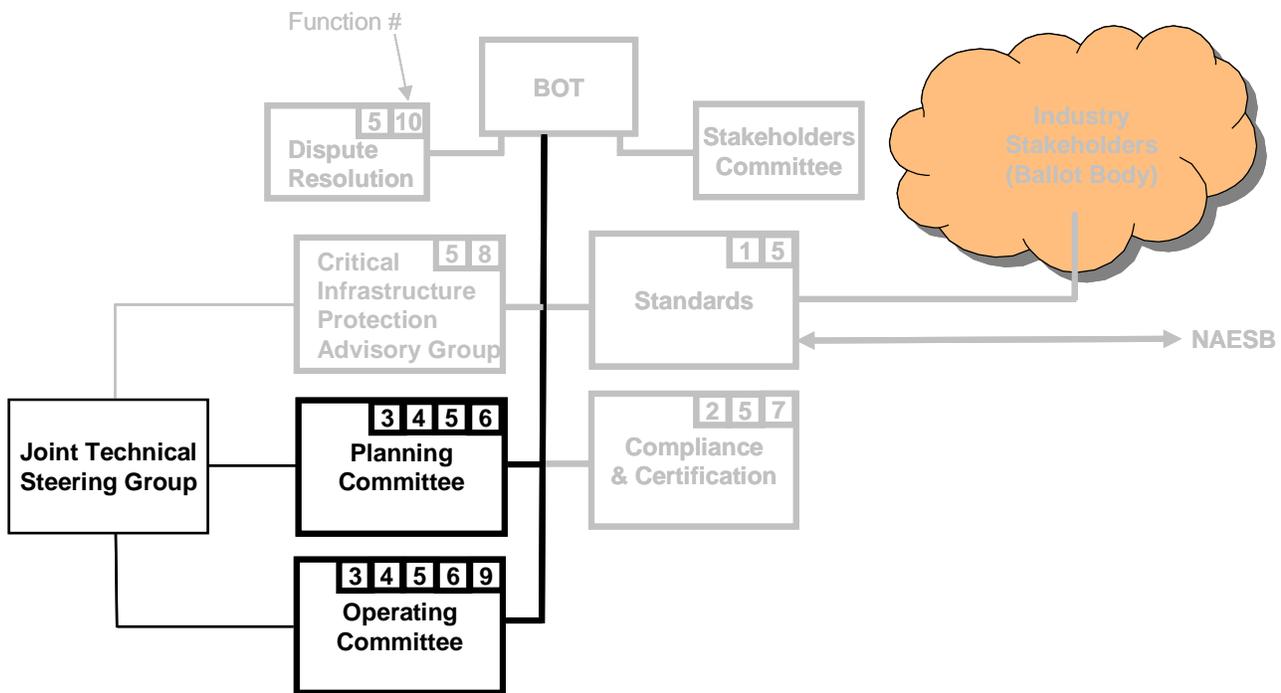


Figure 9 — Minority Recommendation for Two Committee Model

The two-committee alternative would consolidate the standing committees to be: Operating Committee and Planning Committee. In this alternative, the market perspectives previously attributed to the Market Interface Committee would be merged into the Operating and Planning committees. While some inputs were received that the Market Interface Committee should continue, at least on a transitional basis, to focus on the interfaces between the NERC Functional Model and the Standard Market Design (and other market designs), neither the majority or minority recommendations support continuing the Market Interface Committee. Both approaches emphasize the importance of transitioning the expertise and views that were available in the Market Interface Committee into the surviving committees.

It is important to understand that in the two-committee alternative, the recommendation is not simply a status quo of existing committees. The scopes of these committees must be reevaluated and aligned with the NERC functions outlined in this report. The committees would jointly review subcommittee, working group, and task

force resource needs across the committees to improve functional alignment and more efficiently allocate resources. Appendix G is a preliminary start in this direction — showing what the committee scopes might look like. Much of the discussion on focusing and streamlining subcommittees and subgroups that is provided in the one-committee model also applies here.

Joint Technical Steering Group

To address the issue of prioritizing and integrating the work of the committees, the minority recommendation includes establishing a Joint Technical Steering Group. This group would have a stronger role than today's Technical Steering Committee, whose role is primarily limited to inter-committee coordination. The Joint Technical Steering Group would likely be comprised of the Executive Committees of each committee and the Critical Infrastructure Protection Advisory Group. The Joint Technical Steering Group would have similar responsibilities to the Executive Committees, except in a joint manner across the two committees and the CIPAG. Each committee and the CIPAG would be separately accountable to the Board. The Joint Technical Steering Group would serve the following functions¹⁷:

- Coordinate work plans, priorities, and agendas across the committees and the CIPAG.
- Manage subcommittee and subgroup assignments and efficient allocation resources.
- Coordinate the approval of results when more than one committee is involved.
- Communicate issues among committees, identify and resolve differences between committees, and ensure minority views are respected.
- Prepare joint reports to the Board when more than one committee is involved.

“Committee of the Whole” Concept

A concept that was discussed, but has not yet been fully tested, was one of structuring organizationally around the two committees described above, but allowing them to meet in joint session to debate and act on issues affecting both committees. Meetings would be structured to allow the committees to meet separately and then in joint session, or vice versa. This would change the current purpose of joint committee meetings from being purely informational to including joint committee actions on issues affecting more than one committee. If the two-committee model is chosen, this additional feature may be worthy of further exploration in developing the detailed transition plan. The Executive Committees plan to test this approach in the March 2003 committee meetings.

Justification for Minority Recommendation

The proponents of the minority recommendation argue that largely the NERC committees are working well and just need tuning to address the changed role with respect to standards development and compliance, and to review the scope documents in light of the NERC functions outlined in this report. Commenters add that the minority recommendation is the simplest to implement and would cause the least disruption to the NERC organization, its processes, and all those involved in its activities. Additional arguments for the two-committee model point out that NERC has only recently established its committee organizations, including critical infrastructure protection, and that another large step change will perpetuate confusion and uncertainty at a time when stability is needed.

¹⁷ This is a preliminary outline of responsibilities of the steering group. Because of a concern expressed by some that a small group, without full representation, could have decision-making responsibilities, these functions need to be fully vetted. It is the intent of the Executive Committees, if the three-committee option is implemented, that this joint executive steering group would have similar responsibilities and authorities as today's executive committees, except in a joint manner.

Many proponents of retaining multiple committees note that expert volunteers will not be interested in discussing detailed technical issues in areas with which they are not familiar – that the number of volunteer experts would be reduced not only by the lesser number of seats on one committee, but also by a decrease in interest by industry experts. They suggest that greater participation will be encouraged by retaining multiple committees. The argument implies that participants with strong technical expertise prefer working in separate committees, while the one committee-model supports those with more general knowledge who would like go to fewer meetings to protect their business interests. Commenters argue that the minority recommendation would result in fewer subgroups reporting to each committee and a more manageable scope of the issues for each committee. The minority recommendation offers the flexibility for committees to meet jointly if required, to accomplish the coordination objective.

Adopting the minority recommendation now would not preclude transitioning to one technical committee in the future if justified. The minority recommendation could facilitate the working relationships with those regions who have planning and operating committees.

Should the Board adopt the two-committee minority recommendation, the Executive Committees suggest the following measures be adopted in the implementation to address shortcomings perceived by the majority.

Table 6 — Measures to Mitigate Disadvantages of the Two-Committee Option

Potential Disadvantage of Two-Committee Option	Nonstructural Measures to Mitigate Disadvantages
There will continue to be weak integration of results across the areas of bulk electric system operations and planning and analysis. Multiple and often redundant points of approval for committee products will continue. Maintaining an operating and planning committee perpetuates a silo mentality that is counter to the current evolution of the industry. Each committee will create its own subcommittees and subgroups, with redundancies between committees.	Initiate a stronger Joint Technical Steering Group with executives from each committee and the CIPAG. Although this group does not report directly to the Board, it coordinates priorities, work assignments, and results across the committees and the CIPAG. Conduct joint committee meetings on issues pertinent to more than one committee. Maintain a written work plan with assignments across the committees. Form joint initiatives or groups for common work scopes, such as maintaining the Functional Model.
Two technical committees are not an efficient use of industry resources. Already strained organizations will have to participate in two committees rather than one to address their interests. This issue is particularly acute with smaller entities that do not have sufficient resources to cover various NERC technical committees, NAESB, regional market activities, and other forums.	Seek ways to reduce the total number of meetings, including alternative means of participating in reliability issues other than meetings. Coordinate the time and location of meetings that are required. Encourage representative memberships that allow a committee member to represent a group of interested stakeholders rather than an individual organization.
Multiple NERC technical committees compete for resources from the standards process and NAESB.	Closely coordinate committee work with the Standards Committee and the NAESB Wholesale Electric Quadrant to avoid placing redundant demands on industry volunteers.

Continuation of existing committee structures, without acceptance of the need for changes, will disenchant volunteer participants and reduce the number and qualification level of volunteers.	As part of the implementation, update the committee scopes and procedures manual. Evaluate subcommittee scopes. Orient the committee and subgroup scopes toward the NERC functions identified in this report and organization goals identified in the Board strategic review. Review the committee membership needs and update qualifications as needed.
Market participant perspectives will be overrun in the more narrowly focused committees of operating and planning experts, as compared to the broader representation model of a single technical committee.	Expertise and perspectives from the Market Interface Committee, as well as other market perspectives must be a significant part of the updated operating and planning committee memberships.
Focusing the technical committees toward technical details will erode the level of volunteers from senior executives and managers to middle and lower level managers and staff.	Delegate technical details to subcommittees and focus committee agendas on resolving higher level issues. Actively recruit higher level volunteers.
Taking a partial step now in committee reorganization will prolong the disruption and delay the benefits of integrating into a single committee.	Use the two-committee model as a stepping stone, with a periodic review to see if additional change is warranted.

Minority Recommendation on Representation on Technical Committees

Minority Recommendation 6 — Assign each Technical Committee to propose for Board approval a representation model to meet its unique resource requirements.

With the minority recommendation for three standing committees, each committee would be allowed to adopt unique representation models, subject to Board approval, to meet their technical needs and stakeholder interests. Initial suggestions have focused around the following approaches:

- Operating Committee — Revise membership to align more closely with the Functional Model and incorporate market participants.
- Planning Committee — Retain the current model aligned by asset ownership classes and incorporate market participant representation as needed.

Other Committee Organization Alternatives Considered

A brief description of other committee organization alternatives that were considered, but rejected for various reasons, is provided in Appendix H.

Section 6 — Transition Plan

Recommendation 6 — Direct the technical committee(s) to submit for Board approval in June 2003, and initial implementation in July 2003, an updated scope document and plan for reorganizing to achieve assigned responsibilities.

This report is the culmination of the Executive Committees' review of the scope, functions, organization, and representation needs of the NERC standing committees. At the same time, it represents a starting point for implementing the transition. The Board is requested to direct the Technical Committee(s) to develop additional details of a transition plan, with a target of completing an initial transition of the committees and major subcommittees by July 2003.

The Executive Committees, after considering a delay of this transition and possible ways to complete the transition in phases, have agreed that completing the committee reorganization quickly will be less disruptive and more effective. Even without making the changes recommended in this report, the NERC standing committees are facing expiration of the current membership terms in July 2003 and are working under outdated scope documents and procedures manual.

Transition Leadership

During the period from February until the new committee organization is in place, substantial coordination and leadership are needed to assure a successful transition. The Executive Committees recommend that they continue in a role of facilitating the transition, working closely with the existing standing committees, until the reins are handed to the new Technical Committee(s) in July 2003. This approach would be appropriate whether the one- or two-committee option is selected.

Formation of the Technical Committee(s)

The goal is to complete the initial transition to the new committee organization in July 2003 in accordance with the following schedule. A key issue in the transition is how the new committee(s) will be populated. Comments have been received encouraging an open process for nominating and selecting committee members.

Tasks to Form Technical Committee(s)	Due Date
1. Pro forma committee scope documents presented in report to Board.	February 11, 2003
2. Final draft of committee scope(s).	February 28, 2003
3. Appoint committee nominating task force(s).	February 28, 2003
4. Final draft of committee representation model and member qualifications.	February 28, 2003
5. Existing committee review of scope documents and membership model and qualifications.	March 20, 2003
6. Issue requests for nominations to committee(s).	March 28, 2003
7. Close nominations for committee(s) and subcommittees.	April 30, 2003
8. Nominating task force(s) prepare recommended slates for committee(s).	May 15, 2003
9. Board approves slates and interim scope(s) of committee(s).	June 10, 2003
10. Initial term starts for Technical Committee(s).	July 1, 2003
11. Technical Committee(s) conducts(s) initial meetings.	July 15-18, 2003

Formation of Subcommittees, Working Groups, and Task Forces

The transition plan calls for the Executive Committees and existing standing committees to prepare an initial organization plan for subcommittees, working groups, and task forces that will be available to the Technical Committee(s) beginning in July 2003. Some of these groups may be existing groups and some may be new. The key is to ensure continuity of work efforts and minimal disruption, while improving the alignment of subgroup resources to functional responsibilities. A preliminary strawman for organizing subcommittees and subgroups is provided in Appendices F and G, for the one- and two-committee models respectively. This outline should be assigned to the Executive Committees to continue working, in close coordination with the existing committees, for development of a transition plan to be implemented beginning in July 2003.

Tasks to Form Subcommittees and Subgroups	Due Date
1. Draft subcommittee and subgroup organization and scopes.	February 28, 2003
2. Review subcommittee organization and scopes with existing committees.	March 18-20, 2003
3. Prepare plan for July 2003 transition of subcommittees and subgroups.	April 15, 2003
4. Solicit subcommittee and subgroup nominations as required to fill any voids in the July 2003 initial transition.	April 30, 2003
5. Close subcommittee and subgroup nominations	May 31, 2003
6. Prepare recommended slates for subcommittee and subgroups.	June 30, 2003
7. Present subcommittee and subgroup scopes and slates to Technical Committee(s) for approval and assumption of responsibility going forward.	July 15-17, 2003

Parallel Transition Activities

The following transition activities should be completed in parallel with the formation of the Technical Committee(s). These activities are outside the scope of the Executive Committees' initiative. Therefore, the Executive Committees simply outline their suggestions here, expecting that details will be established by the responsible NERC staff or committee in each of these areas:

Parallel Transition Tasks by Others	Due Date
1. Standards Committee and Director of Standards continue to develop the standards process and report progress to the Board.	Ongoing
2. NAESB Interface MOU executed and coordination procedures and criteria developed for Board approval.	February 11, 2003 (or earlier)
3. Compliance and Certification groups and Director of Compliance present organization plan for Board approval.	June 10, 2003
4. Critical Infrastructure Protection submits organization plan for approval.	February 11, 2003
5. General Counsel develops a consolidated set of procedures for the Dispute Resolution function for Board approval.	October, 2003

Continuing Review

Each major functional area¹⁸ will report to the Board annually on the effectiveness of their organization and recommend changes as appropriate.

¹⁸ Includes: Standards, Compliance and Certification, Technical Committee, and Dispute Resolution.

Appendix A — References

The following references were used by the Executive Committees for the purpose of culling the best ideas for describing the NERC mission and functions. The group used all of these documents but emphasized the more recent ones in articulating its understanding of NERC’s mission and functions today and going forward.

1. NERC Certificate of Incorporation (amended April 10, 2001)
2. NERC Bylaws (amended October 16, 2001)
3. Board of Trustees Resolutions and Principles (February 20, 2002)
4. Board Resolution Stating NERC Mission (July 1998)
5. Draft Reliability Legislation Language (May 2002)
6. Electric Reliability (Blue Ribbon) Panel Report (December 1997)
7. Organization and Procedures Manual for NERC Standing Committees (October 12, 2000)
8. Organization Standards Process Manual (June 14, 2002)
9. Integration Conference Final Report (October 2000)
10. Summary Scopes of Existing NERC Groups (various effective dates)
11. NAERO Compliance Program Roadmap (April 21, 1999)

Appendix B — NERC Mission Statement References

Corporate Documents

The NERC Certificate of Incorporation (amended April 10, 2001) includes the following statement:

[NERC’s mission is] to promote the reliability and adequacy of bulk electric supply by electric systems of North America.

The Bylaws (amended October 16, 2001) contain the following statements:

The Principal mission of NERC is to promote the reliability and adequacy of electric supply by the electric systems of North America, including through standards that provide for an adequate level of reliability of the bulk electric power systems of North America.

All Trustees are expected to serve the public interest and to represent the reliability concerns of the entire North American electric grid system.

Board Directive

In February 2002, the Board of Trustees made the following statement regarding NERC’s mission:

We believe there is a paramount public interest in a reliable bulk power system in North America. We conclude an organization encompassing both the United States and Canada should have as its principal mission maintaining a reliable bulk power system. In light of NERC’s technical expertise, history, and governance by an independent board of trustees charged to represent the broad public interest, we believe NERC should be that organization.

We believe that core reliability standards normally can be crafted to accommodate the needs of transparent, non-discriminatory markets, and that, in most cases, implementation of those standards can effectively and efficiently be accomplished through market-based solutions.

Electric Reliability Panel Report

Similar statements can be found in some of the other listed reference documents, although the Electric Reliability (Blue Ribbon) Panel report (December 1997) was the richest source of ideas in this area, with the following statements:

NAERO’s declared mission should be “to develop, promote, and enforce standards for a reliable North American bulk electric system.”

The primary purpose of the NAERO is to maintain security or short-term reliability.

NAERO’s primary purpose should be to set rules for grid security, making sure that commercial power flows do not cause grid instability or failure.

The secondary purpose of the NAERO is to assess and encourage adequacy.

The secondary purpose should be to assess and encourage the system’s “adequacy”, the sufficiency of the grid resources.

The preservation of reliability has two basic components. First, system operators make real-time decisions that clear transactions, dispatch loads, and take steps to deal with sudden failures. Second, prior decisions about maintenance of plant, installation of the correct equipment, training of system operators, and promulgation of rules affect the ability of the system to function reliably in the longer term.

Address any matters that may affect reliability, be they technical, operational, commercial, or regulatory.

Be a fair, impartial, inclusive and transparent organization.

Reflect technical excellence in all activities.

Provide an international perspective in all of its work.

All Board members are expected to serve the public interest and represent the reliability concerns of the entire North American electric grid system. The Board should reflect in its membership commitment to the public interest as well as expertise in the following areas: technical reliability and legal, market, financial, and regulatory matters.

Integration Conference Report

The following statements describing a reliability organization as part of a future (2005) desired vision of the industry were developed through an industry consensus “search conference” process (October 2000):

Bulk power system security will be maintained at all times.

Core reliability requirements will be enforced.

Bulk power system adequacy will be assessed and reported to all interested parties.

Market-based solutions will be employed to provide reliability.

An organization employs an internationally accepted process for setting reliability standards exists. This organization is open, balanced and broadly representative; and recognizes the needs of the market and its ability to contribute to reliability. It also has the authority to enforce compliance with a core set of reliability standards, and is subject to regulatory oversight.

NERC’s role is to administer an internationally accepted reliability standard setting process that is open, balanced, and includes sector voting so that approved standards are fair, responsive to the marketplace, and enforced equally by all RTOs.

Board Resolution on NERC Mission

At its July 1998 meeting, the NERC Board approved the following statement of NERC’s mission:

- Maintain Security or short-term reliability and assess and encourage long-term Adequacy.
- Address any matters that may affect reliability, be they technical, operational, commercial, or regulatory.
- Be a fair, impartial, inclusive, and transparent organization.
- Reflect technical excellence in all activities.
- Provide an international perspective in all of its work.

Appendix C — NERC Function Elements

NERC Function 1

Set standards for the reliable operation and planning of bulk electric systems.

- A. Provide a fair, open, balanced, and inclusive standards process that is accredited by ANSI and, as applicable, other standards accrediting organizations in the United States, Canada, and Mexico.
- B. Establish reliability and market interface principles upon which reliability standards are based.
- C. Administer a registered ballot body that is open to all stakeholders interested in participating in standards development and approval.
- D. Facilitate stakeholder consensus on the need for a proposed reliability standard or revision to a standard.
- E. Accommodate regional differences and regional criteria in the development of NERC standards.
- F. Facilitate stakeholder and additional expert resources in the drafting of standards.
- G. Facilitate development and field testing of practical measures for the standards.
- H. Facilitate stakeholder review and comment on proposed standards. Coordinate responses to comments, resolve differences, and seek consensus on proposed standards.
- I. Provide forums to facilitate consensus-building and informed debate of standards and related issues.
- J. Administer the voting procedures for the approval of standards.
- K. Facilitate the development of reference documents to support reliability standards.
- L. Evaluate the effectiveness of standards and the standards development process.
- M. File reliability standards with applicable regulatory agencies in the United States, Canada, and Mexico, as needed to implement the NERC compliance enforcement program.

NERC Function 2

Monitor, assess, and enforce compliance with standards for bulk electric system reliability.

- A. Establish and maintain the authority and necessary oversight to monitor, assess, and enforce compliance with reliability standards.
- B. Maintain independence of the compliance program from affected stakeholders or stakeholder groups and from the standards development process.
- C. Set penalties and other sanctions for non-compliance with reliability standards.
- D. Conduct compliance audits and performance reviews to assess the performance of organizations compared to standards.
- E. Administer penalties and other sanctions.
- F. Coordinate the compliance program with Reliability Regions and other compliance enforcement authorities.
- G. Report the status, results, and effectiveness of the compliance program to the NERC Board of Trustees.

NERC Function 3

Provide education and training resources to promote bulk electric system reliability.

- A. Provide reliability-related education and training resources for personnel who are involved in or affected by reliability standards.
- B. Provide reliability-related education and training resources to support the certification function.
- C. Provide reliability-related education resources for policy makers, legislators, regulators, and the public.

NERC Function 4

Assess, analyze, and report bulk electric system adequacy and performance.

- A. Assess and report on the existing and future adequacy of the bulk electric system, including both supply resources and delivery capabilities.
- B. Coordinate system reliability studies, including pre- and post-season operating and planning studies.
- C. Monitor bulk electric system reliability performance and results to identify opportunities for improvement.
- D. Evaluate system disturbances and events to identify opportunities for improvement.

- E. Develop, maintain, and coordinate databases and tools for system modeling, analysis, forecasting, and study.

NERC Function 5

Coordinate reliability standards and reliability matters with Reliability Regions and other organizations.

- A. Coordinate reliability standards development, compliance enforcement, and reliability matters with Reliability Regions.
- B. Coordinate reliability standards with other standards-setting organizations that would be impacted by the reliability standards.
- C. Assess the reliability impacts of standards proposed or set by other organizations.
- D. Resolve existing or potential conflicts with standards of other organizations through coordination and conflict resolution.
- E. Provide forums for the coordination of standards and other matters related to the reliability of bulk electric systems of North America.
- F. Coordinate reliability standards with regulators.
- G. Coordinate reliability matters with regulators, legislators, government agencies, public interest groups, industry associations, and others.

NERC Function 6

Coordinate the provision of applications (tools), data, and services necessary to support the reliable operation and planning of bulk electric systems.

- A. Develop functional requirements and specifications for applications (tools) and data interfaces necessary for bulk electric system reliability.
- B. Manage projects and budgets for the development and operation of reliability support applications (tools) and databases.
- C. Operate reliability support applications (tools) and services.
- D. Maintain system models and data for reliability evaluation.
- E. Facilitate real-time voice and data exchange services among Reliability Authorities.
- F. Maintain information security and confidentiality, as required.

NERC Function 7

Certify reliability service organizations and personnel.

- A. Develop certification criteria for reliability service organizations through a process that is open, inclusive, balanced, and fair.
- B. Establish and maintain the authority to certify and de-certify reliability service organizations.
- C. Provide, administer, and coordinate a reliability service organization certification program.
- D. Develop certification examinations for reliability personnel.
- E. Provide, administer, and coordinate a program to certify reliability personnel.
- F. Coordinate the organization and personnel certification programs with accrediting organizations.

NERC Function 8

Coordinate critical infrastructure protection of bulk electric systems.

- A. Operate the Electric Sector Information Sharing and Analysis Center.
- B. Coordinate critical infrastructure protection matters with regulators, government agencies, and industry trade associations, as appropriate.
- C. Coordinate critical infrastructure protection matters with inter-dependent industry organizations, such as telecommunications, fuel, and transportation.
- D. Develop standards and guidelines for physical and cyber protection and response to threats.
- E. Coordinate information and tools for crisis response by reliability personnel.

NERC Function 9

Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.

- A. Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.

NERC Function 10

Administer procedures for appeals and conflict resolution for reliability standards development, certification, and compliance, and other matters related to bulk electric system reliability.

- A. Maintain and administer procedures for appeals and conflict resolution within NERC, such as for standards setting, compliance enforcement, and certification.
- B. Coordinate conflict resolution with other organizations on matters related to bulk electric system reliability.

Appendix D — NERC Resource Types

Resource Type	Description
Open body of stakeholders	Registered body of entities that is open to all stakeholders of bulk electric system reliability (i.e., Registered Ballot Body).
Independent oversight	Independent governing body that sets reliability principles and policies, assures openness, inclusiveness, fairness, and balance in reliability processes, and assures accountability for results of reliability processes (i.e., Board of Trustees).
Standards process coordination group	Group of stakeholder volunteer representatives that advises and facilitates the standards process in a manner that is fair, open, balanced, and inclusive (i.e., Standards Authorization Committee).
Compliance coordination advisory group	Group of stakeholder volunteer representatives that advises and facilitates the compliance process in a manner that is fair, open, balanced, and inclusive (i.e., Compliance Advisory Committee).
Organization certification advisory group	Group of stakeholder volunteer representatives that advises and facilitates the organization certification process in a manner that is fair, open, balanced, and inclusive (i.e., Organization Certification Committee).
Personnel certification advisory group	Group of stakeholder volunteer representatives that advises and facilitates the personnel certification process in a manner that is fair, open, balanced, and inclusive (i.e., Personnel Certification Committee).
Balanced committee	Group of stakeholder volunteer representatives that is balanced across all stakeholders.
Select committee	Group of stakeholder volunteer representatives from an applicable subset of stakeholders.
Group of experts	Group that includes individuals who are expert in a particular field of interest. The group may consist of stakeholder volunteer representatives, supplemented by staff or contractors.
Independent group	Group that is independent from a) an organization, b) a select class of organizations, or c) all stakeholders, as is applicable to assigned tasks and responsibilities. The group may consist of stakeholder volunteer representatives, supplemented by staff or contractors.
Confidential group	Group that works under confidentiality restrictions, as is applicable to assigned tasks and responsibilities. The group may consist of stakeholder volunteer representatives, supplemented by staff or contractors. Confidentiality procedures may be required to protect sensitive information and comply with standards of conduct.
Open session	A session or series of coordinated sessions for education, debate, and building of consensus on a particular issue or topic. These sessions are open to all interested parties.
Staff	Employees of the reliability organization with administrative capabilities and/or technical expertise in reliability. May be supplemented by contracted resources.
Reliability Region	Regional Reliability Council or Organization with responsibilities of setting and enforcing regional reliability standards and coordination of other reliability processes.
RTO	An organization approved by applicable regulators to provide a regional market, transmission service, and reliability services.
Dispute resolution	Specialized personnel for facilitating conflict resolution or ADR.

Appendix E — Summary of Resource Needs Analysis by Function

Function	Function Statement	Resource Needs ¹⁹
1. Set Reliability Standards	Set standards for the reliable operation and planning of bulk electric systems.	<ul style="list-style-type: none"> • Open body of stakeholders • Standards process coordination group • Groups of experts in reliable operations, planning and market interface • Open sessions • Staff
2. Monitor and Enforce Compliance with Reliability Standards	Monitor, assess, and enforce compliance with standards for bulk electric system reliability.	<ul style="list-style-type: none"> • Compliance coordination advisory group • Reliability Regions • RTOs • Independent, confidential expert groups • Staff
3. Provide Reliability Education and Training	Provide education and training resources to promote bulk electric system reliability.	<ul style="list-style-type: none"> • Groups of experts • Balanced committee • Reliability Regions • RTOs • Staff
4. Assess Adequacy and Performance	Assess, analyze, and report bulk electric system adequacy and performance.	<ul style="list-style-type: none"> • Groups of experts with elements of independence and confidentiality • Balanced committee • Reliability Regions • RTOs • Staff
5. Coordinate with Other Organizations	Coordinate reliability standards and reliability matters with Reliability Regions and other organizations.	<ul style="list-style-type: none"> • Reliability Regions • RTOs • NAESB • Balanced committee • Groups of experts in reliable operations, planning and market interface • Open sessions • Staff
6. Coordinate Reliability Applications, Data, and Services	Coordinate the provision of applications (tools), data, and services necessary to support the reliable operation and planning of bulk electric systems.	<ul style="list-style-type: none"> • Groups of experts • Balanced committee • Reliability Regions • RTOs • Confidential groups • Staff

¹⁹ The need for independent oversight is evident in all function areas, but is particularly significant in Functions 1, 2, 4, 7, and 10.

7. Certify Reliability Organizations and Personnel	Certify reliability service organizations and personnel.	<ul style="list-style-type: none"> • Open body of stakeholders • Organization certification advisory group • Personnel certification advisory group • Groups of experts • Confidential groups • Reliability Regions • Staff
8. Coordinate Critical Infrastructure Protection	Coordinate critical infrastructure protection of bulk electric systems.	<ul style="list-style-type: none"> • Balanced committee • Groups of experts • Confidential groups • Reliability Regions • RTOs • Staff
9. Facilitate Reliable Real-Time Operations	Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.	<ul style="list-style-type: none"> • Groups of experts • Confidential groups • Reliability Regions • RTOs • Staff
10. Provide for Appeals and Conflict Resolution	Administer procedures for appeals and conflict resolution for reliability standards development, certification, and compliance, and other matters related to bulk electric system reliability.	<ul style="list-style-type: none"> • Conflict resolution specialists • Staff

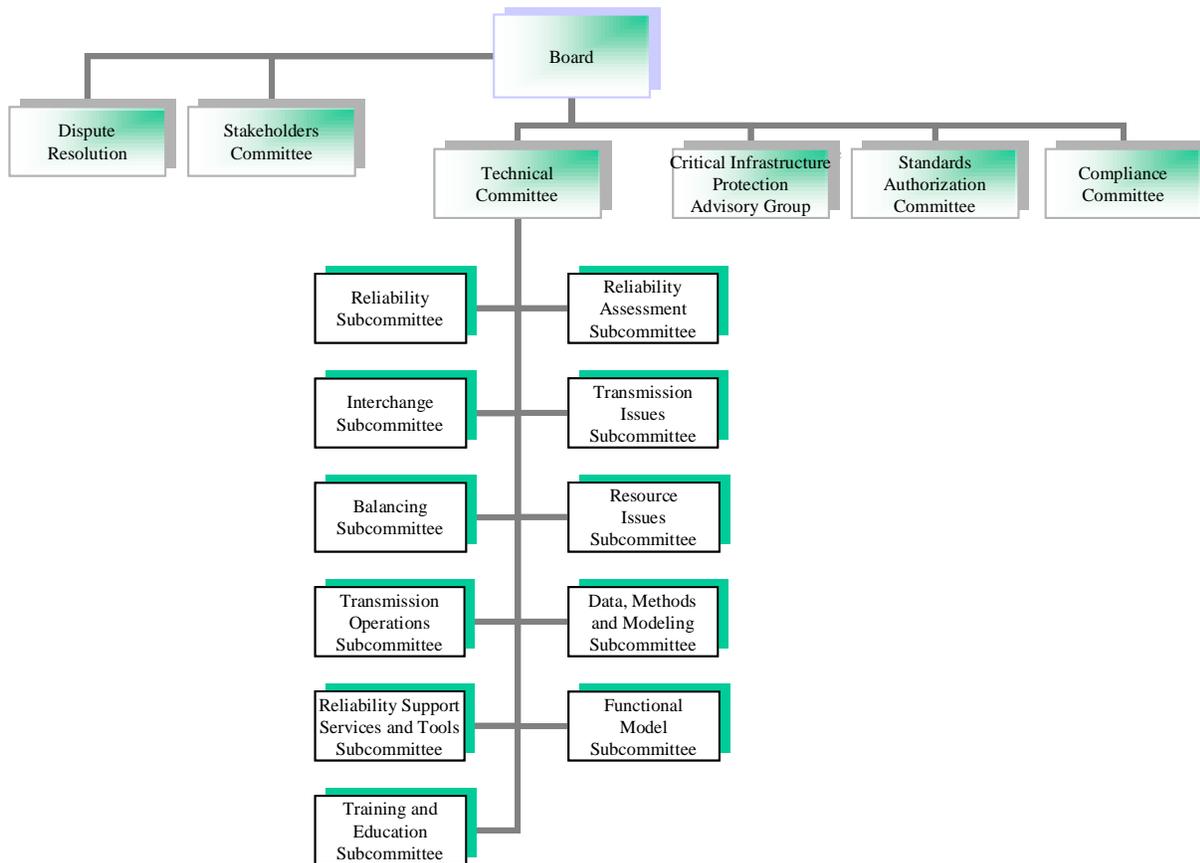
Appendix F — One-Committee Strawman Scope and Organization

Committee Support of NERC Mission and Values

The technical committee assists and advises the Board of Trustees in achieving the NERC mission by:

- Facilitating and promoting the reliable operation of the North American bulk electric system.
- Assessing, reporting, and promoting the adequacy of the North American bulk electric system.
- Accommodating the evolution of transparent, non-discriminatory markets and market-based solutions for reliability.

Strawman Technical Committee Organization (One-Committee Model)



Technical Committee Strawman Scope and Functions

<p>NERC Function 3 Provide education and training resources to promote bulk electric system adequacy and reliability.</p>
A. Provide reliability-related education and training resources for personnel who are involved in or affected by reliability standards.
B. Provide reliability-related education and training resources to support the certification function.
C. Provide reliability-related education resources for policy makers, legislators, regulators, and the public.
<p>NERC Function 4 Assess, analyze, and report bulk electric system adequacy and performance.</p>
A. Assess and report on the existing and future adequacy of the bulk electric system, including both supply resources and delivery capabilities.
B. Coordinate system reliability studies, including pre- and post-season operating and planning studies.
C. Monitor bulk electric system reliability performance and results to identify opportunities for improvement.
D. Evaluate system disturbances and events to identify opportunities for improvement.
E. Develop, maintain, and coordinate databases and tools for system modeling, analysis, forecasting, and study.
<p>NERC Function 5 Coordinate reliability matters with Reliability Regions and other organizations.</p>
A. Assess and report the reliability impacts of standards proposed or set by other organizations.
B. Advise on technical matters related to reliability to assist the coordination of reliability, business practice, and other standards affecting bulk electric systems.
C. Coordinate reliability matters with Reliability Regions and other regional entities.
D. Assist the Board in addressing reliability matters with regulators, legislators, government agencies, public interest groups, industry associations, and others.
<p>NERC Function 6 Coordinate the provision of applications (tools), data, and services necessary to support the reliable operation of bulk electric systems.</p>
A. Develop functional requirements and specifications for applications (tools) and data interfaces necessary for bulk electric system reliability.
B. Advise projects and budgets for the development and operation of reliability support applications (tools) and databases.
C. Maintain system models and data for reliability evaluation.
D. Facilitate real-time voice and data exchange services among Reliability Authorities.
E. Maintain information security and confidentiality, as required.
<p>NERC Function 9 Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.</p>
A. Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.

In addition to having primary responsibility for the functions above, the Technical Committee provides a supporting technical role in the areas of standards development, compliance and certification, and dispute resolution, as shown below:

<p>NERC Function 1 Assist the development and implementation of standards for the reliable planning and operation of bulk electric systems.</p>
A. Maintain the Functional Model upon which reliability standards are based.
B. Identify the need for new standards or revisions to standards and initiate standards actions by submitting SARs.
C. Recommend industry experts for the development of SARs and standards.
D. Provide a forum for education, sharing of views, and informed debate of standards.
E. Review and comment on proposed draft SARs and standards.
F. Facilitate the development of reference documents and perform other activities related to standards implementation.
G. Assess the effectiveness and impact of standards and advise the Standards Committee and the Board.
H. Coordinate with others, as appropriate, on technical aspects of the interactions of reliability standards with business practice standards.
<p>NERC Functions 2 and 7 Advise the Compliance and Certification functions on reliability matters.</p>
A. Advise the Compliance and Certification functions on reliability matters.
B. Recommend industry experts for conducting compliance and certification reviews.
<p>NERC Function 10 Advise the Dispute Resolution function as needed.</p>
A. Strive to resolve all conflicts and disputes arising from committee activities within established committee procedures.
B. Advise the Dispute Resolution function on operating reliability matters, as requested.

Appendix G — Two Technical Committees Strawman Scopes and Organizations

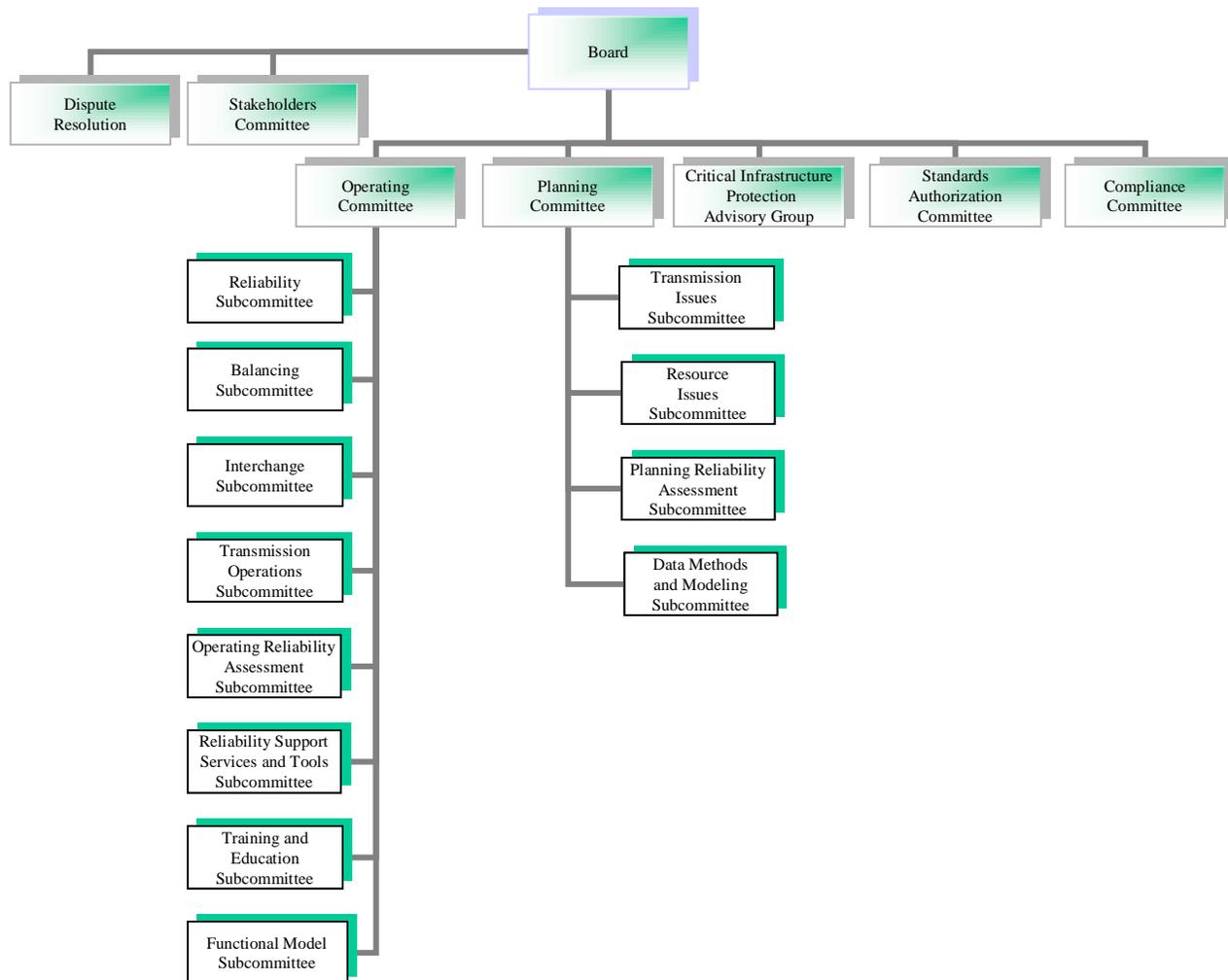
Assuming Two Technical Committees: Operating Reliability and Planning & Adequacy

Committee Support of NERC Mission and Values

The technical committees assist and advise the Board of Trustees in achieving the NERC mission by:

- Facilitating and promoting the reliable operation of the North American bulk electric system.
- Assessing, reporting, and promoting the adequacy of the North American bulk electric system.
- Accommodating the evolution of transparent, non-discriminatory markets and market-based solutions for reliability.

Two Committee Alternative Strawman Organization



Operating Committee Scope and Functions

<p>NERC Function 3 Provide education and training resources to promote bulk electric system reliability.</p>
A. Provide reliability-related education and training resources for personnel who are involved in or affected by reliability standards.
B. Provide reliability-related education and training resources to support the certification function.
C. Provide reliability-related education resources for policy makers, legislators, regulators, and the public.
<p>NERC Function 4 Assess, analyze, and report on bulk electric system operating reliability performance.</p>
A. Coordinate system reliability studies, including pre- and post-season operating studies.
B. Monitor bulk electric system reliability performance and results to identify opportunities for improvement.
C. Evaluate system disturbances and events to identify opportunities for improvement.
<p>NERC Function 5 Coordinate operating reliability matters with Reliability Regions and other organizations.</p>
A. Assess and report the reliability impacts of standards proposed or set by other organizations.
B. Advise on technical matters related to operating reliability to assist the coordination of reliability, business practice, and other standards affecting bulk electric systems.
C. Coordinate operating reliability matters with Reliability Regions and other regional entities.
D. Assist the Board in addressing operating reliability matters with regulators, legislators, government agencies, public interest groups, industry associations, and others.
<p>NERC Function 6 Coordinate the provision of applications (tools), data, and services necessary to support the reliable operation of bulk electric systems.</p>
A. Develop functional requirements and specifications for applications (tools) and data interfaces necessary for bulk electric system reliability.
B. Advise projects and budgets for the development and operation of reliability support applications (tools) and databases.
C. Maintain system models and data for reliability evaluation.
D. Facilitate real-time voice and data exchange services among Reliability Authorities.
E. Maintain information security and confidentiality, as required.
<p>NERC Function 8 Assist the critical infrastructure protection program on matters related to operating reliability.</p>
A. Advise the critical infrastructure program on matters related to operating reliability.
B. Coordinate the threat preparations and response of Reliability Authorities with the critical infrastructure program.
<p>NERC Function 9 Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.</p>
A. Enable the reliable operation of interconnected bulk electric systems by facilitating information exchange and coordination among reliability service organizations.

In addition to having primary responsibility for the functions above, the Operating Committee provides a supporting role in the following functions:

NERC Function 1 Assist the development and implementation of standards for the reliable operation bulk electric systems.
A. Maintain the Functional Model upon which reliability standards are based.
B. Identify the need for new standards or revisions to standards and initiate standards actions by submitting SARs.
C. Assist the standards process by providing expert resources in support of the development of SARs and standards.
D. Assist the standards process by providing a forum for education, sharing of views, and informed debate of standards.
E. Review draft SARs and standards and provide comments.
F. Facilitate the implementation of reliability standards by developing reference documents and performing other activities.
G. Assess the effectiveness and impacts of standards and advise the Standards Committee and the Board.
NERC Functions 2 and 7 Advise the Compliance and Certification functions on operating reliability matters.
A. Advise the Compliance and Certification functions on operating reliability matters.
NERC Function 10 Advise the Dispute Resolution function as needed.
A. Strive to resolve all conflicts and disputes arising from committee activities within established committee procedures.
B. Advise the Dispute Resolution function on operating reliability matters, as requested.

Operating Committee Strawman Subcommittees

All Subcommittees

- Monitor Interconnection operations
- Review and comment on posted Standards Authorization Requests and draft Reliability Standards
- Submit Standards Authorization Requests as needed
- Help SAR and standards drafting teams as requested
- Review training documents prepared by NERC staff

Reliability

- Provide guidance to Reliability Coordinators
- Review operation of the Interchange Distribution Calculator and direct Interchange Distribution Calculator Working Group to make changes as needed
- Maintain Transmission Loading Relief Procedure
- Approve “local” congestion management procedures that are used in response to TLR request
- Approves Reliability Plan “footprint” changes, and recommends Reliability Plan approval changes to the Operating Committee
- Manage Reliability Coordinator-Control Area relationships (will probably manage Reliability Authority-Balancing Authority-Transmission Operator relationships)
- Direct Data Exchange and Telecommunications Working Groups
- Review standards associated with Reliability Authority

Balancing

- Review effectiveness of, and compliance with, Control Performance and Disturbance Control Standards (the latter in conjunction with the Compliance Managers Committee)
- Set Interconnection Epsilon values

- Monitor Interconnections' frequency response and characteristics and recommends changes to Reliability Standards as needed
- Maintain inadvertent interchange procedures and resolves disputes (will probably move to NAESB)
- Provide a forum to discuss relationship between Control Areas and generators (regarding regulation, load-following, reserves, etc.)
- Review standards associated with Balancing Authority, Generator Owner, Generator Operator, Load-Serving Entity

Interchange

- Review tagging procedures and recommend changes as needed
- Review standards associated with Interchange Authority

Transmission Operations

- Monitor transmission operations
- Provide a forum to discuss relationship between transmission operators and generators (regarding reactive power supply)
- Review standards associated with the Transmission Owner, Transmission Operator, and Reliability Authority

Training and Education

- Administer continuing education program
- Provide input to personnel certification program as requested

Operating Reliability Assessment

- Conduct operations planning studies and assessments (up to one year) at the Interconnection level, and provides results to the Reliability Authorities
- Review system disturbances and “unusual events” for lessons learned and possible revisions to Reliability Standards

Reliability Support Services and Tools

- Manage implementation and operation of system operating tools, such as the Interchange Distribution Calculator, E-tag system, and NERCnet telecommunications system

Functional Model Subcommittee

- Maintain the functional model

Planning Committee Scope and Functions

<p>NERC Function 3 Develop education and training materials and provide personnel, as appropriate, to promote bulk electric system reliability (adequacy).</p>
<p>a. Develop educational materials as necessary for use by others and for communicating with the public on issues related to resource adequacy, including generation, transmission, and demand program impacts.</p>
<p>b. Develop educational materials as necessary for use by others and for communicating with the public on issues related to the reliability (adequacy) of the interconnected transmission systems.</p>
<p>NERC Function 4 Assess, analyze, and report on bulk electric system reliability (adequacy).</p>
<p>A. Assess and report annually on the existing and future adequacy of the bulk electric systems, including both resource adequacy and transmission system reliability.</p>
<p>B. Assess and report on the reliability (adequacy and operational security) of the bulk electric systems for each upcoming summer and winter season and prepare a post-seasonal report for each season.</p>
<p>C. Promote coordination in system planning studies from intra- and interregional perspectives.</p>
<p>D. Evaluate system disturbances and events to identify opportunities for improvement.</p>
<p>NERC Function 5 Coordinate planning and adequacy matters with Reliability Regions and other organizations.</p>
<p>A. Assess and report the reliability impacts of standards proposed or set by other organizations.</p>
<p>B. Advise on technical matters related to bulk electric system planning and adequacy to assist the coordination of reliability, business practice, and other standards affecting bulk electric systems.</p>
<p>C. Coordinate bulk electric system planning and adequacy matters with Reliability Regions and other regional entities.</p>
<p>D. Assist the Board in addressing bulk electric system planning and adequacy matters with regulators, legislators, government agencies, public interest groups, industry associations, and others.</p>
<p>NERC Function 6 Coordinate the development of databases, methodologies, and tools necessary to support the reliability of the bulk electric systems.</p>
<p>A. Develop and recommend data requirements, system modeling techniques, and system analysis programs and methodologies for analyzing system stability (all time frames) and preventing or constraining the extent of system instability, cascading outages, and voltage collapse.</p>
<p>B. Investigate and recommend new methods, procedures, and analytical programs and tools for evaluating the reliability of the bulk electric systems.</p>
<p>C. Maintain and develop, as appropriate, system models (steady-state and dynamic) necessary for reliability simulations and assessments.</p>
<p>D. Maintain a unified generator database (UGD) for all existing and proposed future generating units in North America.</p>
<p>E. Maintain a generating availability data system (GADS) on the historical performance (maintaining confidentiality as appropriate) of existing generating units.</p>

<p>NERC Function 8 Assist the critical infrastructure protection program on matters related to the physical security of bulk electric systems.</p>
A. Advise the critical infrastructure program, as requested, on matters related to the physical security of bulk electric systems.
B. Assist in the development and maintenance of spare equipment databases from a critical infrastructure protection (security) perspective.
C. Assist in the development of guidelines for the physical protection of the bulk electric systems and the response to threats.
<p>NERC Function 9 None</p>

In addition to having primary responsibility for the functions above, the Planning Committee provides a supporting role in the following functions:

<p>NERC Function 1 Assist the development and implementation of reliability standards necessary for planning and assuring the reliability (adequacy) of the interconnected bulk electric systems.</p>
A. Assist in maintaining the Functional Model upon which reliability standards are based.
B. Identify the need for new and revised standards and initiate standards actions by submitting SARs.
C. Recommend industry experts for the development of SARs and standards.
D. Provide a forum for education, sharing of views, and informed debate of standards.
E. Review and comment on proposed draft SARs and standards.
F. Facilitate the development of reference documents and perform other activities related to standards implementation.
G. Assess the effectiveness of the standards and advise the Standards Authorization Committee and the Board, and initiate revisions when necessary.
H. Coordinate with others, as appropriate, on the interaction of the reliability standards with business practice standards.
<p>NERC Function 2 Advise the Compliance and Certification functions on matters related to bulk electric system planning and reliability (adequacy).</p>
A. Assist, as appropriate, in determining what constitutes compliance with the reliability standards.
B. Recommend industry experts for conducting compliance and certification reviews.
<p>NERC Function 10 Advise the Dispute Resolution function as needed.</p>
A. Strive to resolve all conflicts and disputes arising from committee activities within established committee and NERC procedures.
B. Advise the Dispute Resolution function on bulk electric system planning and adequacy matters, as requested.

Planning Committee Strawman Subcommittees

Transmission Issues Subcommittee

- Promote the reliability (adequacy) of the interconnected bulk electric systems in North America.
- Provide a forum to address the planning and adequacy of the bulk electric systems.

- Review and develops data requirements, and new analytical tools and methodologies for evaluating bulk electric system reliability (adequacy), including system stability (all time frames), voltage collapse, reactive resource adequacy, and coordinated system protection and control.
- Review, monitor, and develop procedures and processes for consistency and coordination in determining transmission transfer capabilities.
- Review the activities and practices in the electricity market as they may relate to the determination of transfer capability.
- Assess the impacts of new and evolving electricity market business practices on the reliability of the interconnected bulk electric systems.
- Develop training and educational materials as necessary for use by others and for communicating with the public on issues related to the reliability of interconnected bulk electric systems.
- Review and comments on proposed Standard Authorization Requests and Reliability Standards in its area of expertise.
- Assess the effectiveness of the standards and develops and submits Standard Authorization Requests as appropriate.
- Assist in maintaining the Functional Model upon which reliability standards are based.
- Advise the critical infrastructure protection program, as requested, on matters related to the physical security of the bulk electric systems.
- Identify and investigate long-term issues that may impact the reliability of the transmission systems.

Reliability Assessment Subcommittee (Planning)

- Perform an independent assessment of, and reports on, the reliability (adequacy and operational security) of Regional and interregional existing and planned bulk electric systems to ensure that each Region (or entity) meets its own planning criteria and NERC reliability standards.
- Perform detailed assessments for a five-year horizon, with an analysis of trends in resources and transmission adequacy over the longer-term (six- to ten-year) horizon.
- Assess and report on the reliability (adequacy and operational security) of the interconnected bulk electric systems for each upcoming summer and winter season.
- Prepare a post-seasonal report following each respective summer and winter season.
- Develop NERC's ten-year aggregated projections of U.S. and Canadian peak demands (summer and winter), net energy for load, demand management programs, and generating capacity resources.
- Determine and report on the degree of uncertainty inherent in NERC's U.S. and Canadian demand and supply aggregations.
- Maintain and update, as appropriate, a bandwidth methodology for determining probabilistic bandwidths on the ten-year peak demand and net energy for load projections for the United States, Canada, and the three NERC Interconnections.
- Monitor and report on the use of natural gas for electricity generation, the interdependency of natural gas and electricity, and the potential impacts of gas transmission system contingencies on electric system operations and reliability.

Resource Issues Subcommittee

- Encourage, evaluate, and report on long-term resource adequacy and resource adequacy trends.
- Develop and evaluate resource methodologies for determining resource adequacy.
- Develop training and educational materials as necessary for use by others and for communicating with the public on issues related to resource adequacy, including generation, transmission, and demand program impacts.
- Review and comment on proposed Standard Authorization Requests and Reliability Standards in its area of expertise.
- Assess the effectiveness of the standards and develops and submits Standard Authorization Requests as appropriate.
- Assesses the impacts of new and evolving electricity market business practices on resource adequacy.

- Assist in maintaining the Functional Model upon which reliability standards are based.
- Identifies and investigates long-term issues that may impact resource adequacy.

Data, Methods, and Modeling Subcommittee

- Maintain and manage data collection and system modeling (steady-state and dynamic) efforts necessary for reliability simulations and assessments.
- Assure that data and simulation modeling capabilities are maintained within each of the three NERC Interconnections (Eastern, Western, and ERCOT).
- Maintain the existing procedures and analytical techniques used to evaluate the reliability of the interconnected bulk electric systems.
- Develop a library of solved power flow models and associated dynamics simulation models of the Eastern Interconnection for use by the Regions and their members.
- Maintain a system dynamics modeling database of the Eastern Interconnection.
- Maintain a Procedures Manual for submitting power flow and system dynamics modeling data.
- Develop and submits Standard Authorization Requests as appropriate.
- Maintain a unified generator database (UGD) of all existing and future generating units in North America.
- Maintain generating availability data system (GADS) on the historical performance (maintaining confidentiality as appropriate) of existing generating units.

Appendix H — Committee Structure Alternatives Considered

Alternative A — Update Existing Committee Scopes, Functions, and Subgroups

This alternative would acknowledge the need for stability in the existing committee structure by retaining the current standing committees (Operating, Planning, and Market Interface Committees and the Critical Infrastructure Advisory Committee). The committees would be directed to update their scopes and functions based on this framework and the functions presented in this report. The committees would complete a joint review of subcommittee, working group, and task force resource needs across all the committees to improve functional alignment and more efficient resource allocation. Committees would be allowed to adapt their representation models, subject to Board approval, to meet their technical needs and stakeholder interests. Subgroup representation models would be modified, as necessary, to be more focused on expertise in assigned functional areas.

This approach would provide the smoothest transition from the existing committee structure and the least amount of disruption of existing activities. The review and reorganization of subgroups would provide an opportunity to achieve a more functional orientation and significantly reduce resource requirements and redundancy. This approach could serve as an initiating step toward future changes, allowing more time to make gradual changes as near-term uncertainties make big changes more risky. Some, however, may see retaining the existing standing committees as failing to adapt to the functional requirements identified in this report and not achieving sufficient efficiency gains.

Alternative B — Alternative A with a Stronger Steering Function

In addition to Alternative A, Alternative B would provide for a stronger committee management function, comprised of a joint executive group with members from the several committees, to coordinate work and results across committees.

This alternative addresses the need for greater coordination and integration of work among committees, but once again may fall short structurally in meeting the functional needs and challenges identified.

Alternative C — Consolidate the Existing Committees (No Market Interface Committee)

Alternative C would consolidate the standing committees to be: Operating Committee, Planning Committee, and Critical Infrastructure Committee. In this alternative the market perspectives previously attributed to the Market Interface Committee would be merged into the Operating and Planning committees. There has been much discussion during this initiative whether NERC needs a market interface committee given the recent actions by the Board to focus NERC's mission on reliability and the emergence of NAESB. Some have suggested retaining Market Interface Committee, at least for a transition period (that would be accomplished in the first two alternatives above). If the Market Interface Committee is retained, its focus should shift toward a better understanding and coordination of the interfaces between the NERC Functional Model and the Standard Market Design (and other market designs). Alternative C would be accomplished in concert with the actions in Alternative A (review scopes, functions, and representation needs) and could possibly include Alternative B (executive coordinating group across committees).

This approach would result in some immediate consolidation of committee and subgroup resources.

Alternative D — Several Committees Realigned by NERC Functions

Alternative D would establish several technical committees, but would align them more closely by NERC function rather than by operations and planning. For example, one committee could focus on assessing system

adequacy and reliability performance (Function 4). A second could focus on critical infrastructure protection (Function 8). A third could focus on the Functional Model implementation (reliable operations and planning of bulk electric systems) and address the remaining committee functions. Other options for allocating committee resources could be considered in the transition planning process. This alternative would also be used in conjunction with the actions in Alternative A and possibly Alternative B.

This alternative may come closest to achieving the goals of the organization framework and NERC functions, especially if considered in concert with Alternative B (a joint executive group to coordinate committee work).

Alternative E — Alternative D with a Joint Technical Committee

Alternative E would implement one of the prior committee alignments outlined in Alternatives A, C, or D and would form a joint technical committee, comprised of a balanced number of delegates from each of the several expert committees. Delegates would be required to serve on both the Technical Committee and the area committee to ensure continuity of perspectives. Each expert committee would both conduct its own business and provide delegates to the joint technical committee for the purpose of coordinating work and integrating results. The joint technical committee would report to the Board, but the officers of each major expert area committee would also meet with the Board to represent the views of their respective committee. Thus the member committees could be:

- Operating, Planning, and Market Interface Committees and Critical infrastructure protection (A)
- Operating Committee, Planning Committee, and Critical Infrastructure Protection Committee (C)
- Assessment Committee, Critical Infrastructure Protection Committee, and Functional Model (Reliability) Committee (D)
- Other function-based allocation of committees

This alternative would allow committee activities can be coordinated up front and integrated when results are available. The joint technical committee can resolve differences and report any unresolved differences to the Board. A principal argument against this approach is that it retains separate committees and then adds a new joint committee, further draining resources. Another argument against this approach is that technical experts on committees and subgroups would be one layer further removed from direct interaction with the Board and there could be less interest therefore in participating in technical subgroups.

Alternative F — Committee of the Whole

Alternative F emerged late in the process as an adaptation of Alternative E. In the Committee of the Whole concept, several (likely three) committees would be established. Each committee would report separately to the Board in its area of responsibility. Issues that involve more than one committee would be addressed by the three committees meeting jointly in a plenary session, hearing the debate and taking necessary actions. The Committee of the Whole would also be able to initiate its own subgroups when an activity bridged more than one committee, such as maintaining the Functional Model. This option would require a coordinated meeting format. For example, committees could meet separately for half a day, then jointly in plenary session and then again separately over a two day period. This option would substantively change the format of today's joint committee meetings, which are informational only, and allow debate and action in the plenary session. This obviously would require strong leadership and a well thought out set of procedures for managing actions in such a large group (could be approximately 100 members).

Alternative G — Organize Committees around Ten NERC Functions

This approach was found to be useful in a few areas that have distinct resource and process requirements, but would lead to inefficiencies in other areas, particularly those requiring volunteer industry experts (volunteers

would have to participate in too many different groups). If adopted across all ten functions, this approach would result in an unnecessary proliferation of groups reporting directly to the Board. This approach has been partially adopted into the proposed organizational framework in selected areas that have unique resource and process requirements: standards setting (Function 1), compliance (Function 2), organization and personnel certification (Function 7), and dispute resolution (Function 10). A leaning toward functional orientation of the committees is also included in the single Technical Committee recommendation and Alternatives D and E above.

Alternative H — Organize Resources around the Functional (Reliability) Model

This approach suggested separate committees for Reliability Authorities, Balancing Authorities, Transmission Service Providers, Interchange Authorities, Generators, Load-Serving Entities, etc. The group felt that this approach would be ineffective and inefficient. The important work of NERC is addressing the interactions among these industry functions and to organize committee resources on the basis of these functions would create silos of expertise. This does not preclude, however, subgroups being established with specialized expertise in one or more reliability functions.

Alternative I — Organize Resources Based on the Nine Industry Stakeholder Segments

While there are advantages to a stakeholder-centric model for organizing committees, once again, this approach would tend to promote silos around interest groups rather than encourage interactions among them.

Alternative J — Allow Register Ballot Body to Set up Expert Committees It Needs

This approach is similar to that proposed by NAESB. However, the Registered Ballot Body is intended to address the NERC standards development (Function 1), and there are nine other functions identified. In the proposed organizational framework, the ballot body does have oversight, along with the Board, of the standards process.