

MINUTES
IEEE POWER ELECTRONICS SOCIETY
ADMINISTRATIVE COMMITTEE
PHOENIX, ARIZONA USA
October 3, 1999

Officers	
President Operations V.P. Meetings V.P. Treasurer Senior Past President Junior Past President Division II Director	Philip Krein Thomas Habetler Kevin Fellhoelter Arthur Witulski Thomas Jahns Jerry Hudgins Barry Brusso

Members at Large (and terms)		
1997 & 1998-1999	1997 & 1998 & 1999	1996 & 1997 & 1998
Thomas G. Habetler William Gerard Hurley Dean Patterson Seth Sanders Tore M. Undeland Robert V. White	Jaime Arau Arthur W. Kelley Francesco Profumo Rene Spee J. Daan van Wyk Thomas G. Wilson, Jr.	Hirofumi Akagi Dusan Borojevic William G. Dunford Mark Jacobs Keyue Ma Smedley Katsuichi Yotsumoto

Operations Committees			
Asian Liaison Automotive Power Awards Chapter Development Computers in PE Constitution/Bylaws Education Activities ETTC European Liaison Fellow Evaluation	Tsutomu Ogata Randy Frank Chris Riddleberger. Jaime Arau Steven Leeb Keyue M. Smedley Dean Patterson Robert Beers Javier Uceda J. Daan Van Wyk	History Intersociety Liaison Membership/Publicity Newsletter Publications Region 9 Liaison Standards Transactions Telecomm Energy	Laura Steffek Thomas M. Jahns Atsuo Kawamura Gene Wester Francesco Profumo Jose Antenor Pomillo Jason Lai Richard Hoft Lars Bjorstrom Robert Jurewicz

Meetings Committee	Kevin Fellhoelter
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President's Committee	
Nominations	Thomas M. Jahns

PELS Administrative Office			
Administrator	Robert Myers	PELS Office	Lee Myers

PELS Representatives	
TAB Intelligent Transportation Committee TAB New Technologies Directions Committee TAB Public Relations Committee Society on Social Implications of Technology TAB IEEE Press Books TAB Transactions Committee TAB Magazines Committee TAB Newsletters Committee IEEE Energy Committee IEEE Standards Board APEC Steering Committee Electronic Media Editor	Dean Patterson, Seth Sanders Seth Sanders Dushan Boroyevic William E. Sayle William Hazen Richard Hoft Gene Wester Gene Wester Michael R. Jaske Jason Lai M. Jovanovic, C. Mullet, F. D. Tan Arthur W. Kelley

SUMMARY OF ACTION ITEMS

Chris Riddleberger will contact IEEE Awards Department to clarify nomination and selection processes for a Field Award and specifics for upgrading the Society Newell Award to Field status.

Bob Myers will report results of the Society officer and AdCom election to IEEE/TAB and will notify all candidates of results.

AdCom members will provide President Phil Krein with comments and/or concerns regarding Society-wide election of officers and AdCom members.

Dean Patterson will prepare a proposal for the Society AdCom to sponsor an international workshop on power electronics.

MOTIONS

Authorized a subcommittee of the Educational Activities Committee to recommend if and to what extent PELS should participate in a Department of Energy Future Energy Challenge in 2001.

Approved advance funding of \$5,200 for PESC-01.

Accepted the 2000 budget for the Computers in Power Electronics Technical Committee.

Reaffirmed approval of budgets for INTELEC-2000, PESC-2000 and APEC-2000

Endorsed technical participation in a 2000 IEEE power electronics workshop in Jordan.

Adopted a Society budget for 2000.

President Phil Krein convened the meeting at 10:02 a.m. (Attachment A) and asked for approval of the agenda. **MOTION: Tom Jahns moved approval, Kevin Fellhoelter seconded and the agenda for the meeting was adopted as submitted ((Attachment B)..**

Jahns said the minutes of the June 27 meeting at Charleston mistakenly described an approved increase in the non-member subscription price for the PELS Transactions as a per page hike and **MOTION: moved the minutes be approved but corrected to read ~~approved an~~ increase in the non-member Transactions subscription price from \$250 to \$295.** Randy Frank seconded the motion and the minutes were adopted.

ACTION ITEMS (June 27 Meeting)

1. *Atsuo Kawamura will set in motion a survey questionnaire of PELS members* - Krein said he will communicate with Kawamura and ask him to proceed with the survey.
2. *Bob Myers will ask IEEE Conference Services to remove PELS as a co-sponsor of a battery conference* - Myers said he has asked IEEE to remove PELS as a sponsor and was awaiting confirmation.
3. *Chris Riddleberger and Arthur Kelley will continue efforts to seek elevation of the William E. Newell award to IEEE Technical Field Award status.* Riddleberger noted that some awards require submission of nominations to the IEEE Awards Committee to action while others authorize a Society to make a single nomination. **ACTION: Riddleberger will contact the IEEE Awards Department to determine implications of nomination and selection processes for a Field Award and if a Society nomination would be sufficient for election if Newell were a Field award.**
4. *The Society Publications Committee will study the possibility of establishing a Power Electronics Society magazine* - Frank Profumo's Publications Committee report outlined the issues involving a potential move from a newsletter to a Society magazine.
5. *Phil Krein will research the feasibility, cost and other factors of Society-wide voting for AdCom member elections and Kay Smedley will study Constitutional or Bylaws implications* - Krein said IEEE can conduct a Society-wide election of officers and AdCom members in either mail and electronic formats or a combination of the two. He and others in discussions raised several issues: 1. the need to make an election and nominations process a serious effort and not simply a popularity contest, 2. the nominations process itself, 3. assurance of international diversity in candidates, 4. the dissemination of information to assure a thoughtful response, and 5. a concern over low turnout of voters as experienced by a number of other societies. Krein said he has conferred with Junior Past President Jerry Hudgins on the issues and asked **ACTION: asked AdCom members for individual comments and concerns on Society-wide elections.** Bylaws questions were covered by Smedley in her Constitution and Bylaws Committee report.

ACTIONS SUBSEQUENT TO JUNE MEETING

1. Krein said he approved the transfer of the Tokyo Section Chapter of PELS from the Section to the new Japan Council, as requested.

2. The President appointed Issa Batarseh of the University of Central Florida as PELS representative to an IEEE Web Education Workshop in Florida in December.

3. Krein said a list of 24 PELS nominations for the IEEE Millennium Medallions, together with 16 alternative selections, had been developed by an Ad Hoc committee of Riddleberger, J. Daan van Wyk, Jahns and Hudgins and submitted to IEEE by the October 1 deadline. Considered for nomination were past and present Society presidents, officers, editors, conference chairs and other key leaders with each selected candidate having activity in at least two of those categories.

4. Art Witulski has assumed his new duties at Society Treasurer and has completed about 60 percent of the transition process from Acting Treasurer Rene Spee. Witulski has developed the Society's budget for 2000.

ELECTION RESULTS

Jahns substituted for Hudgins as teller of the officer and AdCom election and reported results of the late summer balloting:

President - Krein (re-elected)

Vice President - Operations - Tom Habetler (re-elected)

Vice President - Meetings - Jan A. (Braham) Ferreira, Donald Grahame Holmes, Jose Antenor Pomilio, Seth Sanders (re-elected), F. Dong Tan, Tore Undeland (re-elected). Four members of the AdCom will complete their at-large terms the end of 1999 and were not eligible for re-election - Ger Hurley, Dean Patterson, Bob While and Tom Habetler.

ACTION: Myers will notify all candidates and report results to IEEE/TAB.

KEY ISSUE

Krein reported the U.S. Department of Energy has requested PELS participation in a DOE student competition - to be termed a Future Energy Challenge - involving a series of annual studies of inverter costs in fuel cell systems aimed at seeking lower pricing structures (Attachment C). PELS participation, he said, would give IEEE an opportunity to help draft rules for the competition, provide technical support and participate in directing possible product development. The DOE hopes to stage its first competition in 2001.

Jahns responded that the DOE's apparent basing of judgment on cost alone is risky business - asking how reasonable costs can be set for large-scale production as basis for selection. He suggested that the proposed competition seeks to dramatically reduce the cost of dc-ac inverters and interface systems for use in fuel cell systems and the requirement that competitors develop hard numbers is almost impossible to achieve. Frank said customers and some suppliers are reluctant to share information - distributors might be a source but process information is almost impossible to determine. Witulski and Habetler questioned if the planned activity is within the interest or level of learning of undergraduates. Krein said some senior year projects include costing and financial matters as well as technical aspects and curricula is recognizing the need to factor in cost issues, asking students to make reasonable estimates and to understand cost matters.

Asked how many schools would participate in the competition, Krein said the DOE anticipates 80 but he believes a maximum of a dozen. Habetler predicted a "massive effort" to get 12 schools involved and said the project needs restructuring to make it more interdisciplinary.

Krein suggested that the Educational Activities Committee establish a subcommittee to oversee PELS arrangements with DOE and supervise any funds to encourage participation and results. He proposed that funds be authorized from the Educational Activities budget to operate the subcommittee. Fellhoelter recommended a representative of INTELEC be appointed as an industrial participant.

Discussion evolved into agreement that the AdCom supports the concept of a student competition but the project needs to be studied to develop a plan offering a strong chance of success. Later in the meeting, Dean Patterson, chair of Educational Activities, moved **MOTION: authorization of a competitions subcommittee to consider PELS participation in the Department of Energy Future Energy Challenge 2001 and prepare a recommendation to the AdCom.** Frank seconded and the motion was approved. Named to the committee were Jason Lai, Chair, and members Habetler, Jahns, Krein, Fang Peng, Seth Sanders, Kay Smedley, and a representative of INTELEC.

OFFICER REPORTS

President - Krein said he had made the following appointments for 2000:

Treasurer - Witulski

Newsletter - Gene Wester

Transactions - Arthur Kelley

Intersociety committee - Jahns, Krein, Habetler, Hudgins

He said he hoped all other committee chairs would continue in their roles but asked that any chairs or members wishing to change assignments to notify him as soon as possible. Silence will indicate agreement to stay on with their 1999 assignments.

The President reviewed activities of the IEEE and the Technical Activities Board.

He said a nanotechnology council is being discussed for formation next year and several members in England are proposing a **focus** chapter specializing in system on a chip. If this topic ever grows to become a council, he said, PELS needs to be involved because of its critical role in power electronics.

TAB is engaged with three major topics

1. Branding - An ad hoc committee has commissioned a survey and developed a position statement which essentially is a longer version of a mission statement, along with a **road map** for the next decade. Krein said the committee has recommended a logo change to support a more uniform look and feel.
2. Streamlining - The IEEE professional staff is seeking a wider scope of management activities, with volunteers serving as a policy making and oversight body. The concept is under study and in need for a uniform policy, Krein said. He described this program as a mix of controversial and noncontroversial issues in search of a policy.
3. Financial Model - Krein said there seems to be a growing consensus for a new financial model and the new model needs to balance income and expenses while encouraging responsible business practices by every IEEE group. He explained that technical societies are major sources of income - notably conferences and publications - but also heavy users of services. Income is credited to societies and often the central administrative infrastructure of IEEE is in a deficit

position. The IEEE Financial Committee, with input from various entities including TAB has developed a new financial plan and will oversee its implementation in 2000. The plan calls for:

1. Coverage of all major IEEE expenses
2. Consolidation of investment classes and pools into one entity.
3. Charging services on a per-use basis when possible.
4. Charging of infrastructure costs through overhead categories such as dues and charging to each income-producing group based on budget levels.
5. Maintenance of dues at their current level.
6. Societies will pay an equitable share for services.
7. Societies will reduce all expenses in 2000 by at least 3 percent.

Krein said he has set four objectives for the Society:

1. Be among the first societies with full electronic publications.
2. Provide a wide range of continuing education opportunities
3. Expand technical committees into new areas of power electronics.
4. Add the IEEE logo to every commercial power supply to show compliance with standards.

Vice President - Operations - No report.

Vice President - Meetings - Fellhoelter introduced the following motions recommended by the Meetings Committee:

1. **MOTION: The Society will advance PESC-01 seed funding of \$5,200 (Attachment D).** Approve.
2. **MOTION: The Society approves the Computers in Power Electronics budget for 2000.** Approve.
3. **The AdCom reaffirms its approval of the budgets for INTELEC-2000, PESC-2000 and APEC-2000 as submitted at earlier AdCom meetings.** Approve.
4. **The Society approves PELS technical participation in a 2000 IEEE power electronics workshop in Jordan.** Approve.

Treasurer - Witulski introduced a final budget submission for 2000 showing revenues lower and expenses higher than in 1999. The biggest variable, he said, is the periodicals item with the 2000 page count set at 1,500 pages, up from 1,200 this year. Witulski explained that income and expenses from conferences are not included in IEEE financial reports until conference books are closed and necessary audits completed.

A major change in the PELS financial picture in 2000 is the unbundling of the Transactions which will have an effect on both income and expenses. The impact of the unbundling cannot be assessed until member dues begin to be received, he said. Krein and Habetler suggested that fewer members subscribing to the Transactions will result in a greater financial benefit to the Society.

Witulski reviewed key parts of the budget (Attachment E), noting the TAB-mandated 3 percent reduction in expenses from 1999, higher AdCom expense (\$42,000 to \$59,000) and a potential increase because of partial underwriting of some members attendance at AdCom meetings (financial coverage after the first \$700 of a member's expenses) and the uncertainties of book broker returns. Summarizing the budget, Witulski noted total income is expected to approach \$1.1 million with expenses \$993,000, resulting in a projected surplus of \$100,000. **MOTION: Witulski moved acceptance of the budget for 2000 as presented.** Patterson seconded and the motion was approved. Krein commented that the Society is in excellent financial

condition.

Long-Range Planning - Jahns said the Long-Range Planning Committee includes as members Hudgins, Krein, Witulski, Javier Uceda, Tsutoma Ogata, Jose Pomilio, Patterson and Franco Profumo. The committee met in June at PESC in Charleston for brainstorming sessions` discussing publications and structure of the Society. Particular emphasis was placed on electronic publishing as opposed to hardcopy products, restructuring of technical committees to build them around PESC technical tracks and smaller conferences and workshops to reach different parts of the world and niche technologies. Jahns said the committee encouraged steps when feasible and prudent to consolidate conferences and workshops to advance the needs of the profession and the society.

HIGHLIGHTED COMMITTEES

Awards - Riddleberger said Krein had covered the status of the Millennium Medallions awards and emphasized that all suggestions were considered by the nominating committee. Other topics:

1. A application form has been established for the new best chapter competition (Attachment F).
2. The October Newsletter will contain nomination forms for the William E. Newell, Richard M. Bass Outstanding Young Power Engineer and PELS Distinguished Service awards.

Publications - Franco Profumo said his committee is studying the feasibility of converting the Society newsletter to a magazine. Issues under review include:

1. Composition of the audience - more than just Society members?
2. Competitive factors.
3. Content of magazine.
4. Sources for content (authors, contributors).
5. Frequency of publication.
6. Sources and potential of revenue.
7. PELS investment and when will magazine become self sufficient?

Jahns suggested the committee contact Dayne Aldridge of IAS to track that Society's experiences. Jahns said IAS has hired the Darnell Group to expand advertising. Profumo said Bob White will contact Jeff Sheherd of Darnell.

Transactions - Dick Hoft submitted his final Transactions report (Attachment G) in preparation to turning over the editorship of the Transactions to Arthur Kelley. Hoft said new papers are being sent to Kelley while he processes those papers already in hand. Noting that the most challenging problem remains the timely publication of papers, Hoft said he and Kelley are debating whether Kelley will take over the backlog or keep it in Hoft's hands - a decision, he said, has been left to him. Hoft added that Kelley plans to expand the reviewer database to speed processing of papers.

Electronic Media - Kelley was reported to be concentrating on three areas:

1. Developing a reviewer database.
2. Maintaining the Society member database.
3. Establishing an electronic version of a paper review form.

Newsletter - A report from Gene Wester noted he has finished preparation of the October

newsletter.

Constitution and Bylaws Committee - Smedley said pending amendments - 1. Elimination of Society Secretary (Constitution) and 2. Division II Director election provision (Bylaws) had been approved after publication and request for comments - none was received in either case.

Should the AdCom switch to a Society-wide election process, the PELS Bylaws must be changed essentially to provide sufficient time - for submission of nominations, mailing of ballots and deadline for voting (Attachment H). Krein suggested - and Smedley concurred - that any revision of the Bylaws must await a decision on Society election procedures.

Power Packaging - A written report from Doug Hopkins noted an International Workshop on Integrated Power Packaging is being planned for July 14-15, 2000 in the Boston area (Attachment I). Hopkins said a committee is in organization and he is seeking a steering committee with representatives from three IEEE Societies - PELS, IAS and CPMT - and the Power Sources Manufacturers Association.

Computers in Power Electronics - Workshop Chair Jason Lai said he is working to expand attendance to close to 100 at the 7th Workshop on Computers in Power Electronics to be held July 16-18, 2000, in Blackburg, Virginia (Attachment J). Lai said he is receiving strong support in his organizational efforts from Steve Leeb, Chair of the Committee. Leeb's committee, he added, is reviewing papers for a planned special issue of the Transactions on Power Electronics.

Educational Activities Committee - Patterson outlined six areas of activities, plus the formation of a subcommittee to recommend PELS involvement with a U.S. Department of Energy Future Energy Challenge 2001 competition (see Key Issue section of minutes).

1. The Society has received more than \$9,000 in income to date from sales of a power electronics drives video - PELS invested \$10,000 in 1997 as a partner with IAS - and can be expected to receive final returns exceeding the investment.
2. IEEE has proposed reformatting the electronic drives video into both CD-ROM and web forms with the Society receiving a royalty lower than the 20 percent for the video. The plan, if it proceeds, means new life and new revenue for the program.
3. The committee is negotiating with Dan Mitchell for development of an rf/emi video.
4. Discussions are under way on sponsoring a video on intelligent power modules.
5. Educational Activities is proposing sponsorship of a small power electronics workshop outside of the U.S. every two years and to provide \$5,000 to support visiting speakers. The workshops will be aimed at international groups, not just PELS chapters, Patterson said. **ACTION: Patterson will prepare a formal workshop proposal for AdCom consideration at its February meeting.**
5. PELS has been asked to help sponsor a National Science Foundation workshop on modern power electronics curriculum at the University of Central Florida. The proposal requests the Society pay accommodations for 70 attendees and travel and accommodations for eight persons at a cost of \$8,000. Other sponsors would be NSF itself, the Center for Power Electronics and Systems and the University of Central Florida. Habetler responded that funding a workshop is not in the spirit of Society operations - that PELS seeks events that pay for themselves, that some level of registration fee be applied. The workshop, he

said, proposes funding not sponsorship. Habetler recommended the Society fund the attendance of one or two members but not a blanket coverage.

OTHER BUSINESS

None

NEXT MEETING

The AdCom will hold its next meeting on Sunday, February 6, at the Fairmont Hotel in New Orleans, on the opening day of the 2000 APEC conference. The Meetings Committee will meet at 8 a.m. with the AdCom convening from 10:45 a.m. until 5 p.m.

ADJOURNMENT

The meeting was adjourned at 2:35 p.m.

Submitted,

Robert Myers
PELS Administrator