

**IEEE Power and Energy Society
(PES)**

**Power and Energy Education Committee
(PEEC)**

***OPERATIONS AND
PROCEDURES MANUAL***

(July 2021)

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Introduction and Description of the PEEC

1.1 Introduction and Scope

The Power and Energy Education Committee (PEEC) is a standing administrative committee of the IEEE Power and Energy Society (PES). In matters of budget, scope, and programs the PEEC reports to the PES Vice President for Education. This document is intended as an operations manual with the committee scope, procedures, and objectives delineated. The organization and operating procedures set forth in this manual are for the guidance of the officers and members of the PEEC in performing the work of the committee. The approved scope of the PEEC is:

Scope: Work for constant improvement of relationships between all segments of the electric power and energy industry and all elements of the engineering education community. Promote electric power and energy engineering and technology education, and professional developments in schools and industry. Be an advocate of research and researchers at universities and encourage the support, dissemination, and use of university research in electric power and energy engineering. Work with other appropriate Power and Energy Society Committees to develop continuing education programs in the electric power and energy field and contributions to the IEEE Press. Formulate recommended Power and Energy Society policy relative to all matters involving engineering and technology curricula accreditation. Serve as the primary source of Power and Energy Society recommendees for service in various activities of ABET. Cooperate with similar committees of other societies.

The organization of the PEEC is designed to contribute to all aspects of this scope and to stimulate active involvement of PES members. Suggestions for improving the responsiveness of the PEEC are strongly encouraged. Such suggestions may be communicated to any of the PEEC officers. A current listing of all PEEC officers and members is available through the PES web site.

1.2 Liaison to Other Organizations

The PEEC chair may arrange on an informal basis for liaison representatives to or from an organization within or outside of IEEE. Such representatives are not necessarily members of

PEEC. PEEC liaison representatives to committees of outside organizations must: attend meetings of the committees to which appointed; keep the PEEC and sponsoring subcommittee(s) informed of relevant activities of the outside committee; keep the outside committee informed of relevant activities of the PEEC.

The chair of PEEC subcommittees, working groups and task forces may arrange, on an informal basis, for liaison representation to or from other PES committees, PES student members, or outside organizations. Chairs of working groups and task forces should coordinate the arrangement with the subcommittee chair.

The PEEC currently has members who participate as liaisons with the following organizations:

IEEE EAB

IEEE P&E Magazine

Technical Council (TC)

Intelligent Grid & Emerging Technology Coordinating Committee (IGETCC)

IEEE Industry Applications Society

IEEE Press PE Series

ABET

The Power and Energy Education Committee is responsible for the Power and Energy Society's interests in ABET activities. The chair is responsible for recommending qualified IEEE members for these activities and encouraging their employers to make them available for participation in such activities as may be required by ABET.

1.3 Exceptions and Amendments to Procedures

The procedures in this manual cover the normal operation of the PEEC. If the procedures are not appropriate for special situations, the chair may authorize exceptions on an ad hoc basis when he or she decides that such exceptions are warranted. The chair, acting with the concurrence of the Administrative Subcommittee (AdCom) of the PEEC, may at any time direct the amendment of this manual. Any member of PEEC may offer amendments to this Operations and Procedures manual by submitting same as an agenda item for the next PEEC AdCom meeting. These amendments shall be in force immediately upon 2/3 vote of approval of AdCom.

2. Committee Organization and Responsibilities of Officers

2.1 Organization

Officers of the PEEC are the chair, the vice chair and secretary. The past practice was for the chair to be appointed by the PES President for a one-year term of office (beginning on January 1) with the possibility of reappointment to a maximum of five one-year terms. The general practice, however, was for the chair to serve two years. The vice-chair and secretary were appointed by the PEEC chair, after approval by the PES President, for a one-year term of office with possible reappointment. The general practice was for the vice-chair and secretary to serve two years. After the two-year period was over, it was also general practice for the vice-chair to succeed to the chair, the secretary to succeed to the vice-chair, and for a new secretary to be appointed. In 2005, PEEC initiated an election process where the secretary is voted on by the PEEC main committee membership. The first election occurred in 2005 and the first elected secretary began her term in January 2006. The succession process continues as before. After the two-year period is over (every even numbered year), the vice-chair succeeds to the chair, the secretary succeeds to the vice-chair, and a new secretary begins his/her term (after being elected every odd numbered year). Officers must be members of PEEC, PES, and IEEE in good standing. The PEEC chair reports to the Vice President for Education.

Election Process The nomination and election procedure is:

- Any person may nominate any PEEC member for this position. Self-nominations are permitted.
- The nominations subcommittee (appointed by the PEEC chair and approved by the AdCom) shall examine all nominations, validate eligibility for nomination, and put forth eligible nominees for the PEEC secretary ballot.
- The criteria for the nominations subcommittee to put forth a nomination to the ballot include: interest in Power and Energy education, service to PEEC, familiarity with PEEC operations, agreement of the nominee to participate in the election, and likelihood to serve a full term in the position.

Nominations are due (by email, by fax, or by postal mail) by a date and time announced by the election coordinator in the year the current secretary's term ends (odd numbered years).

- The ballot shall be made available in August of the odd years to PEEC members on record as of June 30 of that year.
- The elections will be conducted electronically. All the members can submit their secret ballot electronically until a specified date. The chair or a member of the election subcommittee shall run the election and tabulate the votes. The individual with the largest number of votes shall be declared the winner. In the event of a tie, the election coordinator will conduct a runoff election with a new ballot comprised with candidates who tied for the most votes in the initial election.

AdCom (the Administrative Subcommittee) consists of the officers, subcommittee chairs, past PEEC chair, and the Vice President for Education, and is chaired by the PEEC chair.

Subcommittees are permanent structures within PEEC, and each is composed of its respective chair, and subcommittee members. Some subcommittees may have vice chairs and secretaries as appropriate. The subcommittee structure may be changed as appropriate to fulfill PEEC's mission, by action of AdCom. One becomes a subcommittee member by volunteering to serve, and is appointed, or removed, by the subcommittee chair. The initial appointment is for one-year term with annual reappointment thereafter. Before the formation of a subcommittee, a proper scope must be written and approved by the AdCom.

Subcommittee chairs begin their term on January 1st. The term of subcommittee chairs is two years. Each subcommittee has Chair, Vice Chair and Secretary positions, and the current practice of electing a secretary and the two-year rotation is similar to that of the PEEC Officers.

Working groups and Task Forces are agents of specific subcommittees, and may exist as long as necessary, subject to subcommittee approval. The chairs of the working groups are appointed by the subcommittee chairs for a one-year term with annual reappointment. Names of working group officers are reported to the PEEC secretary on a yearly basis. Members of the working groups are appointed by the working group chairs with approval of the subcommittee chairs for a one-year term with annual reappointment. Task forces are more focused than working groups and tend to be smaller in membership size.

Before official formation of a working group or task force, a proper scope must be written and approved by the subcommittee chair. The following Working Groups currently exist within PEEC:

Reporting to the PEEC are

Working Group on the PEEC Website

Reporting to the University Education Activities Subcommittee are:

Working Group on Educational Resources

Working Group on the Power Globe Listserv

Reporting to the Awards and Recognition Subcommittee are:

Student Prize Paper WG (This is under PES Outstanding Young Engineer Award SC, but liaisons with PEEC.)

Working Group on Prize Paper Review

Working Group on IEEE Fellow Nominations

Reporting to the Research Subcommittee are:

Working Group on the North American Power Symposium (NAPS)

Editor: In the past, the Vice Chair served as the editor of Transactions on Power Systems representing PEEC. This term was for two years concurrent with the vice chair term. To allow better continuity and efficiency, this was changed in 2012 by creating a separate position of editor. The editor is appointed by the PEEC chair in consultation with PEEC officers for a duration of six years.

A chart of the PEEC organization is shown in Figure 2.1.

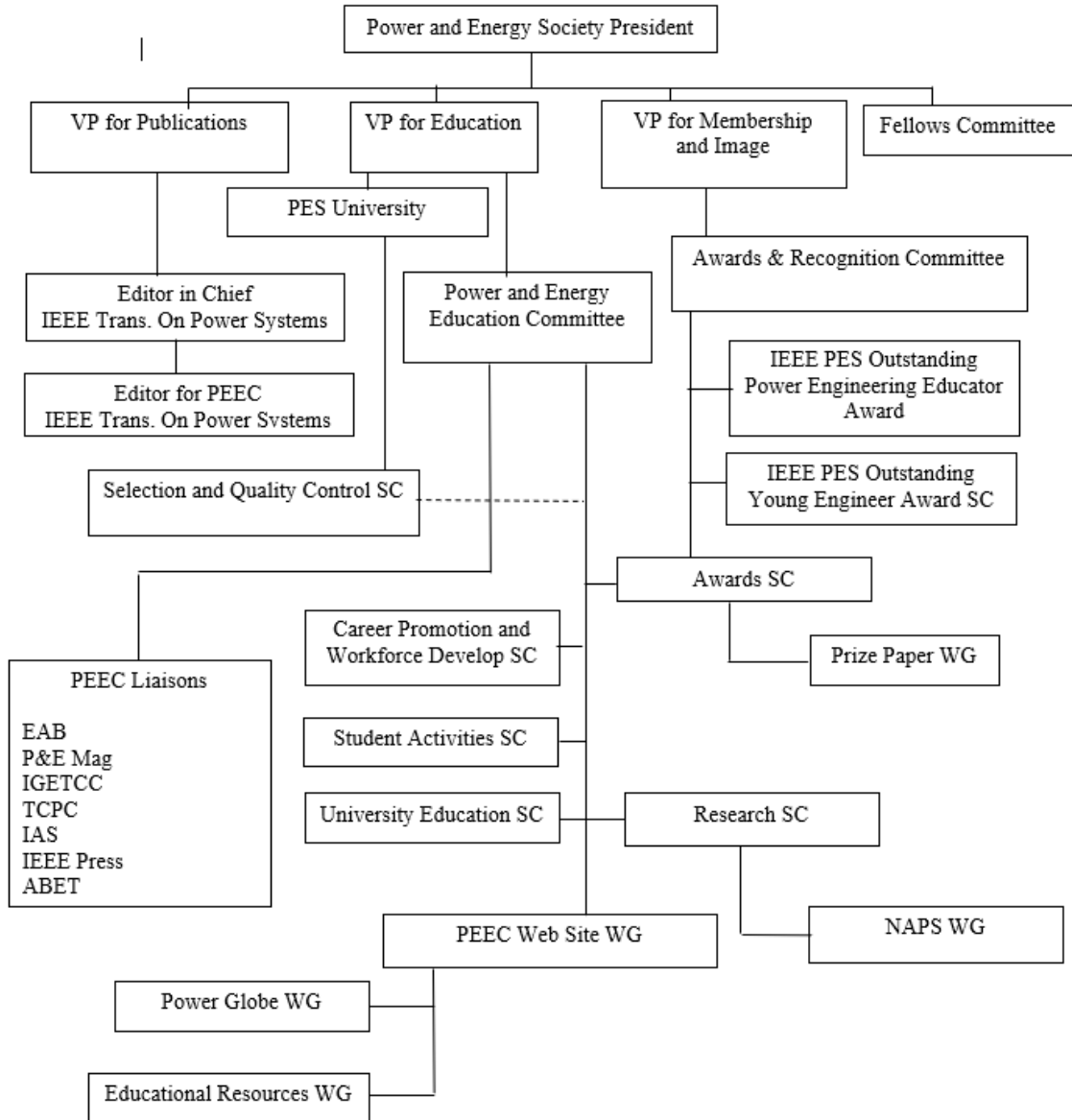


Figure 2.1: PEEC organization chart

2.2 Duties of the Officers

Duties of the officers as a group

1. Counsel with each other on all PEEC issues, ensuring that its activities are in accord with the PEEC scope, and the overall goals and objectives of PES and IEEE.

2. Encourage subcommittees to organize and conduct appropriate technical sessions, panels, tutorials, workshops, and other activities at all IEEE-PES meetings.
3. Assist subcommittees in the implementation of their activities.
4. Continuously review the PEEC website for errors and possibility for improvements.
5. Advise new members, officers, and chairs of the existence of a PEEC website and direct them to review all material, including this Manual, with particular attention to sections that apply to their new office.

Duties of the PEEC chair

1. Report to the Vice President for Education/ (submit annual report and request budget).
2. Have general supervision of the affairs of PEEC. When able, the chair shall schedule, preside, and set the agenda at all meetings of PEEC and AdCom.
3. Be an ex-officio member of all subcommittees, and offer advice and support to their activities.
4. Continuously examine the organization of PEEC, proposing whatever changes may improve its effectiveness and efficiency.
5. Coordinate the appointment and removal of subcommittee chairs.
6. Serve as chief liaison to all other agencies within PES, except when specific liaison responsibilities are delegated to other PEEC members.
7. Annually, submit a written report of PEEC activities to the PES leadership.
8. Attend PES Technical Council meetings – these typically take place in January at the Joint Technical Committee Meeting (JTCM), and General Meeting.
9. Request and administer the PEEC budget.
10. A typical timetable of the PEEC chair is given in Appendix D.

Duties of the PEEC vice chair

1. Report to the PEEC chair and preside at all committee meetings not attended by the chair.
2. Serve as the PEEC Technical Committee Paper Coordinator (TCPC) for PES General Meetings and Transmission and Distribution Conference, serve as liaison with

- the PES Technical Sessions, and coordinate PEEC liaisons and representatives at PES administrative meetings.
3. Solicit requests for PEEC panel sessions from the PEEC Main Committee or Subcommittees about nine months before the next IEEE Power and Energy Society General Meeting, Transmission and Distribution Conference or other PES conference. With guidance from the PEEC officers assign panel sessions to the time slots available to PEEC.
 4. About nine months before the next IEEE Power and Energy Society General Meeting or conference, request information from subcommittee chairs on technical papers that may become available for presentation and advise them of deadline dates for submission of proposed papers. The question as to availability of technical papers should also be brought up as an agenda item at each Administrative Subcommittee meeting.
 5. For each meeting and conference, upon receipt of a tentative technical sessions schedule from IEEE headquarters, plan the number of individual Power and Energy Education sessions, according to the number of papers to be presented, and/or joint sessions with other committees or subcommittees.
 6. By the deadline date, submit the final Power and Energy Education program of sessions on the forms provided on the Mirasmart web site for the specific meeting or conference. A session chair is required and shall be selected by the PEEC vice chair. The session chair will be guided by the information given in the PES Technical Sessions Guide.
 7. Prepare a schedule of committee, subcommittee, working group, task force meetings, and other PEEC activities for the annual General Meeting and submit this information to the PES through the Mirasmart web site.
 8. Process review of conference proceedings papers assigned to PEEC by IEEE headquarters (see Appendix B). Also, formulate a consensus for acceptance or rejection of these papers. It may be necessary to gather additional information to formulate this decision.
 9. Attend PES Technical Sessions meetings – these typically take place in January at the Joint Technical Committee Meeting (JTCM), and General Meeting.

10. Forecast technical papers and technical programs to be undertaken by the PEEC.
11. Schedule and coordinate subcommittee meetings to minimize conflicts between them, and with the technical Sessions at the respective-meetings of the PES.

Duties of the PEEC Secretary

1. Record minutes of the Power and Energy Education Committee and its Administrative Subcommittee meetings, including attendance. Distribute these to members of the committee and the PEEC officers and secretary.
2. Prepare agenda and send notices of meetings to committee members as requested by the chair.
3. Keep the Power and Energy Education Committee, subcommittee, task force, and working group rosters up to date and distribute to the members of the committee and PEEC officers.
4. Update the PEEC Operations Manual as needed.
5. Based on the details recorded in minutes, prepare an annual report, and submit to Chair at the end of each year.

2.3 Duties of Subcommittee Chairs

The duties of the subcommittee chairs are as follows:

1. Supervise the affairs of the subcommittee, under the general direction and guidance of the chair of the PEEC.
2. Carry out the stated purpose and work of the subcommittee.
3. Oversee the election of the secretary, when it is time to rotate the officers.
4. Call and preside at the meetings of the subcommittee.
5. Promote technical papers pertaining to the objectives of the subcommittee and its task forces and/or working groups. Also, to be alert to new technical problems that need to be worked on by the subcommittee.
6. Recommend the establishment of new task forces and/or working groups and the dissolution of old ones when they have served their purpose.

7. Report on the activities of the subcommittee and its task forces and/or working groups, either verbally at meetings of the PEEC or in writing to the chair when so requested.
8. Submit minutes of the meetings of the subcommittee and its task forces and/or working groups, for inclusion in the minutes of the PEEC.
9. Recommend candidates for PEEC membership.

2.4 Membership

One becomes a member of PEEC by AdCom approval. To qualify for membership, the candidate must have an expressed professional interest in power and energy education, served with distinction for not less than 12 months on a PEEC subcommittee, be proposed for membership by the subcommittee chair, and agree to continuously meet the criteria for member in good standing. To remain a member in good standing of PEEC, at a minimum, one must be a member of IEEE in good standing; be a member of PES, or at least one other Society of IEEE, in good standing; have a demonstrated on-going professional interest in power and energy education; maintain a good faith effort to attend all meetings; and annually contribute to the ongoing work of PEEC in some capacity. Specifically, meeting attendance should be, at minimum, attendance of two out of the six main committee meetings in three consecutive years. All PEEC members in good standing are eligible to vote in PEEC Secretary election.

3. Subcommittees and Working Groups

3.1 Administrative Subcommittee

This subcommittee serves in an executive capacity in the assignment and coordination of work among all the subcommittees, arranges for preparation and presentation of papers at meetings, recommends officers and members of the various subcommittees and the main committee, and develops long range plans for the PEEC.

Scope: Serve in an executive capacity in the assignment and coordination of work among all the subcommittees, arrange for preparation and presentation of papers at meetings, recommend officers and members of the subcommittees and main committee, and develop long-range plans for the Power and Energy Education Committee.

3.2 Life Long Learning Subcommittee (LLLSC)

This subcommittee serves the power and energy society by selecting tutorials, plain talks, webinars and other educational materials. Selected tutorials are considered for all the conferences of the PES including General Meeting, ISGT, and T&D conference and exposition. For selection, LLLSC coordinates with IEEE PES education and meeting services, IEEE PES executive board, and PES Technical council, considering the recommendations from the technical committees.

Scope: Study, coordinate, and report on electric power engineers' continuing education needs, opportunities, and resources. Provide PEEC with guidance and leadership for improving continuing education resources, both with respect to content and delivery. Define, study, and report on the value of effective continuing education in the achievement of individual career goals and the advancement of professionalism in the power industry, Sponsor of Panel Sessions and tutorials. Evaluate the educational resources including tutorials, webinars, plain talks and other educational materials.

Tutorials: This subcommittee is responsible for soliciting and screening tutorial session proposals received from the Technical Committees for possible scheduling at one of the three PES conferences: General Meeting, T&D Conference and Exposition, and

ISGT. The subcommittee works with the PES office, Technical Council and the Meeting Department to facilitate distribution of printed material to the registered attendees, processing Continuing Education Units, and the eventual presentation of the tutorial.

Tutorials should be on a technical subject and of such a nature that the material to be presented is not readily available from conventional sources. They should be planned as educational experiences and should not duplicate technical sessions. The presentation should be lectures with ample opportunity for interactions, questions, and answers. The course should be spread over as long a time period as can be arranged to improve learning, study and retention of material. Where there is sufficient interest, tutorial courses may be repeated but it is recommended that there be two or more years between the second and third presentations. The tutorials should also reflect the need and adhere to the conference themes.

Preparing a Tutorial:

Before a Conference:

1. Tutorial organizer should first get the tutorial technically approved by the relevant PES Technical Committee. It is recommended that the following should be submitted to the Technical Committee for their approval:
 - i. An overview of the tutorial.
 - ii. A summary of topics and a brief description of what is covered by each topic.
 - iii. Organization of the tutorial – this should show time-slots allotted to each topic. An eight-hour tutorial should allow for at least 7.5 hours excluding breaks.
 - iv. Instructors' names and biographies.
2. If the tutorial is approved and sponsored by Technical Committee, the tutorial organizer will then submit (via email) a request to schedule the tutorial to the Lifelong Learning Subcommittee (LLLSC) chair. This request should be accompanied by the material submitted to Technical Committee, a copy of the email/letter showing the approval/sponsorship from the Technical Committee chair, and a 150-word summary of the tutorial for inclusion in the printed program if the tutorial is scheduled to be presented at a PES meeting.

3. LLLSC tutorial selection committee (comprising of LLLSC members, members from the PES Technical council) will review the contents of all requests received in accordance to review criteria, and inform the tutorial organizer if the proposed tutorials will be scheduled or not. If a tutorial is accepted to be scheduled, its organizer should then start preparing detailed material and slides.
4. After the selection process, tutorial organizer will send the summaries of the accepted tutorials to the Meetings Department and the Local Organizing Committee (LOC) for scheduling, inclusion in the printed program, and display at the conference web site.
5. LOC will send out Profit Sharing Agreement for execution to all tutorial organizers.
6. The tutorial organizer will submit to IEEE PES tutorial manager/LLLSC chair
 - Detailed course material to be distributed to attendees and the slides to be used by instructors. The slides should not contain any proprietary material or promotions of any kind.

The Tutorial organizer will submit to the LOC Chair

- Signed Profit Sharing Agreement.
7. LLLSC will go over the submitted material and slides for any proprietary/commercial contents and recommend changes, if necessary. Once the submission is accepted, LLLSC will then
 - Send all the material to the PES office.
 - Apply to the PES office to approve all accepted tutorials for Continuing Education Units (CEU).
 - Major selection criteria will be
 - a) Sponsorship from IEEE Technical Committee/subcommittees and recommendations
 - b) Conference theme
 - c) The need and value of the topic
 - d) Type of attendees and general audience
 - e) Previous offerings and feedback
 - f) Instructor mix, team and experience

At the Conference:

8. PES office will provide to the attendees
 - Hard copies of the tutorial material and slides.
 - CEU Tracking Form.
 - Tutorial Evaluation Forms.
9. Tutorial organizer will
 - Collect the Tutorial Evaluation Forms from all attendees, and turn them in to a LOC representative.
 - Sign and return CEU Tracking Forms to the attendees.
10. Attendees will turn in their signed CEU Tracking Forms to a LOC representative.

After the Conference:

11. LOC will turn in the evaluation forms to LLLSC chair and the CEU Tracking Forms to the PES office.

Other educational materials including web-based learning, webinars and plain

talks: Under its responsibilities, LLLSC will also review and select other educational materials such as webinars, plain talks and web based learning courses in coordination with the IEEE PES educational services manager. The process of selection is similar to that for the tutorials. Webinars are archived by the PES.

3.3 University Education Activities Subcommittee

The University Education Activities Subcommittee works to promote and improve electric power and energy engineering and technology education in universities. Included in the subcommittee's activities are: to conduct a survey, in even years if not more often, of the electric power and energy engineering educational resources at universities, summarize and disseminate the results.

Scope: Seek to improve electric power and energy engineering education at the university level by promoting and disseminating innovative teaching methods and materials, identifying changing industry educational requirements, collecting and publishing data

on faculty and laboratory resources available at colleges and universities and other such activities.

Activities: Include regular resource assessments (e.g., faculty, laboratories, etc.), assessing power industry requirements that impact electric power and energy engineering education, model university curriculum development, promotion of innovative teaching methods and aids, encouraging faculty professional development, sponsoring technical monographs suitable for classroom use, and coordinate PEEC web resources.

Working Group on Educational Resources

Scope: Maintain a database of educational resources at universities.

This working group offers internet-based survey every two years. It is offered through a PES web site. It is designed to provide information about Power programs to parents, students, and industry. Working group prepares a report summarizing the findings of the survey and publishes it on a PES web site. A paper capturing the trend over the years is also under the scope of this WG.

Working Group on the Power Globe Listserv

Scope: Maintain the Power Globe Listserv and supervise its operation. Set and maintain list usage guidelines and documentation. Oversee subscriber management.

3.4 Student Meeting Activities Subcommittee

Scope: Develop programs for students at the PES meetings.

Activities: Work with the local host committee to provide a comprehensive student program for the PES meetings. Typical program activities include (but are not limited to): Sunday social activity (e.g., city tour), Monday morning overview prior to plenary session, technical tours (both student-only and general membership), student poster session, Student/Faculty/Industry Panel session, and Student/Faculty/Industry Luncheon. In addition to meeting activities, the subcommittee may provide housing support for qualifying students.

Responsibilities:

1. Request a budget for the PES meetings through PEEC. Additional matching funds can be requested from the National Science Foundation. The target proposal submission date: January 15 for the GM.
2. Contact the local host committee to identify the individual(s) responsible for student meeting activities. Provide local committee with breakdown of responsibilities and budget. Coordinate student activities with the local committee.
3. Prepare student poster and housing application forms, and publicize the program at least four months in advance.
4. Select students to receive housing/hotel accommodation sponsorships.
5. Coordinate Student Poster Contest (responsibility of the subcommittee vice-chair). Secure judges from among faculty and industry membership.
6. Prepare poster booklet at-least 15 days prior to event date, which can then be circuited to judges before the event.
7. Select undergraduate and graduate student poster winners based on input from judges, and prepare certificates for poster winners.
8. Secure speakers and/or panelists (responsibility of chair), working with local committee.
9. Manage the student/faculty/luncheon event and announce poster winners.

10. Keep the student subcommittee website up-to-date.

3.5 Awards and Recognition Subcommittee

Scope: Conceiving and implementing appropriate honors and awards in electric power and energy engineering education. Included is responsibility for administration of the Student Prize Paper Contest, the Prize Paper Review and Fellow Nominations. In addition yearly selection of individuals in PEEC to receive awards per Technical Council Policy.

Responsibilities: This subcommittee is responsible for conceiving and implementing appropriate honors and awards in electric power and energy engineering education, including student prize papers, review of Fellow nominees, outstanding service awards, PEEC prize paper award, and recognition awards. This subcommittee also has responsibility for liaison with the PES Awards Committee.

Working Groups:

Working Group on Student Prize Paper Contest: Liaisons with PEEC.

Working Group on Prize Paper Review

Working Group on Fellow Nominations.

Working Group on Student Prize Paper Contest

Scope: Fostering interaction between engineering students and the electric power and energy industry and faculty, and to encourage graduate and undergraduate students to become skilled in both performing research and writing quality technical papers. This working group is under PES Outstanding Young Engineer Award SC, but liaisons with PEEC.

Responsibilities: Encouragement of student participation in the contest by sending out invitations to schools, approaching professors and advertising on the WEB, review and evaluation of the papers submitted to the contest, and selection of the winner.

Procedures:

1. The paper must be in the English language. Length of the paper is limited to 5000 words. The organization and format of the paper shall follow the Authors Guide of IEEE –PES.
2. No distinction is made between graduate students (MS) and undergraduates. Both groups of students can submit each year with no distinction in category. Submission based on Ph.D. programs of study is not eligible. Submissions from Electrical Technology students are accepted. Student team efforts are encouraged. Faculty sponsorship is encouraged, but papers co-authored by faculty are not acceptable.
3. The working group forms a committee to judge the papers. The members of this committee shall be electric power and energy engineers. Committee reviews the submitted papers and determines the recipient of the Student Prize Paper Award. The group decision is final. Although the committee is not bound to declare a winner if none of the papers met its standard.

Working Group on Prize Paper Review

Membership: Working group is composed of the three members of the current awards and recognitions subcommittee.

Scope: Stimulating innovation in Power Engineering Education through the recognition of outstanding technical papers.

Responsibilities: Review papers submitted to the PEEC and identify outstanding contributions to electric power and energy engineering education. Vice chair of the Awards and Recognition Subcommittee serves as chair of this working group.

Procedures: The committee reviews the papers sponsored by the PEEC and published in the last three years. Based on the review, the Working Group ranks the papers and selects the best paper. This paper will be recommended for the PES prize paper award. Although the committee is not bound to declare a winner if none of the papers met its standard.

Working Group on Fellow Nominations

Membership: Working group is composed of three fellows, who are active members of PEEC.

Scope: Recognition among the membership of the PEEC for potential candidates for nomination to the IEEE fellow grade and initiation of the nomination process.

Responsibilities: This Working Group is responsible for initiation of nomination of eligible candidates.

Procedures: The request for endorsement is sent to the chair of PEEC. He or she will send the applications to the chair of the Fellow Nominees Working Group. The working group chair distributes the applications to the members and request ranking of the candidates by each member. The working group chair will consolidate the individual ranking and develop a final ranking order. Based on this ranking, the committee chair selects the candidates for endorsement and will prepare a brief summary of the professional accomplishments of the candidates which are judged to be of such distinction as to warrant their elevation to the grade of Fellow. Each year the committee reviews the membership and identifies potential candidates for the elevation of fellow grade. The Working Group encourages the nomination of these candidates. The Working Group should complete the reviews and send the recommendations in each year before April 15 to the chair.

3.6 Power Engineering Career Promotion Subcommittee

Scope: To promote and publicize electric power and energy engineering.

Activities: This subcommittee participates in activities to promote electric power and energy engineering as a career. These activities include the creation and distribution of promotional materials and ideas and provide a focal point for PES on promoting electric power and energy engineering as a career. These materials are targeted at various audiences including: K-12 students, early college engineering students, and faculty and administrators in other areas of EE. The goal of the materials is to educate the various audiences about the opportunities in electric power and energy engineering and the interdisciplinary nature of the field. We are particularly interested in getting industrial representatives to be involved in these promotional activities.

Responsibilities: The subcommittee responsibilities are to request and administer a budget for producing and distributing publicity materials including videotapes and flyers; create and distribute materials to encourage K-12 students and first year engineering students to consider electric power and energy engineering as a career option, organize and publicize electric power and energy engineering promotion materials available on the Web and through other sources, work with electric power and energy engineering faculty to identify ways to demonstrate the interdisciplinary nature of electric power and energy engineering for other EE faculty and engineering students, and work with other subcommittees, particularly the university activities subcommittee, on topics of mutual interest.

3.7 Research Subcommittee

The Research Subcommittee monitors and promotes research activities in electric power and energy engineering. Opportunities for members are publicized and discussed in an open forum to encourage maximum participation. Capabilities and resources of the members are publicized to industry and government agencies to inform them of available talent. The subcommittee also promotes the dissemination of research results through conferences and workshops. With regard to the latter, the Research Subcommittee is

responsible for the organization and operation of the North American Power Symposium (NAPS, see Appendix C).

Scope: Advocate research and inform researchers. Promote programs for power engineering research at government and private entities. Promote forums for the dissemination of university research.

Activities: This subcommittee meets at each General meeting of the PES. The subcommittee typically organizes and chairs at least one panel session related to research opportunities, capabilities, or dissemination of results. The subcommittee monitors and reports on the status and activities of funding agencies including the U.S. National Science Foundation, U.S. Department of Energy, and the Electric Power Research Institute. The subcommittee promotes the interaction of researchers between universities, and between universities and industry. The subcommittee invites program directors of funding agencies to its meetings and stimulates discussion of new research directions and opportunities.

The subcommittee promotes and monitors the annual North American Power Symposium (NAPS). The subcommittee offers historical advice and information on obtaining IEEE/PES advertising and technical co-sponsorship. Through its members, the subcommittee participates in the planning and organization of the annual meetings.

The subcommittee acts as a forum for electric power and energy engineering researchers to discuss their activities and the broad goals and directions of future research. It stimulates the exchange of ideas and potential collaboration among researchers.

Working Groups:

Working Group on the North American Power Symposium (NAPS).

Working Group on the North American Power Symposium (NAPS)

Scope: Promote interest in the North American Power Symposium and assist in its promotion through PES publications. Maintain historical records of the symposium and

provide liaison with the NAPS steering committee. Maintain NAPS Operating and Procedures Manual and ensure that it is distributed to chairs of each NAPS.

3.8 Strategic Planning Subcommittee

The Strategic Planning Subcommittee consists of the past 3 PEEC Chairs. These people are supposed to provide long-term continuity in PEEC and provide long-range vision for future activities.

Scope: Provide long-range vision for PEEC and promote new activities within IEEE PES and the academic community.

3.9 PEEC Web Site Working Group

Scope: Maintain the PEEC web site and all subcommittee web sites by coordinating with the respective officers.

Activities: This working group coordinates with the secretaries of PEEC, and all its subcommittees to maintain web sites. Web sites will contain at least the scope, officers' names and contact details, minutes from the past few meetings, and any recent activities and announcements. Similar documentation for the associated working groups should also be maintained.

4. Meeting Procedures and Committee Administration

4.1 General

The vice chair of the PEEC shall assume any or all of the powers and duties of the chair in the event of the chair's incapacity. PEEC meetings will ordinarily be conducted by the chair under Roberts Rule of Order or as authorized in these procedures.

Fifty percent of the voting members of the PEEC shall constitute a quorum. Actions (requiring a majority 50% vote of those present at a meeting), taken at a scheduled meeting lacking a quorum, may be subsequently validated through approval of the meeting minutes or through approval by special email ballot. Approval by email ballot shall require an affirmative majority vote. Fifty percent of the membership of any subgroup constitutes a quorum.

Each voting member of the PEEC is expected to attend every regularly scheduled PEEC main meeting. If the member must be absent, he/she shall grant partial or full power of proxy to another PEEC member or to a qualified person who will be in attendance at the meeting. To be valid, the proxy must be written and be in the secretary's hands prior to the action(s) for which the power of proxy is exercised.

4.2 Scheduled Meetings

The PEEC chair shall endeavor to schedule PEEC main meetings one year in advance. The secretary shall be responsible for all meeting arrangements for the PEEC. Future meeting notices will be included in the previous meeting minutes. A minimum of one month before a scheduled meeting, the PEEC secretary shall email to each PEEC member a notice of the time and place of the meeting. Request for items to be placed on the agenda should be brought to the attention of the secretary. The meeting agenda, approved by the chair, shall be emailed at least two weeks before the meeting. Items not on the Agenda may be brought up under "old" or "new" business, but if important actions are moved relative to such items, the chair, at his/her discretion, may rule the motion out of order by virtue of its not having been part of the official agenda. Presently, PEEC has two scheduled main meetings, which are held at the General Meeting and North American

Power Symposium, and are open to all the members. The AdCom has one meeting at the General Meeting and a teleconference between January and May of every year.

4.3 Minutes

The secretary shall keep a permanent record of each meeting in the form of meeting minutes. The minutes shall be a true and complete record of all actions taken, reports made, discussions, assignments and other business coming before the meeting. Committee reports should be written and should appear as attachments to the minutes. Also, the minutes shall show who was in attendance at the time of important discussions and votes. The secretary shall email a listing of action item assignments to all PEEC members within ten days following a meeting and shall mail a copy of the minutes to all PEEC members and to a supplemental list of interested people, within 60 days immediately following the meeting. The minutes will also be archived on the PEEC web site. An item of business at the next following meeting shall be the approval of the preceding meeting minutes. The minutes as thus approved, with revisions, shall stand as the official record of the committee's operations.

Appendix A

Brief History of PEEC

History

The Power and Energy Education Committee (Power Engineering Education Committee until 2009) is the outgrowth of the Power Generation Committee's subcommittee on Advancement of Power Engineering. In 1964, the subcommittee was elevated to full committee status as the Power Engineering Education Committee in the Organization Department. In 1970 the committee was transferred from the Organization Department to the Technical Operations Department. In 1984 the Power Engineering Education Committee was elevated to the stature of a full committee of the Power Engineering Society Administrative Committee (AdCom). Some time subsequent to 1984, the PES AdCom was changed to PES Executive Board; the PEEC then became a standing committee of the PES Executive Board.

In 1997 there was a reorganization of PEEC with the main effort being to consolidate several subcommittees and thereby streamline the committee structure. In 1998, the PEEC committee reporting structure was changed from reporting to the PES Executive Board to reporting to the PES Vice President for Education. In 2013 the name of the committee was changed to Power and Energy Education Committee.

Appendix B

North American Power Symposium

Introduction

This appendix provides a summary of information related to the organization of the North American Power Symposium (NAPS) and the operations and procedures that have been established by the steering committees of past symposia. The material for this Appendix came mainly from the PEEC Research Subcommittee that is responsible for NAPS.

Condensed History

The forerunner of NAPS was the Midwest Power Symposium (MPS) [1]. This symposium was established to provide an academic setting where students and faculty could discuss research and education programs at their universities. The first Midwest Power Symposium was held in 1969 with the following stated purpose [2]:

"The purpose of the Midwest Power Symposium is to stimulate advanced scholarly work and more research activity in the field of electric power engineering. This symposium is to be a forum where advanced students, their academic advisors, and practicing engineers can present the results of their work, discuss the activities of their colleagues, and publish their technical accomplishments with a minimum time delay."

This statement of purpose has remained unaltered throughout the history of MPS/NAPS. In addition, the sponsorship of PEEC has also remained as listed in the meeting descriptions of [3]:

"North American Power Symposium (formerly the Midwest Power Symposium): This conference is organized to serve educators and graduate students of regional universities in North America. It is a one-day meeting designed to improve communication of progress and results of university-based power system research. Planned for a college-campus setting, it provides for the early dissemination and publication of research project progress before results are available in formal technical paper form at other Power Engineering Society meetings. The Power Engineering Education Committee is responsible for the technical program at this meeting. Attendance can be expected to be approximately 100 faculty, graduate students, and sponsoring industry IEEE members."

The location of the MPS was determined by the steering committee which met immediately following the last session of each symposium. The steering committee was an informal collection of faculty members that attended the symposium. Each university in attendance was given one vote on motions made by the committee. As interest in hosting the

symposium grew, the committee planned formally up to two years in advance. The program chair for each symposium was the future symposium chair. For example, at the conclusion of the 19xx symposium, the locations for the 19xx+1 and 19xx+2 meetings were firmly decided. A representative of the two future-site universities would be required to confirm that they were still interested in hosting the symposia in those years. Locations for the meetings in 19xx+3 and beyond were tentative and usually consisted of an unordered list of interested sites.

The program chair was responsible for working with the symposium chair to formulate the call for papers. In order to reduce the financial burden on the host institution, many of the early calls asked the authors to provide copies of their papers for inclusion in the proceedings. This practice has been discontinued. A ten page limit on paper length was introduced in 1978.

Originally, the MPS was to alternate offerings east and west of the Mississippi River. Assuming that the University of Minnesota is east of the Mississippi, the first violation of the "east-west rule" occurred in 1980. The rule has been a guideline only in recent years.

The name change to the North American Power Symposium was proposed in 1984 - and affirmed by vote of the steering committee in 1985. Although complete attendance records have not been kept for the symposium, selected data indicates that attendance has ranged between 40 and 200; it has grown significantly in the recent years. For many years, the symposium attendance could best be described as "stable", but recent efforts to publicize the meeting and encourage student attendance has resulted in modest increases in paid attendance. The IEEE PES has been very helpful in this regard. Copies of all proceedings and most of the minutes and reports of previous meetings are currently on file at the University of Illinois.

Operating and Procedural Guidelines

The steering committee of MPS/NAPS has established guidelines for use in planning and hosting future symposia. These guidelines are summarized below:

1. NAPS will not normally expect funding support from IEEE/PES although IEEE has assisted with the publication of proceedings in the past and has assisted with student support in recent years.
2. IEEE/PES has provided excellent support in advertising future symposia in various publications. For example, past advertisements and calls for papers have appeared in the IEEE Power Engineering Review. The current year host should contact the prior year host to obtain information on who to contact to obtain this advertising.
3. It is desirable to have a reduced registration fee for students. In the past the normal registration fee has been between \$75 and \$100 (copy of proceedings included) for full registrants and between \$25 and \$50 (no copy of proceedings) for students.
4. The symposium should be held in a university setting, preferably alternating in location on either side of the Mississippi River.
5. The hosts of each NAPS may determine the specific format for their symposium, although the following format is suggested:
 - The follow-on site should be involved in the current year symposium program.
 - The symposium should be one and one half days (e.g. Monday - Tuesday noon).
 - The symposium should minimize the use of parallel sessions wherever possible.
 - The symposium should encourage student presentations.
 - They should consider a student prize paper contest.
 - They should issue the first call for papers by January 15 of the year.
 - They should ask for papers to be due by July 1 of the year.
 - They should hold the symposium in the fall (e.g. mid-October).
 - They should specify a paper length limit of 8 pages.
 - They should encourage papers that illustrate student projects.
 - They should encourage student attendance.
 - They should require each submitting author to state an intent to attend.
6. The steering committee for a NAPS symposium will consist of the faculty members that attend that particular symposium. On matters requiring a vote, each university will be allowed only one vote. The steering committee meeting at each NAPS should (at the 20xx meeting):

- Evaluate the current NAPS meeting and consider modifications for future meetings. These evaluations should be based on a reporting by the host chair including statistics about numbers of papers, sessions, format and financial data.
- Reaffirm the next years (20xx+1) site (a representative of that site must be present or have made this affirmation known to the committee in writing).
- Affirm the follow-on (20xx+2) site (a representative of that site must be present or have made this affirmation known to the committee in writing).
- Maintain a tentative list of future sites to be affirmed at future meetings. The ordering of this list will be established by a NAPS Site Selection Subcommittee as outlined in part 9 below.

7. The chair of the current symposium (20xx) should preside over the steering committee meeting. The chair of the next years NAPS (20xx+1) prepare minutes of the steering committee meeting. These minutes and a final report on the current symposium should be forwarded to the chair of the Research Subcommittee of PEEC. The minutes should include at least the following information:

- Members present at the steering committee meeting
- Time and place of the steering committee meeting
- Approval of previous minutes
- Statistics on current year attendees and paper acceptance
- Statistics on expenses incurred by the host institution
- Recording of any important motions.
- Recording of the confirmation of the next two years sites
- Recording of the list of possible sites after two years

8. The chair of the symposium should provide information to the chair of the follow-on symposium to assist in maintaining smooth transitions.

9. After the conclusion of each 20xx NAPS, the chair of the next NAPS (20xx+1) will organize and lead a NAPS Site Selection Subcommittee which will also include the chairs from NAPS 20xx-1, 20xx, 20xx+2 and one industry person. This subcommittee will solicit hosts for future meetings. This solicitation should close by July 1, 20xx+1. This subcommittee will use the following criteria to evaluate future sites:

- Sustained participation in previous NAPS meetings
- Time since last hosting NAPS
- Plans to maintain low registration costs
- Plans to support student participation
- Evidence of long-term interest in power
- Need for exposure
- Quality of facilities
- Alternating sites across the Mississippi River.

This subcommittee will prepare a recommendation for one additional firm site and any changes to the list of tentative future sites to the NAPS 20xx+1 steering committee for approval as outlined above. This group may not revoke a firm site status unless specifically requested in writing by the scheduled firm site.

References

- [1] G.T. Heydt and P.W. Sauer, "A History of the North American Power Symposium", Proceedings 1994 North American Power Symposium, Kansas State University, Manhattan, Kansas, September 26-27, 1994, pp. 3-12.
- [2] The 1969 Midwest Power Symposium Proceedings, Department of Conferences and Institutes, General Extension Division, University of Minnesota, Minneapolis, MN, 1969.
- [3] C. J. Essel (Editor-in-Chief), 1995 IEEE Power Engineering Society Organization and Committee Directory, IEEE, 445 Hoes Lane, Piscataway, NJ, 1995.

Appendix C

Guidelines for Processing the Review of Papers submitted for IEEE Transactions on Power Systems

The following are guidelines for the technical review of papers submitted to PEEC:

1. The editor is assigned technical papers for review by the Editor-in-Chief of the IEEE Transactions on Power Systems. The editor selects at least three reviewers for each paper through Manuscript Central.
2. The assigned reviewer either personally reviews the paper or declines to review it. The assigned reviewers complete review through Manuscript Central with the reviewer's comments and confidential comments to the editor. Reviewers' comments, which should support their decision, are mandatory for all the papers.
3. The editor formulates a consensus for acceptance or rejection of the papers submitted. Additional information may be gathered to assist in this decision.
4. The editor completes the Review Summary and submits a recommendation to the editor-in-chief.
5. The editor shall make recommendations for possible prize candidacy based upon reviewers' comments and/or recommendations.

Appendix D

PEEC Officer Duties Timetable

The Power and Energy Education Committee (PEEC) is a standing administrative committee of the Power and Energy Society (PES). In matters of membership, scope, and programs, PEEC reports to the PES Vice President for Education. The organization and operating procedures set forth in this manual are for the guidance of the officers and members of PEEC in performing the work of the committee. The procedures in this manual cover the normal operation of the PEEC. If the procedures are not appropriate for special

situations, the chair may authorize exceptions on an ad hoc basis when they decide that such exceptions are warranted. The chair, acting with the concurrence of the Administrative Subcommittee of PEEC (AdCom), may at any time direct the amendment of this manual. The PEEC AdCom meets physically once a year at GM, and has a teleconference in spring. The PEEC meets twice (GM and NAPS) per year and its subcommittees, task forces, and working groups meet annually at the IEEE-PES general meeting.

PEEC Chair Timetable

January

- (1) Edit annual report for Technical Council and VP Education prepared by secretary.
- (2) Identify PEEC and Subcommittee budget needs and prepare a consolidated budget request.
- (3) Attend TC meeting at JTCM.

February

- (1) Follow up on action noted per Executive Board, Technical Council.
- (2) Coordinate with Secretary for minutes of the AdCom meeting.
- (3) Preside at PEEC AdCom meeting via teleconference.

March

- (1) Submit PEEC budget for the following year to VP, Education.

July

- (1) Preside at PEEC AdCom meeting at GM.
- (2) Preside at PEEC Main Committee meeting at GM.
- (3) Attend TC meeting at GM.

August

- (1) Follow up on action noted per Executive Board, Technical Council, and PEEC meetings at GM.
- (2) Coordinate with Secretary for minutes of the AdCom and Main Committee meetings at GM.
- (3) Seek advice from PEEC AdCom and then select nominees for ABET Review Teams and select new members of PEEC and/or working groups/task forces.

September

- (1) Prepare initial roster of next year's PEEC list of officers and members. Send to PEEC AdCom for review and comment by October 1.

September or October

- (1) Preside at PEEC Main Committee meeting (usually Sunday afternoon) at NAPS meeting. Submit report to secretary for minutes.
- (2) Prepare final roster and list of PEEC officers for next year. After a verbal consent from VP Education is received on new officers, submit final roster to VP.

November

- (1) Together with the chair of the Awards and Recognition Subcommittee, make recommendations to Chair of Awards and Recognition Committee, PES for Outstanding Contributions to PEEC.

December

- (1) Review objectives and goals of PES and PEEC. Decide on future proposed courses of action of PEEC.

PEEC Vice Chair Timetable

Distributed at random times in the year

- (1) Act for the PEEC chair as needed.
- (2) Act as TCPC for GM and T&D conferences, and attend TCPC meetings at Joint Technical Committee Meeting (JTCM) and GM.

January

- (1) Formulate a spreadsheet for the technical meetings, committee meetings, WGs and other meetings at the next GM.
- (2) Participate in the TS meeting at JTCM.

February

- (1) Make final decisions on papers submitted for the GM.
- (2) Finalize the meeting rooms request for the next GM.
- (3) Participate in PEEC ADCOM meeting via teleconference.

March

- (1) Prepare schedule of technical sessions for the next GM and submit to IEEE PES.
- (2) Submit the meeting rooms request for the next GM as per IEEE-PES deadlines.

July

- (1) Attend Technical Council meeting at GM for liaison reporting.
- (2) Attend PEEC AdCom, Main, and TS meetings at the IEEE GM.
- (3) Solicit proposals for panel sessions for next PESGM and T&D conference.

September

- (1) Start selecting reviewers for papers submitted for T&D Conference (even numbered years) to be held in the following Spring.

September or October

- (1) Attend the PEEC Main meeting at the North American Power Symposium.

November

- (1) Make final decisions on papers submitted for the T&D.
- (2) Prepare schedule of technical sessions for the coming T&D.

December

- (1) Start selecting reviewers for papers submitted for the next GM.

PEEC Secretary Timetable

January

- (1) Prepare agenda for AdCom teleconference.
- (2) Participate in the PEEC AdCom meeting via teleconference, and take minutes.

February

- (1) Participate in the PEEC AdCom meeting via teleconference, and take minutes.

June/July

- (1) Prepare and submit agenda for PEEC AdCom and Main committee meetings for GM.
- (2) Attend PEEC AdCom and Main meetings at the IEEE GM and take minutes.

July/August

- (1) Distribute minutes from the PEEC AdCom and Main meetings from the GM.
- (2) Update the attendance matrix and committee roster.
- (3) Update the Operations Manual and Organizational Directory as necessary.

September/October

- (1) Prepare and submit agenda for the PEEC Main meeting at NAPS.
- (2) Attend PEEC Main meeting at NAPS and take minutes.
- (3) Distribute minutes from the PEEC Main meeting at NAPS.

December

- (1) Update the Operations Manual and Organizational Chart as necessary.
- (2) Prepare annual report of the previous year's activity to be submitted to TC and VP Education.

Appendix E

History of the Power Globe

In 1989, Dr. Gerald Heydt, then at the National Science Foundation, put together a list of e-mail addresses taken from the NSF data base known as the "HP System." This was a list of reviewers for the entire foundation. The names used were those who had participated in an NSF review in the power engineering program. The HP system was fraught with problems: many e-mail addresses were outdated and the list was poorly maintained.

The idea of an e-mail bulletin board was described at the 1990 PES Winter Meeting and several useful suggestions were received on how to make use of the list.

At the 1990 PES Summer meeting, this was discussed further in connection with the possibility of forming a University Research Subcommittee of the Power Engineering Education Committee (PEEC). The idea was to use the subcommittee -- and potentially the list of names and e-mail addresses -- to network the community in matters of power research. Dr. Sarosh N. Talukdar of Carnegie Mellon University assisted in this matter and volunteered to use the computer at CMU as a host. The number of names on the list was in the 25-50 range, and all were at universities. The machine at CMU was called the Globe machine, and the name Power Globe was given to the list. Dr. Talukdar, assisted by Dr. Peter Sauer of the University of Illinois and Dr. Jerry Heydt -- then at Purdue -- put together the Power Globe.

Dr. Heydt composed the rules and edited the list, Dr. Talukdar made sure the computer implementation worked. There were a lot of problems since list editing was manual and often fell behind schedule. There were many disgruntled users who wanted their name added or removed in a timely way.

In about 1995, Dr. V. C. Ramesh, then a graduate student at CMU, was recruited by Dr. Talukdar to make sure that the list of names was maintained smoothly. This worked well initially but the list grew steadily in size, and it became clear that a manually-maintained e-mail list was not practical. The main additions to the list in this period were industry and government people on a worldwide scale. Dr. Ramesh completed his Ph.D. and left CMU for the Illinois Institute of Technology, where he continued to remotely maintain the Power Globe. This worked for a time, but maintenance of the list was still time-consuming.

In PEEC Research Subcommittee discussions, it was suggested that the operation of Power Globe might be streamlined by utilizing a more advanced listserv. North Dakota State was contacted in regards to the use of their listserv, which hosts over 1500 e-mail lists and employs software that is in common use at many universities. Dr. Don Stuehm

of NDSU investigated and found that it would be possible for Power Globe to be hosted there.

On August 7, 1996, Dr. Heydt transferred the existing subscriber list to NDSU and the present listserver-based Power Globe was created. Dr. Bruce Mork was the initial “list owner,” coordinating the configuration of the list and providing subscriber maintenance. The list owner task has rotated among Power Globe Working Group members and will continue to be in the future.

Operating experience to date has been positive, with high reliability of service. Since most subscribers can now take care of their own subscription on a self-serve basis, maintenance has been minimal.