ATTENDEES:

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
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<tr>
<td>Jeff Akers</td>
<td>Positronic Industries</td>
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<tr>
<td>Arnold Alderman</td>
<td>Anagenesis, Inc.</td>
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<td>Bodo Arlt</td>
<td>Power Systems Design Europe</td>
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<td>Dustin Becker</td>
<td>Marconi</td>
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<td>Walt Benecki</td>
<td>Walter T. Benecki, LLC</td>
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<td>Carl Blake</td>
<td>International Rectifier</td>
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<td>Ed Bloom</td>
<td>e/j Bloom associates Inc.</td>
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<td>Steven Carlsen</td>
<td>Raytheon</td>
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<td>Tim Cassidy</td>
<td>Ault Inc.</td>
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<td>Ada Cheng</td>
<td>International Rectifier</td>
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<td>Alexander Craig</td>
<td>Fairchild Semiconductor</td>
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<td>Jon Copley</td>
<td>IMS Research</td>
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<td>Lou DeBartelos</td>
<td>DeBartelos Associates</td>
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<td>Dermot Flynn</td>
<td>Excelsys Technologies Ltd.</td>
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<td>Larry Gilbert</td>
<td>The Powerhouse Inc.</td>
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<td>Paul Greenland</td>
<td>National Semiconductor</td>
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<td>Rich Hannon</td>
<td>Astec Power</td>
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<td>Gregory Harris</td>
<td>Ault Inc.</td>
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<td>Steve Homewood</td>
<td>Delta Energy Systems</td>
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<td>Doug Hopkins</td>
<td>SUNY at Buffalo</td>
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<td>Joe Horzepa</td>
<td>International Power Strategies</td>
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<tr>
<td>Judy Horzepa</td>
<td>PSMA Association Office</td>
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<tr>
<td>Mark Jacobs</td>
<td>Slater &amp; Matsil</td>
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<td>Yong Kang</td>
<td>CPSS</td>
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<td>Larry Kerenyi</td>
<td>Hampton Innovation, LLC</td>
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<td>Walter Knittel</td>
<td>APtronics AG</td>
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<td>Mark Kopitz</td>
<td>Magnetek, Inc</td>
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<td>Fred Lee</td>
<td>Virginia Tech</td>
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<tr>
<td>Kay Luo</td>
<td>Power Integrations</td>
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<td>Chip MacDonald</td>
<td>Winchester Electronics</td>
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<td>Mohan Mankikar</td>
<td>Micro-Tech Consultants</td>
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<td>Cristian Marin</td>
<td>Consultant</td>
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<tr>
<td>Doug McIlvoy</td>
<td>Power Electronic Strategies</td>
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<td>Marshall Miles</td>
<td>Bel Fuse, Inc.</td>
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<td>Bruce Miller</td>
<td>Dell Computer</td>
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<td>Bharat Modh</td>
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<td>David Morrison</td>
<td>Power Electronic Technology</td>
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<td>Gerry Moschopoulos</td>
<td>University Western Ontario</td>
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<td>Chuck Mullett</td>
<td>ON Semiconductor</td>
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<td>Gino Nanninga</td>
<td>Positronic Industries</td>
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<td>Brian Narveson</td>
<td>Texas Instruments</td>
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<td>Bill Nettelhorst</td>
<td>Electro Assemblies Corp.</td>
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<tr>
<td>Cian O’Mathuna</td>
<td>NMRC</td>
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<td>Fabio Orlandini</td>
<td>Real Electronics</td>
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<td>Vicky Panassian</td>
<td>Anagenesis, Inc.</td>
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<td>Kevin Parmenter</td>
<td>ON Semiconductor</td>
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<tr>
<td>Lou Pechi</td>
<td>Power-One, Inc.</td>
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1. WELCOME AND INTRODUCTIONS

Chuck Mullett, outgoing Chairman of the Board of Directors, opened the meeting at 8:00 a.m. and introduced the members of the PSMA Executive Committee who were elected at the January 2004 Board meeting. Chuck also asked each attendee to introduce themselves to the group.

2. APPROVAL OF MINUTES

A motion was made and unanimously approved to accept the minutes of the 2003 Annual Meeting.

3. ELECTION OF DIRECTORS

The terms of office for four of the existing Directors expired at the 2004 Annual Meeting. Chuck recognized the contributions of Scott Wilson, who is leaving the Board and expressed the appreciation of PSMA for his service on the Board and contributions to the Association. In addition, both Chuck and Arnold Alderman had each served two consecutive terms as Director and were not eligible for reelection.

A total of twelve names had been submitted for the four open positions on the Board, but five of the nominees declined to run. Lars Thorsell, whose first term as Director expired at the annual meeting, was eligible to serve another term and was on the list of eligible candidates that had been approved by the Nominating Committee. During the meeting, Dieter Goldschmidt from Power-One and Richard Hannon of Astec Power requested that their names be removed. Lou Pechi, Chairman of the Nominating Committee, asked the attendees for nominations from the floor. There were no additional candidates.

Each candidate had prepared a brief statement on their background and the reasons they would like to serve on the Board. At the meeting the candidates were asked to present their statements.

Chuck Mullett presided over the election and voting was by paper ballot, distributed to the official representative of each Regular Member Company. Representatives from two Regular Member companies, who were not able to attend, had sent in their votes by fax or e-mail.

The following were elected to the Board of Directors for the three-year term (2004-2007):

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<th>Name</th>
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<tr>
<td>Steven Carlsen</td>
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<tr>
<td>Tim Cassidy</td>
<td>Ault Inc.</td>
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<tr>
<td>Cian O'Mathuna</td>
<td>NMRC</td>
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<tr>
<td>Lars Thorsell</td>
<td>Powerbrand Consulting</td>
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Chuck Mullett expressed his appreciation to the individuals who were not elected and urged them to maintain their interest and support of PSMA by participating in committees and other activities of the Association.

4. PRESENTATIONS

At the Sponsors Dinner on Sunday evening, Doug McIlvoy, Industry-Education Committee Co-Chair presented the annual PSMA Education Award, together with a check for $500 to Edward H. Brzezowski, P.E. of Facility Energy Services, Inc. for his development of EnergyLab. The award recognizes the company or institution that has made a significant effort to enhance awareness of power electronics to students in kindergarten through undergraduate college and is intended to encourage companies or institutions to sponsor programs that highlight the contributions, challenges and opportunities available in the field of power electronics. EnergyLab is an interactive educational system for use by students in middle and high school and allows them to have “hands-on” experience as they learn about Science, Math, Engineering and Technology using the existing architectural, mechanical, electrical, plumbing and information technology operations in their school building.

Also at the dinner, Arnold Alderman presented a lifetime achievement award to George Westrom for his founding and promotion of the Future Scientists and Engineers of America (FSEA). FSEA is a national non-profit organization which provides the structure, project material, documentation and workshop training necessary to establish after school technology clubs in K-12 schools. The FSEA program focuses on technology and can easily and readily be implemented in every school.

5. OUTGOING CHAIRMAN’S REPORT

Chuck Mullett, the outgoing Chairman, thanked the membership and the Board for their support during his two year term of office. He then reviewed some of the highlights since the last Annual Meeting including:

- Membership growth to 135 companies with 40 Regular and 32 Associate member companies,
- Issued the fourth triennial report on the Power Technology Roadmap from the workshop held just prior to APEC 2003,
- A modest increase in sales of our publications to increase revenues,
- A very active and productive Marketing Committee
- Increased cross-membership and interaction with NEDA, PCMIG and CPSS added to our ongoing relationships with EPSMA, The Transformer Association and CPES.
- Support for APEC by getting more of the user community involved and members coordinating and presenting a number of the seminars for APEC 2004,
- The PSMA committees have been very active this past year including the Membership, Marketing, Manufacturing, Magnetics, BMPS, Energy, and Industry-Education. Most of these committees have held monthly meetings for the past year.

In closing, Chuck urged the attendees to take advantage of their company membership in PSMA by getting personally involved with one or more of the committees and to share the opportunities offered by PSMA membership with more of the people within their company. He also suggested that they should assure that their company was using the PSMA web site for their news releases and to be sure that their company information was current on the site.

Chuck then welcomed the incoming Chairman, Arnold Alderman and turned over the PSMA gavel to him for his term of office 2004-2006.

A copy of Chuck’s charts is available from the Association Office.
6. CHAIRMAN’S REPORT

Before presenting his report, Arnold Alderman invited Chuck Mullett and his wife Vivian to come to the podium where he presented them with a special plaque in recognition and appreciation of Chuck’s term of office and their contributions to the Association.

Arnold Alderman briefly reviewed the mission and goals of PSMA before discussing the objectives for the coming year and his expectations from the PSMA committees. He reaffirmed the support of the technical committees by the Executive Committee of the Board as well as by all of the Directors.

The activities planned for the next year include the following:
- Supporting APEC – including the OEM initiative, seminar tracks and mining technical papers,
- Publications – assure a steady stream of reports by asking the committees to develop an annual or biannual report on the trends in their specific areas of focus,
- Seminars – perhaps on such topics as “Greening of power supplies”, China as a resource for manufacturing and components, Integrated packaging
- Website – continue the efforts to make it more of an industry resource
- Expand PSMA awareness – more depth in individual company participation, regular press releases on activities

Arnold concluded his report with a discussion on some longer range objectives such as increasing the number of OEM companies in the membership and contributing to industry standards.

A copy of Arnold’s charts is available from the Association Office.

7. FINANCIAL REPORT

Steve Homewood, PSMA Treasurer, reviewed the overall financial performance of the organization for the past year and, in order to put the performance in context, also provided an overview for the past three years. Steve also provided a rolling eight-quarter forecast using assumptions believed to be conservative.

Recent business conditions in the industry had adversely impacted the recent financial performance with the level of membership dues, decline in publication sales and realized APEC surplus revenue. It was assumed in the forecast that APEC 2004 will deliver a relatively high surplus as well as providing a modest surplus from APEC 2005. With these assumptions, the resultant forecast shows continued financial health for the Association. But Steve emphasized that without a healthy surplus from APEC, the financial results would have been difficult. Steve recommended the Association work to increase revenues from membership and other sources to support the Association - without a reliance on APEC revenues. Spending on special studies should only be made based on realized surpluses from APEC.

A copy of the charts used by Steve is available from the Association Office.

8. COMMITTEE REPORTS

BMPS Initiative
Lars Thorsell, chair of the BMPS committee, reviewed the background on the committee which was first proposed during APEC 2002. Teleconferences were held on about a monthly interval the past year which led to the successful workshop held the Saturday before APEC 2004. At the workshop, the participants identified 8 to 10 critical parameters which will be the basis for further work. A report on the workshop will be prepared and made available to the membership.

During 2003, a Memorandum of Understanding was signed with the High Density Packaging User Group (HDPUG) and EPSMA to establish cooperation between the three organizations on lead-free issues and for interaction on critical BMPS issues. These efforts will continue during 2004 and interested individuals were invited to participate in the committee meeting later in the week.

A copy of the charts used by Lars is available from the Association Office.
Capacitor Committee
John Prymak reported that his committee was not active this past year, but that he intends to revitalize the committee and support the work on integrated packaging as that project develops.

Energy Committee
Dusty Becker, Co-Chair of the committee, reported that the group has held monthly meeting this past year and have provided assistance and feedback to EPRI and EPA on the Efficient Design Competition that will be announced during the Plenary Session at APEC 2004.

The committee will meet later in the week to develop an agenda and program for the coming year. All interested individuals were invited to attend the committee meeting.

Industry-Education Committee
Doug McIlvoy, Co-Chair of the committee reported that the committee presented two awards at the Sponsor’s Dinner the previous evening. Edward H. Brzezowski, P.E. of Facility Energy Services, Inc was recognized for his EnergyLab project. There was also a Lifetime Achievement award given to George Weston in recognition of his founding of the Future Scientists and Engineers of America (FSEA). The committee is looking for more members who are interested in the work of the committee which is to foster awareness of power electronics and to encourage young people to consider a career in the field.

The committee would be meeting immediately after the Board of Directors meeting and interested individuals were invited to attend.

Magnetics Committee
Steven Carlsen, Committee Chair, reported that the committee has been quite active this past year. The committee has updated the Magnetics Corner on the web site and plans to post articles of interest to the magnetics community on the site – the first article posted is a paper by Ed Bloom. The committee has prepared a Magnetics Design Checklist for specifying magnetic components that should be helpful to people responsible for designing power supplies. The checklist is available in the Magnetics Corner of the PSMA web site and copies are also available from the Association Office.

A committee meeting is scheduled later in the week and interested individuals are invited to attend and participate in the activities of the group.

A copy of Steven’s charts is available from the Association Office.

Membership Committee
Ed Sidor, Chairman of the Membership Committee, reported that the Committee has been very active this past year. Welcoming calls have been made to all new members and calls have been made to companies that have been slow in paying their membership dues. In addition, the committee has sent letters to over 400 individuals that have attended various industry meetings to provide them with background on PSMA and asking them to consider company membership in the Association.

The committee will hold a meeting during APEC 2004 and interested individuals are invited to attend and consider participating in the work of the committee.

Marketing Committee
Kevin Parmenter, Co-Chair of the committee, reviewed some highlights of committee activities this past year. The focus for the year has been aimed at promoting APEC, increasing the number of quality companies that are PSMA members and increasing the value of membership. The committee has also worked on improving the appearance and content of the web site. Another initiative of the committee has been to develop cross-membership relationships with key organizations in the industry such as NEDA, PCMIG and SAE.

Lou Pechi, Co-Chair, discussed the results of a membership survey to identify and help prioritize the activities of the Association for the next year.

A copy of the survey results is available from the Association Office.
Manufacturing- Quality Committee
Chris Stratus, Committee chair, was not able to remain for the entire meeting because of a commitment to participate in the seminar track the committee organized. However, Arnold Alderman reported the committee has been very active for most of the year and has organized seminars on Lead-Free manufacturing, alternative manufacturing issues including using China as a source for contract manufacturing, and manufacturing quality issues.

The committee will hold a meeting during APEC and interested individuals are invited to learn more about the work.

Power Packaging
Doug Hopkins, Committee Chair, reported that the Committee is a joint one with PELS and PEPTC and is currently developing the focus for the next year.

The Committee will meet later in the week and all are invited to attend to discuss the initiatives for the next year.

Semiconductors
Alex Craig, Chairman, reported that his committee had not been very active this past year but he plans to reactivate the committee for the coming year. He presented a list of options that the committee will consider at their meeting later this week and invited interested individuals to attend.

A copy of Alex’s charts is available from the Association Office.

9. REPORT ON APEC 2003 AND APEC 2004

Jim Kokernak, General Chairman for APEC 2004, reported that as of today 717 people had registered for the technical sessions and 402 people registered for the seminars. This should be close to a record for APEC attendance. This year a record number of Digests were submitted and, before final acceptance, the authors of selected papers were required to send in their registration to verify their intention to attend and present the paper. This action was taken because of visa issues from off-shore authors. Because of cost issues, this year’s registration fees only included a CD and not the hard copy (which are available for purchase). The number of Seminars offered this APEC increased from 15 to 21 and the committee added a Dialogue Session to accommodate more of the papers. Jim gave a special recognition and appreciation to the efforts and contributions from Bob White in making the conference more attractive to OEM attendees.

Jason Lai is the Technical Chair for APEC 2004 and will be the General Chair for APEC 2005. Jason reported that APEC 2005 will be held at the Hilton Hotel in downtown Austin Texas March 6 – 10. The conference will have room for 150 booths in the exhibition hall and the deadline for submission of Digests will be August 9, 2005. Van Niemela is the Technical Chair for the conference and the conference committee will continue the work to increase the number of submissions from industry.

10. INVITED GUESTS

China Power Supply Association
Professor Mark Dehong Xu, Vice Chair of the China Power Supply Society (CPSS) reviewed the background and activities of the organization. The organization was founded in 1983 and is both an academic and a business society with over 500 members. The organization connects with 3000 enterprises and promotes the exchange and cooperation in technical, management and marketing techniques.

The activities of the CPSS include:
- Provides a series of business services and consulting in such areas as R&D, Quality Control, Technical Education,
- Internet web site www.wb-power.com
- Edits and publishes monographs, handbooks and magazines on power supply technology
- Holds a national conference every two years
- Organized annual Chinese International Power Supply Exhibition in a number of cities, nationwide.
Professor Dehong Xu also presented some statistics on the China market:
- The China market for Electronics and IT products increased from $170B in 2002 to $288B (est.) in 2004,
- Sales of PCs were 30M units in 2003,
- UPS sales will approach $300M in 2004,
- There are more than 3000 power supply companies in the country together with an increasing number of major global companies who have established manufacturing in China including Emerson, Delta, Artesyn, and APC.

CPSS has a cross membership with PSMA and the organizations are looking for areas for future cooperation between the organizations. Earlier this year Arnold Alderman made a presentation at the national technical conference in China on PSMA and the conference provided a complimentary booth to PSMA in the exhibit area.

A copy of the charts used in Professor Dehong Xu’s presentation is available from the Association Office.

**National Electronics Distributors Organization (NEDA)**
David Herring, president of NEDA, reviewed the background and goals of the organization. NEDA is a not-for-profit trade association representing distributors of electronic components and their manufacturer-suppliers. The organization is dedicated to the enhancement of the distributor-manufacturer relationship. NEDA represents companies involved in the distribution of electronic components and parts, computer and computer peripheral components and test, measurement and control equipment and their manufacturer-suppliers.

NEDA provides industry data and statistics, conducts research, develops industry guidelines and standards, provides advocacy, and sponsor a number of conferences and roundtables. Some recent issues include date codes, standards for returns, lead free products, value of authorized distribution, grey market and counterfeit components.

NEDA has a cross membership with PSMA and we are looking for areas for cooperation. An area of current interest is the issue of lead-free components. David also offered to provide a summary of the NEDA industry data and statistics for posting on the PSMA web site.

A copy of the charts used in David Herring’s presentation is available from the Association Office.

**PCI Industrial Computer Manufacturers Group (PICMG)**
Gino Nanninga represented PICMG and presented some background and activities of the organization. The group was founded in 1994 as a consortium of companies to collaboratively develop open specifications for high performance telecommunications and industrial computing applications. Their purpose is to offer equipment vendors common specifications, thereby increasing availability and reducing costs and time to market. The group has over 400 members in North America which include top suppliers of computing platforms. The group operates worldwide in association with PICMG Europe and PICMG Japan.

Some of the recent specifications provided by PICMG include:
- PCI-ISA Passive Backplane standard
- Compact PCI
- Advanced TCA

PICMG has cross-membership with PSMA and Gino Nanninga is leading an Advisory Board to explore areas of collaboration with PSMA. Gino is also the representative from Positronic Industries, a PSMA member company.

A copy of the charts used in Gino Nanninga's presentation is available from the Association Office.
European Power Supply Manufacturers Association (EPSMA)

Lars Thorsell is a Director of PSMA and also associated with the EPSMA. Lars has been providing an interface between the two organizations and fostering cooperation on issues of mutual interest.

EPSMA was established in 1995 and with 25 full member companies is the voice of the European power supply community. The organization is registered as a European Economic Interest Group and closely monitors activities of the European standards organizations and provides support and guidance services to its members.

Lars Thorsell presented an overview of the EPSMA and discussed some recent activities of the organization:

- Monitor and contribute to the formation of European standards which impact the power supply industry including:
  - CENLELEC cooperation agreement;
  - Technical committee projects
  - Building strategic links with other recognized industry bodies such as HDPUG.
  - Relationship with PCIM organizations
- Provide Student Programs to promote careers in the power electronics industry,
- Publish technical guides, including:
  - EN61000-3-2 (PFC and harmonic emissions)
  - CE Marking to the EMC and Low Voltage Directives
  - Status of Lead-free legislation;
- Issue technical reports, including:
  - Board mounted dc-dc safety requirements
  - MTBF Calculation Methods

A copy of Lars’s charts is available from the Association Office.

The Transformer Association

Bill Nettelhorst president of Electro Assemblies represented the Transformer Association and reviewed the status of the industry and activities of the Association. The Transformer Association is a trade organization of North American manufacturers of transformer and other power supply manufacturers and is positioned as the voice of the industry. Some of the activities of the organization include:

- Interfaces with safety and regulatory agencies such as UL, CSA and IEC
- Monitor and report on industry data and trends
- Support and strengthen member company business prospects.
- They have been lobbying to reduce inspections and the problems with counterfeiting (especially with product from China).

The Transformer Association has cross membership with PSMA. Bill invited interested PSMA members to attend their annual conferences and to participate in their industry meeting with UL. In addition, he requested PSMA members to provide feedback to The Transformer Association on their expectations from the transformer industry.

ADJOIN

The 2004 Annual Meeting of the PSMA was adjoined at 11:45 a.m. All attendees were invited to remain and attend the February meeting of the Board of Directors, which immediately followed.