IEEE POWER ENGINEERING SOCIETY

ELECTRICAL MACHINERY COMMITTEE

ORGANIZATION AND PROCEDURE MANUAL

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INTRODUCTION

1.1 Purpose of the Organization and Procedure Manual

The purpose of this document is to provide information to officers and members of the Electrical Machinery Committee (EMC) and its subcommittees, to assist them in understanding and working effectively with the Electrical Machinery Committee and its superior and subordinate organizations. Should conflicts occur or exist between this manual and the IEEE Bylaws, the Technical Council Organization and Procedure Manual, or the IEEE Standards Manual, then the Bylaws, The TC O&P Manual, or the Standards Manual shall take precedence. Likewise, this manual takes precedence over EMC Subcommittee Organization and Procedure Manuals.

1.2 Organization

The organizational structure of the PES is shown in the current issue of the IEEE Power Engineering Society Organization and Committee Directory available at the IEEE-PES web site. The Power Engineering Society is Division VII of the Institute of Electrical and Electronics Engineers (IEEE). For operating functions it is responsible to the IEEE Technical Advisory Board and for technical activities to the IEEE Technical Activities Board. The Technical Committees function within the Scope of the Technical Council.

The Technical Committees report to the Technical Council on matters concerning membership, technical publications, recognition, scope and the coordination of Power Engineering Society generated standards. For standards relating to their technical scope, the Technical Committees work directly with the IEEE Standards Board and the Power Engineering Society Standards Coordinating Committee.

The Technical Committees, in support of the Power Engineering Society goals and with the direction and coordination of the Technical Council, shall assist in the following activities:

(a) Promote the understanding of power and electromechanics engineering
(b) Promote the contributions of power and electromechanics industry
(c) Support power and electromechanics engineering education
(d) Seek and promote power and electromechanics industry management support for Society activities
(e) Support and promote chapter activities.

2. SCOPE

2.1 Scope of the IEEE PES Electric Machinery Committee

The Electric Machinery Committee is concerned with all matters related to the requirements, research, development, application, design, construction, operation, characterization, modeling, control and supervision of electrical machinery associated with rotational or translational motion, conversion of electric energy into other forms of energy, or the transmission of mechanical energy using an electric link through rotating and linear machinery. Included is treatment of the following:

- Synchronous machines
- Induction machines
- DC and permanent magnet machines
- Switched reluctance machines
- Motor generator sets
- Rotating frequency changers
- Electric couplings, brakes and dynamometers
- Magnetohydrodynamic energy conversion ducts
- Insulation, magnetic, conductor, and super conductor materials as used in electrical machinery
- Linear motors
- Hydro generators
- Steam turbine generators
- Gas turbine generators
- Power electronics adjustable speed drives applications
- Effects of adjustable speed drives on rotating machine components

The Committee shall sponsor and develop, either alone or jointly with other technical committees or organizations, standards, recommended practices, guidelines and policies and other technical documents. The Committee shall prepare position papers and other documents, and plan or sponsor technical conferences and sessions on matters related to electrical machinery.

The Committee may appoint Working Groups to address issues that are common to two or more of the Subcommittees. The Chairperson of such a Working Group will report on the activities of the Working Group to the Committee for the duration of the active life of the group.

See Section 2.3.

The Committee shall establish and maintain liaison with other technical societies, associations, committees, and groups concerned with aspects of electrical machinery. Matters relating to electric machinery specifically designed for applications covered by other societies or committees, such as electric welding or transportation may be treated jointly with that

organization if the emphasis is on general principles; or exclusively by the application committee if the emphasis is on particular requirements.

2.2 Scope of Subcommittees

2.2.1 Generators Subcommittee

Treat all matters in which the dominant factors are the requirements, research, development, application, design, construction, operation, characterization, modeling, control, and supervision of synchronous generators, rotating as well as linear, both with and without power electronic speed conversion equipment, dc generators and asynchronous generators.

Review and revise test codes as required and provide recommendation for all revisions of standards applicable to this Subcommittee. Sponsor papers, panels, technical conferences, and sessions in the field of generators as described in the previous paragraph.

Establish and maintain liaison with other technical societies, associations, committees, and groups concerned with generators of all kind.

2.2.2 Motors Subcommittee

Treat all matters in which the dominant factors are the requirements, research, development, application, design, construction, operation, characterization, modeling, control, and supervision of integral horsepower polyphase induction machinery, rotating as well as linear, both with and without power electronic speed conversion equipment, as well as dc and permanent magnet machinery and their associated drive systems, including brushless dc motor systems and all permanent magnet machinery systems and synchronous motors.

Review and revise test codes as required and provide recommendations for all revisions of standards applicable to this Subcommittee. Sponsor papers, panels, technical conferences and sessions in the field of motors as described in the previous paragraph.

Establish and maintain liaison with other technical societies, associations, committees, and groups concerned with electrical motors of all kind, as required to support and advance the purpose and scope of the main Committee.

2.2.3 Materials Subcommittee

Treat all matters in which the dominant factors are the requirements, research, development, application, design, manufacture, and testing of insulating, magnetic and conductor materials used in electrical machinery.

Review and revise test codes as required, and provide recommendations for all revisions to standards, recommended practices, and guides within its scope. Sponsor papers, panels, technical conferences, and sessions in the field of insulating, dielectric, conductor,

superconductor and magnet materials related to electrical machinery to keep engineers current with the developments in these fields.

Establish and maintain liaison with other technical societies, associations, committees, and groups concerned with insulating, magnetic and conductor materials used in electrical machinery as required to support and advance the purpose and scope of the main Committee.

2.3 Working Groups

In executing their duties, the Committee and its Subcommittees may organize Working Groups for specific tasks. The Working Group(s) will make the necessary studies and prepare reports or drafts of documents for consideration by the Committee and/or Subcommittee(s). Where the activities of a Working Group span the interests of a number of Subcommittees, it is made responsible to the main Committee.

At the time that a Working Group is established, its scope shall be delineated and a schedule established for the completion of its assignment. When the work relates to a Standard, this information is recorded on the Standards Project Authorization Request (PAR), and, together with other required information, is sent to the Electric Machinery Committee Standards Liaison Representative for transmittal to the IEEE Standards Association for approval. Work on the Standard or Standard revision need not be held up while awaiting approval.

The current listing of Working Groups is shown in the latest issue of the PES Organization Manual and Membership Directory available at the IEEE-PES web site.

2.2.1 Administrative Working Group

Plan and coordinate the activities of the Electric Machinery Committee and its Subcommittees.

Conceptualize and coordinate long-range plans for committee functions and organization. Identify new concepts and directions in the field of electrical machinery. Develop programs for technical sessions, seminars, and technical paper presentations; identify preferred subjects for future sessions and panel discussions. Maintain a current topic list for “calls for papers” within IEEE or other organizations. Identify areas within the scope of the Committee where standards may be required, and pass on this information to the Standards Coordinating Committee for action. Periodically review Committee structure and scope, and Subcommittee scopes to ensure that objectives are being met. Assist the Committee Chairperson in identifying any necessary organizational changes.

2.2.2 Awards, Recognition and Prize Paper Working Group

Biennially review accomplishments of Committee and Subcommittee members. Evaluate members and make recommendations for awards and recognition for outstanding activities

including technical papers, services and other contributions to the profession. Prepare nominations for such awards. Provide the liaison with Power Engineering Society Awards and Recognition Department and with its several Committees. Assist the Committee Chairperson in evaluation and endorsement of award recognition nominations. Appointed membership to the Awards, Recognition and Prize Paper Subcommittee should include at least one representative from each technical subcommittee.

2.2.3 Liaison Activities Working Group

Coordinate and report activities of Committee Liaison to other technical societies, associations, committees, and groups concerned with aspects of electrical machines. Provide an annual review of all Committee and Subcommittee liaison activities. Assist the Committee Chairperson in identifying necessary changes in liaison activities and representatives.

2.2.4 Machinery Theory Working Group

Treat all matters related to the correct understanding and theoretical analysis of rotational/translational electrical machinery and drives. Review theory-oriented technical papers and contributions submitted to the Committee; assess them for theoretical accuracy and precision. Provide advice and counsel concerning theoretical matters for the individual Subcommittees responsible for machine types within the scope of the Electric Machinery Committee, and when and as directed by the Committee Chairperson, to other interested organizations.

Foster and develop interest in the theory and application of theory of electrical machinery and related devices. Sponsor and plan workshops, seminars, technical sessions, and panel discussions towards this objective, and assist the Administrative Working Group in defining preferred subjects for future meetings and calls for papers.

2.2.5 Standards Coordinating Working Group

Coordinate all Standards-related activities within the Committee and its Subcommittees. Function as the interface to the Power Engineering Society Standards Coordinating Committee, the IEEE Standards Association, and all other organizations required to accomplish the purpose of the Electric Machinery Committee's Standards activities.

Annually prepare, maintain, and distribute a current listing of the status of IEEE Standards that are the responsibility of the Electric Machinery Committee.

With the approval of the Committee Chairperson, recommend Electric Machinery Committee delegates to ANSI Committees to be appointed by the IEEE Standards Association.

Attend meetings of PES and IEEE Committees and Boards related to standardization, as appropriate, to support and advance the scope and purpose of the main Committee, and to represent its interests.

3. RESPONSIBILITIES AND DUTIES

3.1 The Electric Machinery Committee's Responsibilities

(a) Promote and coordinate Institute activities in its field.

(b) Evaluate technical papers assigned to the Committee in accordance with guidelines established by Technical Council.

(c) Be responsible for the presentation of papers, panel and poster sessions and tutorials at General Meetings, as arranged by the Technical Council and at other related meetings.

(d) Be responsible for the review and acceptance of technical papers for publication in the IEEE PES Transactions on Energy Conversion. Coordinate the publication of accepted papers with the Editor of the Transactions.

(e) Arrange Special Technical Conferences either alone or jointly with other Committees of IEEE or with other Technical Societies.

(f) Within its scope, initiate and prepare Standards, and report on Standards Activities, to the Standards Association.

(g) From time to time, as determined in cooperation with Technical Council, present at a General Meeting of the Institute a report including a brief resume of the progress of the art in the field of electric machines. The object of these reports is that they may be authoritative sources of information on history of electrical engineering development.

(h) Promote power engineering education through use of tutorial sessions, publications, and other suitable programs.

3.2 Duties of the Electric Machinery Committee's officers

The officers of the Electrical Machinery Committee will consist of -

- Chairperson
- Vice Chairperson
- Secretary & Meeting Coordinator

3.2.1 Duties of the Chairperson.

The Chairperson shall:

(a) Plan and coordinate activities of the Main Committee and its Subcommittees.
(b) Prepare the agenda for the Main Committee meetings.
(c) Chair meetings of the Main Committee.
(d) Appoint new members to the Main Committee with the concurrence of the Subcommittee Chairpersons and in accordance with Technical Council approval requirements.
(e) Be an active member of the Power Engineering Society Technical Council.

(f) Prepare a written report of Committee activities to be submitted at each Technical Council meeting for inclusion in the minutes.
(g) Present to the Technical Council any proposed Committee or Subcommittee scope changes.
(h) Obtain approval of any new Committee officers and Subcommittee chairpersons.
(i) Develop the technical program for general meetings, including paper, poster and panel session topics and tutorials as appropriate.
(j) Be a member of the Organization and Procedures committee.
(k) Contribute articles for the Electric Machinery Committee to IEEE Power Engineering Review
(l) The immediate Past Chairperson will be a member of the IEEE-PES Awards and Recognition committee. The immediate Past Chairperson will also chair the EMC Awards, Recognition and Prize Paper Subcommittee.

3.2.2 Duties of Vice-Chairperson

The Vice-Chairperson shall:
(a) Develop and coordinate the Electrical Machinery Committee technical programs for Power Engineering Society Meetings, Conferences, and Joint meetings.
(b) Act as Technical Conference Program Coordinator for the EMC, within the PES.
(c) Administer the review of abstracts of technical papers for Power Engineering Society Meetings, Conferences, and Joint meetings.
(d) Be a member of the Publications committee.
(e) Be a member of the PES Technical Council – Technical Sessions Committee.

3.2.3 Duties of the Standards Coordinator

The Standards Coordinator shall:
(a) Coordinate all Standards related activities within the Electrical Machinery Committee and its Subcommittees.
(b) Attend meetings of the IEEE Standards Association, and PES committees related to standardization, as appropriate.
(c) Prepare, maintain and distribute annually, a listing of the standards, which are the responsibility of the Electrical Machinery committee, including their current status.
(d) Be a member of the Standards Coordinating committee
(e) Make EMC members aware that membership in the Standards Association (SA) is required to participate in the balloting of standards.

3.2.4 Duties of the Transactions Editors

Transactions Editors shall:
(a) Coordinate the review and publication of Transactions level technical papers within the scope of the Electrical Machinery Committee.
(b) Maintain an up to date interest matrix of qualified reviewers

(c) Coordinate with the Editor in Chief of the Transactions on Energy Conversion to publish high quality, state of the art, technical contributions on the subject of Electrical Machinery.
(d) Maintain and make available lists of papers recommended by reviewers for prize paper consideration.

3.2.5 Duties of the Secretary and Meeting Coordinator

The Secretary and Meeting Coordinator shall:
(a) Write and distribute minutes of Committee meetings.
(b) Prepare and maintain up-to-date membership lists of the Main Committee, Subcommittees, Working Groups and Task Forces.
(c) Coordinate implementation of the technical program for the Committee at general meetings, and provide information on the program to meeting organizers and to the program publisher.
(d) Coordinate the schedule of Committee, Subcommittee and Working Group meetings, and provide information on these meetings to the general meeting organizer and to the program publisher. Maintain a Master Schedule of recurring meetings.
(e) Maintain records of attendance at Committee meetings.
(f) At least once every three years, ballot the Committee membership to determine membership status. The ballot should distinguish between those who wish to maintain active status or Honorary Membership (see Subsection 3.1), and those who no longer wish to be a member of the Committee.
(g) Be a member of the Technical Council - Technical Sessions Committee.

3.3 Duties of the Subcommittee Officers

The officers of each subcommittee will consist of:
- Chairperson
- Vice-Chairperson
- Secretary

3.3.1 Duties of Subcommittee Chairperson

The Subcommittee Chairperson shall:
(a) Plan and coordinate the activities of the Subcommittee and its Working Groups.
(b) Call meetings of the Subcommittee, prepare the agenda, chair the meetings, and distribute minutes.
(c) Direct technical activities within the scope of the Subcommittee, including: encouraging technical papers, developing poster and panel sessions for meetings in conjunction with the Vice-Chairperson, Conference Programs of the Electrical Machinery committee, arranging for seminars and tutorials, and participation in IEEE meetings (as required).
(d) Through members of the Subcommittee and Working Group Chairpersons, prepare and revise IEEE Standards (see Section 5). Review and furnish comments on other industry standards as appropriate and as requested by the EMC Standards Coordinating Subcommittee.

(e) Appoint members to the Subcommittee and Chairpersons of Working Groups, with the approval of the Chairperson of the EMC. Maintain records of participation, and assure participation in Subcommittee activities.
(f) Prepare an annual report, to be submitted to the Chairperson of the EMC at his request. This report shall contain an up-to-date membership list of the Subcommittee.
(g) Maintain a matrix of expertise within the Subcommittee membership to be used in assigning papers for review.
(h) Be an active member of the EMC and the EMC Adcom Working Group.

3.3.2 Duties of Subcommittee Vice-Chairperson

The Subcommittee Vice-Chairperson shall:
(a) Coordinate with the Vice-Chairperson – Conference Programs all Subcommittee activities relating to the technical meeting programs.
(b) Coordinate all reviews of abstracts of papers for technical programs.
(c) Assist with Transactions Editors' requests for paper reviews as required.
(d) Maintain a current matrix of interest for qualified reviewers within the scope of the Subcommittee.

3.3.3 Duties of Subcommittee Secretary

The Subcommittee Secretary shall:
(a) Write and distribute minutes of the subcommittee meetings. Maintain an up to date list of subcommittee membership and working groups. Provide a copy of the list to the EMC Secretary and Meeting Coordinator on an annual basis for inclusion in the PES Directory.
(b) Prior to each technical meeting, provide the EMC Secretary and Meeting Coordinator with a listing of the Subcommittee administrative, Technical Session and Working Group meeting room requirements.
(c) Coordinate with the EMC Secretary & Meeting Coordinator to develop the overall EMC meeting Schedule.
(d) Maintain a Master Schedule of recurring subcommittee related meetings and make sure that the EMC Secretary has a current copy.

3.4 Duties of Liaison Representatives to Other Committees and Standardizing Bodies

Liaison Representatives represent the Committee in other technical societies, committees, and standardizing bodies whose interests have a direct bearing on electric machine activities. They report annually to the Committee the activities of these groups, bringing attention to matters of interest and to any actions that may require closer coordination. In responding to letter ballots, they shall be certain that their vote reflects the views of the EMC.

3.5 Duties of the Committee Delegates to ANSI Committees

IEEE Delegates to ANSI Standards Committees are appointed by the IEEE Standards Association from the Committee membership.

They are expected to attend meetings of the Committee to which they are appointed, participate actively in the formulation of standards, and respond to ballots.

IEEE delegates are instructed delegates, and, as such, represent an IEEE position. They shall circulate drafts of Standards and solicit comments, recommendations, and instructions so as to develop IEEE positions. Where there is more than one IEEE delegate to an ANSI committee, the delegation is organized so as to present general agreement on the IEEE viewpoint, and, for this reason, a Head of Delegation is designated.

They should keep the Committee informed of activities of the ANSI committee through reports at Committee meetings.

For more specific remarks pertaining to the duties and responsibilities of ANSI delegates, see the IEEE Standards Manual of current date.

4. ELIGIBILITY AND SELECTION OF OFFICERS AND MEMBERS OF THE ELECTRICAL MACHINERY COMMITTEE AND ITS SUBCOMITTEES.

4.1 Technical Committee

4.1.1 Qualifications and Eligibility of Technical Committee Members

Technical Committee members shall be members in good standing of the IEEE Power Engineering Society and meet the requirements of the Technical Committee.

The members of each IEEE Technical Committee are appointed by the Chair of that Committee, with notification given to the Chair of the Technical Council. Selection and continuation of Technical Committee memberships shall be determined by meeting all of the following qualifications:

(a) Technical competence in the particular branch of engineering as specified in the scope of the Technical Committee.
(b) Interest in that branch of engineering as expressed by working on standards, publishing papers, taking part in discussions of technical papers, and presentations thereof.
(c) Willingness to devote time and effort to contribute to the advance of the art by attending meetings, reviewing assigned papers for approval of presentation and publication, and suggesting, when possible, improvements in Committee operations.
(d) Continued participation in Technical Committee functions such as serving as an officer, liaison member, liaison delegate, Subcommittee member or Working Group member.
(e) Contributing regularly as a member of a Subcommittee during an apprenticeship determined by the Technical Committee. A minimum apprenticeship of one year is required. Where special conditions exist requiring immediate admission (as, for example, liaison representation to other groups), the Chairperson of the Committee can initiate immediate membership action.
(f) Returning all ballots on Technical Committee issues regularly and on time.
(g) Regular attendance at meetings. When a member is absent for three consecutive scheduled regular meetings and fails to participate by correspondence, the member will be removed from committee membership, subject to a review of the particular circumstances by the Administrative Subcommittee of the Technical Committee.
(h) Need for balance among user, manufacturer, and third party interests created by Standards preparation and balloting requirements.

Committee membership is reviewed and reaffirmed yearly and is contingent upon meeting the qualifications listed above. A member may discontinue his Committee membership by sending a letter of resignation to the Committee Chair, with a copy to the Committee Secretary. The Chair may elect to discontinue the membership of a continually inactive or non participating member by sending written notification to the affected member, stating the specific reasons for termination, and copying the Committee Secretary. At the Chair's discretion, a warning of impending discontinuation of membership may be issued to the affected member. A written appeal for membership reinstatement may be submitted to the Chair of the Technical Committee specifically stating why the individual should be reinstated.

4.1.2 Appointment of Technical Committee Officers

The Chair, Vice-Chair and Secretary of each Technical Committee are recommended by the incumbent Chair of that Committee with the concurrence of the immediate Past Chair and are approved by the Chair of the Technical Council. (See Paragraph 12.0 of the PES Bylaws.)

4.1.3 Technical Committee Officer Terms of Office

The Technical Committee Chair's term of office is one year with reappointment for a maximum of two years, except under extraordinary conditions identified by the Chair of the Technical Council to be in the best interests of the Technical Committee.

The Technical Committee Vice-Chair's term of office is one year with reappointment for a maximum of two years. The Technical Committee Secretary's term of office is one year with reappointment for maximum of two years.

In many committees, there is an automatic progression from Secretary to Vice-Chair to Chair in a six year time span, unless the current Chair has reason (or extraordinary circumstances demand) to deviate from this sequence.

4.2 Technical Committee Subcommittees

4.2.1 Qualifications and Eligibility of Subcommittee Members

Subcommittee members shall be members in good standing of the IEEE Power Engineering Society and meet the requirements of the Technical Committee. The members of the Subcommittees are appointed by the Chair of the Subcommittee with notification to the Chair of the respective Technical Committee.

Subcommittee membership is reviewed and reaffirmed yearly and is contingent upon meeting the qualifications listed above.

A member may discontinue his or her Subcommittee membership by sending a letter of resignation to the Subcommittee Chair. The Subcommittee Chair may elect to discontinue the membership of an inactive or non-participating member by sending written notification to the affected member.

4.2.2 Appointment of Technical Committee Subcommittee Chairperson

The Chair of a Subcommittee is appointed by the Chair of the respective Technical Committee with notification given to the Chair of the Technical Council. The Chair's term of office is one year with reappointments, with a suggested maximum of two years. The Chair of a Subcommittee shall be a member of the respective Technical Committee.

4.3 Technical Committee Subcommittee Working Groups

4.3.1 Qualifications and Eligibility of Working Group Members

Member qualifications include voluntary involvement, expertise in the subject, regular participation in working group activities, and timely completion of assignments. A Working Group member is a participator.

Working Group members need not be a member of the Power Engineering Society but are encouraged to be members in good standing of the Society. The members of the Working Groups are appointed by the Chair of the Working Group with notification to the Chair of the Subcommittee.

A Working Group member may discontinue his membership by sending a letter of resignation to the Working Group Chair. The Working Group Chair may elect to discontinue the membership of an inactive or non-participating member by sending written notification to the affected member. The level of activity required to retain membership is at the discretion of the Working Group Chair.

4.3.2 Qualifications and Eligibility of Working Group Chairpersons

The Chair of the Working Group shall be a member in good standing of the Society and meet the requirements of the Technical Committee. Furthermore, the Working Group Chair should possess the following:

(a) Technical Ability: The Working Group Chair should have demonstrated technical ability through participation in Subcommittee and Working Group activities and discussions. The Chair must have reasonable level of expertise within the Working Group's subject of assignment.
(b) Procedural Experience: The Working Group Chair should have been actively participating in Technical Committee activities and should have demonstrated the willingness to accept and complete assignments and follow through until finished.
(c) Personal Characteristics: The Working Group Chair should be articulate and an innovative contributor. The Chair should have leadership qualities as demonstrated by thoughtful engagement in debate and discussion and should have excellent verbal and written communication skills.
(d) Administrative Support: The Working Group Chair should have access to appropriate reproduction and mailing facilities for the distribution of drafts as well as the final document.

4.3.3 Appointment of Technical Committee Subcommittee Working Group Chairperson

The Chair of a Working Group is appointed by the Chair of the respective Subcommittee with notification to the Chair of the respective Technical Committee. The Chair of a Working Group shall be a member of the respective Subcommittee. The general practice is for the Working Group Chair to serve for the duration of the Project Authorization Request, or for a suggested term of three years for standing working groups.

4.4 Participation by Non-Members of IEEE

Non-members of IEEE may be appointed as consultants to Technical Committees, Subcommittees and Working Groups but will not have a vote except as described below. For example, physicists and mathematicians are frequently called upon, in the basic science fields, to supplement the work of those Committees and Subcommittees. Therefore, individual experts and liaison representation from other organizations are encouraged where appropriate.

With approval of the IEEE Standards Board, non-IEEE members, who are representatives of other organizations or are invited experts, may be consultants to Technical Committees, Subcommittees, and Working Groups developing standards but may vote only on matters relating to those standards.

4.5 Honorary Membership

Technical Committees may, at their option, name Honorary Members who retain their IEEE/PES membership, but because of extenuating circumstances, are generally unable to meet the other membership requirements. An Honorary Member shall have first been a regular member and shall have demonstrated a high level of participation and be generally recognized for his or her contribution. These individuals participate by reviewing and commenting on subjects in their field of expertise and are retained on appropriate and necessary committee mailing lists.

4.6 Corresponding Membership

The Technical Committees may, at their option, offer Corresponding Membership to utilize the expertise of those who are not normally able to attend the Committee meetings. Corresponding Members may participate in all Technical Committee activities, including the development, review, and balloting of standards documents. In addition, Corresponding Members may participate in the review of technical papers sponsored by the Technical Committee.

Corresponding Members may be appointed by the Chair of the Technical Committee, with notification given to the Chair of the Technical Council. The qualifications and eligibility for membership, and continued membership, are the same as for regular Technical Committee members, with the exception of the requirement of regular attendance at meetings.

If desired, Corresponding Membership may be offered at Subcommittee, Working Group, and Task Force levels.

5. PROCEDURES

5.1 Quorum

Fifty percent (50 percent) of the voting membership of the Electrical Machinery Committee shall constitute a quorum. Actions which require a majority (greater than 50 percent) taken at a scheduled meeting lacking a quorum may be subsequently validated through approval of the meeting minutes or through approval by special letter ballot. Such approvals shall require an affirmative majority vote.

5.2 Voting Requirements for Motions

A motion may be made by any Electrical Machinery Committee member during a meeting of the Electrical Machinery Committee. A second to the motion by another Electrical Machinery Committee member is required prior to the call for the vote. Following the discussion of the motion (if any), the Electrical Machinery Committee Chair then calls for the vote on the proposal by the Electrical Machinery Committee membership in attendance. A simple majority vote is required for approval of the motion.

The wording of the motion, the name of the member who made the motion, the name of the member seconding the motion, and the results of the vote are recorded in the Electrical Machinery Committee meeting minutes. Motions made at a scheduled meeting lacking a quorum may be subsequently validated through approval of the meeting minutes or through approval by special letter ballot. Such approvals shall require an affirmative majority vote.

5.3 Exceptions to Procedures by Technical Committees

The organization of the Technical Committees and their Subcommittees, membership procedures, pattern and style of meetings, and other activities, may vary from committee to committee. This may be due to historical patterns or best perceived means to fill the needs of the segment of the industry of interest. Technical Committees desiring to change their organization or procedures in a manner that departs from the Technical Council Procedure Manual, may do so upon approval of the Technical Council.

The Chair of the Technical Committee shall prepare a written request stating the exception desired and the reason for the exception and send it to the Chair of the Technical Council. The Chair of the Technical Council will forward the requested exception to the Organization and Procedures Committee for review. The Committee will present its recommendation at the next regularly scheduled meeting of the Technical Council. The requested exception will be voted upon at the Technical Council meeting and the results noted in the minutes.

5.4 Changes in Scope of Technical Committees

Technical Committees desiring to effect a change in Committee or Subcommittee scopes or add to or subtract from their present committee organization must prepare a written recommendation to the Chair of the Technical Council Organization and Procedures Committee with a copy to the Chair of the Technical Council. Changes which are strictly editorial may be approved by the Organization and Procedures Committee.

The Organization and Procedures Committee will attempt to resolve any conflicts and then present its findings to the Chair of the Technical Council. The Chair of the Organization and Procedures Committee will review the recommendations with the Chair of the Technical Committee which proposed the change and the chairs of any other committees which are affected in a further attempt to resolve any conflicts. When a conflict cannot be resolved, the Chair of the Technical Council will adjudicate a fair decision.

The Chair of the Technical Council will then direct the Secretary to conduct a letter ballot on the final wording of the scope change. The results of the ballot will be appraised by the Organization and Procedures Committee. A recommendation will then be made as soon as possible to the Chair of the Technical Council for approval, initiation of further action, or to table. The Secretary will report the results of the ballot at the next meeting of the Technical Council.

Power Engineering Society Special Services will be notified of the revision by the Secretary. The official scopes of the Power Engineering Society Technical Committees and Subcommittees are kept by the Chair of the Organization and Procedures Committee.

5.5 Procedure for the Endorsement of Fellow Award Nominations

The procedure for recommendations for Fellow Awards is outlined in the following directive from the PES Executive Board:

Any request for endorsement (Form B-27) by the Society should be sent to the Chair of the PES Fellows Committee, who will then refer it to the appropriate Technical Committee(s) for evaluation and recommendation. If that Committee(s) decides to recommend endorsement, the Chair of the Technical Committee(s) should submit to the Chair of the PES Fellows Committee a brief summary of the professional accomplishments of the candidate which are judged to be of such distinction as to warrant the member's elevation to the grade of Fellow. (Form B-3 should be used as a guide in preparing the brief summary.)

The request for endorsement (Form B-27) and the Technical Committee(s)' comments on the candidate will also be forwarded to the members of the PES Fellows Committee for review and recommendations. The PES Fellows Committee will then rate the candidate as Extraordinarily Qualified, Highly Qualified, Qualified, Qualified with Minor Reservations, or Not Yet Qualified to be elevated to the grade of Fellow. The PES Fellows Committee evaluation will be submitted in writing (Forms B-3 and B-93) to the IEEE Fellows Committee as the recommendation or endorsement of the Power Engineering Society.

In the event a candidate's field of specialty falls outside the scope of all Technical Committees, the PES Fellows Committee will evaluate the request for endorsement. The PES Fellows Committee may also request the President of the Power Engineering Society and the Chair of the Technical Council to assist in the evaluation. It should also be emphasized that failure to obtain a high rating from the PES Fellows Committee for a candidate does not prevent the sponsor from submitting the nomination to the IEEE Fellow Committee for consideration.

5.6 Procedure for Evaluation of Technical Papers

5.6.1 Responsibility for Evaluation of Technical Papers

The responsibility for all matters related to the presentation of papers at the various IEEE Conferences throughout the year resides with the Vice Chair of the Technical Committee sponsoring or representing the papers. Alternately, the Vice Chair may designate a person, Subcommittee, Working Group, or Task Force to perform these duties under his or her supervision. For the purpose of this procedure, the responsibilities are assumed to be performed by the Vice Chair.

5.6.2 Technical Paper Review Procedure

Paper reviews are processed by Transactions Editors (or designees) who send to each selected reviewer a copy of the paper and two copies of the form "Review Form RF-2 for Individual Reviewer."

The reviewer may either personally review the paper, or have it reviewed by another IEEE member who is an authority on the subject. Upon completion of the review, the copies of "Review Form RF-2 for Individual Reviewer" are completed by the reviewer, regardless of who actually performed the review. Five unidentified copies of the reviewer's comments and suggestions are attached to the form. One completed copy of the form and the attachments are returned to the Subcommittee Chair (or designee). The other copy of the form and a copy of the comments and suggestions are retained by the reviewer.

Upon receipt of all reviews of a paper, the Transactions Editor (or designee) completes the form "Review Summary", and attaches the unidentified copies of the reviewers' comments and suggestions.

Any paper designated by the reviewers as a possible prize paper is referred to the Awards, Recognition and Prize Paper Working Group Chair of the EMC.

In the event an author appeals the outright rejection of a paper, the paper shall be re-evaluated by the Chairperson of the Committee plus two reviewers selected by the responsible Subcommittee Chairperson with approval of the Vice-Chairperson.

5.7 Procedure for Developing and Balloting IEEE Standards

5.7.1 Introduction

This procedure defines the process used for assuring that all materially interested and affected parties have an opportunity to participate in the development, reaffirmation, withdrawal, and balloting of PES sponsored standards. The procedure supplements guidance provided in the IEEE Standards Operation Manual and the Standards Board Bylaws and is to be used by all standards preparing bodies within the PES.

The procedure is divided into two parts:

Invitation to Participate: Defines the process for advertising the formation of PES sponsored standards projects and extends an invitation for materially affected persons to participate in the development of the standards.

Invitation to Ballot: Defines the process for advertising upcoming ballots of PES sponsored standards projects and extends an invitation to IEEE members who are materially affected and technically competent in the project's subject matter to participate in the balloting of the standards.

5.7.2 Invitation to Participate

5.7.2.1 Advertising

To assure that all materially interested parties are invited to participate in a PES standards project, an Invitation to Participate will be extended in the following publications:

The Standards Bearer

The Standards Bearer has a circulation to IEEE members from all societies. Each Standards Bearer lists recently approved Project Authorization Requests (PARs) by title only. Periodically, the name of a staff member in the IEEE Standards Department to contact for further information will be published. If any responders indicate an interest in document development the staff member, Working Group, or Task Force Chair will mail them an Invitation to Participate form.

ANSI Standards Action

The ANSI Standards Action publication has wide distribution among parties interested in standards development. Upon PAR approval, the IEEE Standards Department submits a PINS (Project Initiation Notification System) form notifying ANSI of the initiation of an IEEE Standards Project. This published notification includes an IEEE staff contact for further information. If any responders indicate an interest in document development the staff member, Working Group or Task Force Chair will mail them an Invitation to Participate form.

The IEEE Standards Department staff is responsible for submitting the information for publication in both the Standards Bearer and the ANSI Standards Action.

5.7.2.2 Invitation to Participate Form

The Working Group or Task Force chair is responsible for sending an Invitation to Participate form (the form is available on the Power Engineering Society web page) both to interested parties who contact the chair directly and to the listing of interested parties supplied by the IEEE Standards Department staff. A list of upcoming Working Group and Task Force meetings shall be included. Any other pertinent information regarding status of the document, qualifications of Working Group and Task Force members, etc., shall also be sent.

The returned Invitation to Participate forms shall be evaluated by the Working Group or Task Force chair for inclusion of the responder in its membership. In general, all who respond and who are technically qualified should be invited to participate unless specific reasons exist for excluding them. (Example: Adding them would provide one organization or company an undue influence on the content of the document.)

Paragraph 4.3.1 of this manual provides additional guidance regarding the qualifications for Working Group members.

5.7.3 Establishment of Balloting Body

5.7.3.1 PES Balloting Pool

Periodically, an invitation to become a part of the PES Balloting Pool will be published in the Standards Bearer, which has a circulation to IEEE members from all technical societies. Additionally, PES Balloting Pool forms can be made available at PES meetings. The purpose of this invitation is to identify those members who have a general interest in standards documents being balloted by the Technical Committees within PES. Responsibility for the maintenance of the balloting pool resides with the Standards Coordinator, along with support from the IEEE Standards Staff. Responses are to be sent to the IEEE Standards Department staff member listed, who will compile the results and upon request send them to the respective Technical Committee Standards Coordinator.

5.7.3.2 Formation of Sponsor Balloting Body

From 3 to 6 months in advance of sponsor balloting, the committee's Standards Coordinator (or the designated representative) will send an Invitation to Ballot form, similar to the one attached, to those who have expressed general interest in that committee's standards projects. Alternatively, the IEEE Standards Department will, upon request, mail the Invitation to Ballot forms.

The Invitation to Ballot form may also be used by the Committee's Standards Coordinator (or the designated representative) to identify persons within PES, including persons within the sponsoring technical committee, who wish to ballot the document. (This can be considered as a supplement to the coordination requests identified on the PAR.)

The sponsor's balloting group will consist of the following:

a. The sponsoring Working Group or Task Force members who both wish to vote and are IEEE-SA members.

b. Those IEEE-SA members who submit a completed Invitation to Ballot form and certify that they understand the material presented in the draft standards and are technically competent to vote on such issues.

c. Members of the sponsoring Technical Committee and the sponsoring Subcommittee who are IEEE-SA members wishing to ballot the document.

Note that the balloting body must be balanced as defined in the IEEE-SA Standards Board Operations Manual, Section 5.4.1. The conductor of the ballot (which in most cases will be the sponsoring Committee or its Standards Coordinator) retains the responsibility for the balance. Any actions necessary, including refusal of membership, to establish or restore balance must be done prior to the ballot. The sponsoring technical committee Standards Coordinator can seek the advice of the IEEE Standards Department staff in achieving balance. Once formed, no new members will be added to the group and if a member must drop out due to circumstances beyond that member's control, the Standards Coordinator shall have the option of appointing a replacement member.

Also note that the sponsor retains a degree of control over the balloting group, as stated in the IEEE-SA Standards Board Operations Manual, Section 5.4.

5.7.3.3 Failure to Return Ballot

Any Balloting Group member who has requested participation in the ballot of a draft standard and fails to return their Ballot Form will be dropped from the balloting pool on future projects and, therefore, will not receive future invitations to ballot. Re-instatement to the balloting pool will be considered upon written request to the Standards Coordinator of the sponsoring Technical Committee.

5.7.4 Balloting Procedures

5.7.4.1 One Ballot

Some committees have used a tiered balloting process to obtain consensus. A Working Group ballot was conducted, followed by a Subcommittee ballot, and then the sponsoring Committee ballot. To expedite the balloting process only one ballot shall be conducted. The balloting body for this one ballot shall be as described in Paragraph 6.10.3. Follow-up ballots (to the same balloting body) will be necessary when substantive technical changes are made as a result of negatives or by comments received.

5.7.4.2 Balloting Procedure

The balloting shall be conducted using the procedure published in the latest revision of the IEEE-SA Standards Board Operations Manual, Section 5.4.3, which can be obtained by contacting the IEEE Standards Department staff, or by downloading it from the Standards Department home page on the World Wide Web.

5.8 Standards Interpretations

From time to time official requests for interpretation of a particular standard are received by each Committee via the IEEE Standards Department. The appropriate Subcommittee chair will appoint two Subcommittee members to review the document and to develop a response for approval by the Subcommittee chair. This proposed response is then sent to the Advisory Committee members for comment (see the IEEE-SA Standards Board Operations Manual section 5.8 for details on formation of the Appeals Panel). If no negative comments are received within fifteen days, the Subcommittee chair will forward the interpretation to the IEEE Standards Department who will be responsible for notifying the originator of the request for interpretation of the official response. If there are negative comments, then it is the responsibility of the Subcommittee chair to work with the particular Advisory member to resolve the issues. The resolution should be discussed with the Committee chair before forwarding to IEEE Standards. If a resolution cannot be achieved, then the Chair of the Committee will make the final decision as to how the response is to be handled.

5.9 Standards Appeals

This procedure to hear appeals to actions or inactions that occur before a draft standard is balloted supplements the procedure in Section 5.8, IEEE-SA Standards Board Operations Manual. [Every attempt should be made to resolve concerns informally before this procedure is formally invoked.]

Appeals may have either technical or a procedural basis. Technical appeals will be referred to the appropriate Subcommittee (SC) or the Technical Committee (TC) responsible for the standard. An appeal committee, chaired by the TC representative to the PES Standards Coordinating Committee, will consider procedural appeals and not the Technical Subcommittee concerned.

An appeal shall be filed with the Chair of the appeal committee in writing within 30 days of the event (action or inaction). The written appeal shall contain information about the issues being appealed, informal attempts made to resolve them, and suggestions to resolve the issue.

The Chair of the appeal committee shall appoint an ad hoc Appeal Panel (AP) consisting of a chair and two other members from the members of appeal committee. None of the appointees shall be a direct participant in development of the concerned standard.

The Appeal Panel (AP) shall review the complaint, seek other information if necessary, and decide if a hearing is required. If the AP dismissed the complaint, the appellant shall so be informed in writing with reasons for the decision. [The AP may try to resolve the issue with informal discussions with the concerned parties.] If necessary, the appeal shall be heard by the

AP during regular meeting week of the appeal committee or other time convenient to all parties before the next regular meeting week of the appeal committee (with at least two weeks' notice to all concerned parties) in person, or by telephone conference, or by correspondence. Failure of the appellant to participate in the hearing shall constitute a withdrawal of the appeal.

A written decision shall be rendered by the AP within 30 days of hearing the appeal and communicated to the parties concerned, Chair of the appeal committee, and Chair of the TC.

5.10 How to ftp/upload Drafts to IEEE for Electronic Balloting

A directory called "drafts" has been created in the ftp/uploads area. You can use this area for uploading files of the drafts. The instructions are below.

1. Please check your draft for the following:

- Each page must be numbered in the proper order.
- Each page must have project # and draft #. (Example: C57.12.00/D5)
- Each page must have current date.
- Complete IEEE copyright statement with current year on the first page is a must.
- Short IEEE copyright statement with current year in a "footer" on each page is a must.
- Title must be same as on approved PAR and must have the word "Draft" (Draft: Title)
- Complete figures, tables and annexes at proper place.
- Only metric units are allowed in the normative portion of the standard. Inch-pound data may be included in footnotes/annexes. Submit necessary exception request to Bruce Barrow of SCC14 (301-493-4374;b.barrow@erols.com).

2. Convert your draft file to PDF.

3. Send files via anonymous ftp to stdsbbs.ieee.org/uploads/drafts

Note 1: Please **do NOT** put spaces or special characters, such as; (@#$%^&*()/?,etc.) in the filenames.

Note 2: If you have many files or directories/subdirectories to upload, please zip them into one file (following the naming convention of Note 1).

Note 3: The uploads/drafts directory is not readable, so you will not be able to see the contents.

4. Send an email to spa-admin@ieee.org and a copy to your staff liaison specifying the names of the files.

Note 1: Uploaded and where they belong, i.e., for balloting use.

Note 2: When spa-admin gets the email he will transfer the files to a directory on the home server. He will specify the directory name at transfer time.

General Information

1. If you are not familiar with ftp, software is available at:
   http://cws.internet.com/ftp-price.html
   Netscape version 4.0 and greater also has ftp capability.

2. Most ftp software requires the following information:
   Host: stdsbbs.ieee.org
   Username: anonymous
   Password: <put your email address here>
   Directory: /uploads/drafts

3. If using Netscape browser, the URL is
   ftp://stdsbbs.ieee.org/uploads/drafts/
   Then click on "File", "Upload file" from the menu items

GUIDELINES FOR PES WORKING GROUP CHAIRS

HOW TO CONDUCT WORKING GROUP MEETINGS

Prior to the Meeting:

(a) When you receive the notice of the upcoming meeting, you must indicate your intention to hold a working group meeting, how long the meeting will be, whether audio, visual, or other special aids are required, and approximately how many people you expect to attend your meeting. Subsequently if changes to your original plans occur, your subcommittee chair should be contacted promptly.
(b) A formal agenda and pertinent documentation covering the items to be discussed should be sent to each working group member and to your subcommittee chair about three or four weeks prior to the meeting. You may also wish to send the agenda to previous guests or individuals interested in the activities of your working group. The agenda should specify the individual who is to report on each specific agenda item. These individuals should be made aware that if they are unable to attend, they are expected to report by mail or to find a qualified replacement to attend and report.
(c) Plan to bring to the meeting a sufficient number of copies of draft documents for guests.

At the Meeting:

(a) You have been given the authority by the officers of your committee to conduct this meeting on behalf of, and in the best interests of, the PES and the IEEE. You are in charge and you are expected to use all the resources at your disposal to complete your assignment in a timely manner. Your most important resource is the committee "Organization and Procedures Manual." It is essential that you become familiar with this manual. If you do not have a copy of the manual or you have reason to believe it is out of date, contact your subcommittee chair for an up-to-date copy. Your subcommittee chair and the committee officers are also available as resources for resolving problems.
(b) Arrive 15 to 20 minutes early. Be aware of detrimental influences on your meeting, such as room temperature, noisy neighbors, inadequately sized room, etc. Contact the committee meeting planner or hotel staff for assistance if needed.
(c) Start your meeting on time.
(d) Follow the agenda as much as possible, but allow for deviations if pertinent to the assignment of the working group. It is essential that the assignment be kept up to date, and that the changes be approved by the subcommittee chair.
(e) Encourage everyone to participate. However, be mindful of individuals who dominate the meeting or deviate from the subject at hand. Ideally, every member of the working group should have an assignment.
(f) Keeping minutes is usually assigned to a permanently appointed secretary or a vice chair. This leaves you free to concentrate on running your meeting. It is most important that the minutes include decisions, assignments (including assignee's name and completion date required), summaries of interesting discussions, reports on unresolved issues along with a proposal for resolution, and an attendance list. Appointment of a permanent working group

vice chair is recommended who can also act as chair in your absence. This is particularly important in order to keep the working group on track and to assure continued progress.

(g) Just prior to adjournment, review the specific assignments, the assignees. and the required completion times. End the meeting promptly. It is not appropriate to fill in the time with editorial changes, minor details, or discussions that are not within the scope of the working group. Appoint an editor or small group of editors to make decisions on grammar and punctuation. DO NOT USE VALUABLE MEETING TIME FOR THIS PURPOSE. Do focus on issues pertinent to timely completion of the assignment.

Immediately Following the Meeting:

(a) A summary of your meeting minutes should be prepared for presentation at the subcommittee meeting. If conflicts arise such that you cannot attend the subcommittee meeting, contact the subcommittee chair prior to the meeting to propose ~~s~~ a substitute to make the presentation on your behalf. A written copy of the minutes should be sent to each working group member, guests, and your subcommittee chair within three or four weeks.

(b) Make it known to your members that it is annoying if not disruptive to have working group members not show up for a scheduled meeting. Indicate that they should inform you of their particular conflict prior to the meeting. This is only common courtesy. Very often, these conflicts are the result of membership in too many working groups. If a working group member consistently fails to attend meetings or complete assignments, he should be reminded of his responsibility to attend and asked to either commit or resign.

Between Meetings:

(a) The success of the working group in completing its assignment in a timely fashion very often depends on the effort of the working group chairs between meetings.

(b) It is important to keep in contact with individuals who have accepted assignment to discuss progress. Working group members should be advised that the committee expects assignments to be completed in a timely fashion. By detecting problems early on, the working group chair can often find alternate means of getting the work completed on time.

(c) When necessary, plan for special separate meetings in order to keep the work on schedule. These special meetings may involve only a few key working group members with specific assignments. Consider arriving a day early or staying a day or two after the regularly scheduled meeting time. In order to meet target completion dates, full day sessions may be required.

(d) Annually review the standing of your working group members. Members who consistently turn down assignments, fail to complete assignments, or do not regularly attend meetings should be dropped.

GUIDELINES FOR PES WORKING GROUP CHAIRS

HOW TO COMPLETE A WORKING GROUP ASSIGNMENT

1. Assembling the Working Group:

Working Group (WG) members are invited to join by the WG chair and are approved by the subcommittee chair. Members should be invited to join on the basis of their knowledge and experience in the field of interest and their ability and willingness to perform. If needed, recruit members from outside your committee, including corresponding members or members outside of North America. The goal is to develop a working group membership that will produce a quality product rapidly and efficiently while at the same time developing a broad consensus.

2. Develop the Objectives:

Write out in detail exactly what the WG assignment encompasses. Bracket what specifically will be included as part of the assignment. Use the input from the WG to help you. Check with your subcommittee chair to make sure your detailed assignment description meets the intent of the assignment to you. Summarize the assignment into a couple of sentences which will serve as the official description and give it to your subcommittee chair for approval. A realistic target date for completion of a detailed outline of the assignment should be approved by the subcommittee chair. Typically, one or at most two meetings should be used for this purpose.

3. Develop the Project Authorization Request (PAR):

If your assignment is to develop or revise a standard, recommended practice, or guide, a PAR must be submitted early in the project to assure proper coordination with other technical committees. Consult the "Standards Submittal Kit" for details on submitting a PAR. This kit can be obtained by contacting the IEEE Standards Department, 445 Hoes Lane, Piscataway, NJ 08855-1331.

4. Research the Literature:

Establish a bibliography of existing literature that covers the subject. Organize the bibliography by topics. Include non-IEEE pertinent literature such as that from IEC, CIGRE, etc. Consider making this the first WG assignment. Each member of the working group should receive a copy of this background material.

5. Write the Outline:

A detailed outline should logically establish how you intend to execute your assignment. A good outline that clearly defines the subjects organized by topic are essential in getting back a "good product." Use the WG to help develop and refine the outline. Make as clear as possible what is to be incorporated in each section of the outline. Present a copy of the outline to your subcommittee and establish a date for completion. To avoid misunderstandings later, it may be necessary to define what is meant by completion.

6. Make Writing Assignments:

Use the outline you have established to make writing assignments. Assignments should be made where possible on a voluntary basis, keeping in mind that the primary goals are technical quality and timely completion. Therefore, the most proficient writers must be given first consideration. Working group members should understand that their duty as members is to accept assignments and to complete them on time. Include assignments and due dates in your WG minutes. Ideally, every member of the working group should have an assignment. Consider the use of task forces with their own chair to handle significant assignments.

7. Integrate Writing Assignments into a First Draft:

The chair or his designee should put the compete writing assignments together into a first draft. There will be overlaps and different writing styles that will clash. What is important at this stage is that all subject areas are covered. Number and date all drafts and minutes of all meetings. The chair must follow up promptly if assignments are not completed on time and is expected to use his management skills to find a way to resolve the delay. By contacting WG members between meetings, these surprises can be avoided. If needed to maintain satisfactory progress, the chair should consider extending meeting sessions or schedule separate meetings of individual task forces and/or the entire group.

8. Edit the Draft:

The next step is to edit the draft to get it to "flow", to eliminate repetition and overlap, as well as to blend writing styles so it looks like one person, and not a committee, wrote the document. Very often the editing is best done by one or at most two individuals. DO NOT USE VALUABLE MEETING TIME FOR EDITING. Also at this stage, the technical input needs to be carefully checked for clarity and accuracy. Use the WG members to help in this process. The editing process will take a number of drafts. Underlining all new changes between drafts saves time.

9. Unresolved Issues:

If the progress of the working group becomes stalled because of specific unresolved issues, the working group chair should not hesitate to ask the subcommittee for direction and assistance.

10. Balloting:

When the working group is satisfied with the draft, a formal request is made of the subcommittee for approval and disposition. The required approval process depends upon the type of document; i.e., standard, technical paper, etc. The details of the approval process are covered in either your committee organization and procedures manual or in the IEEE Standards Manual. The balloting process can be a bit intimidating and sometimes downright frustrating. The working group chair is very often the key to aggressively bringing a ballot to a successful

conclusion. Hard work and persistence are required. Use the assistance of your committee's standards coordinator representative or the standards subcommittee chair to resolve procedural issues. See Paragraph 6.10.4 of the Technical Council Organization and Procedures Manual.

11. Publish the Document:

12. Summary Paper:

In some cases, for example standards documents and guides, it may be beneficial to write a summary paper for publication in IEEE transactions to serve as publicity as to the existence of the new or revised document and to solicit feedback in the form of discussions. This feedback can be particularly valuable in the case of "trial use" documents.

13. Disposition of Working Group:

Make a recommendation to your subcommittee as to the future direction of the working group; i.e., disband, new assignment, revisions, etc.