

Center for Power Systems Studies
Semiannual Meeting
MINUTES
Rapid City, SD - April 29, 2004

1. **Call to Order:** Steve Hietpas called the meeting to order at approximately 8:30 AM
2. **Recording Secretary:** John Weber
3. **Roll Call:**
Member Companies:
 - Stuart Wevik – Black Hills Power, Inc.
 - Ted Massey – Black Hills Power, Inc.
 - Vance Crocker – Black Hills Power, Inc.
 - Jim Edwards – East River Electric
 - John Weber – Missouri River Energy Services
 - Lloyd Linke – Western Area Power Administration
 - Greg Vaselaar – Western Area Power AdministrationAssociate Member Companies:
 - Mike Bowers – Rushmore Electric Power Coop.
 - Bob Thompson – West Plains EngineeringSDSU
 - Steve Hietpas
 - Dennis Helder
4. **Approve Agenda:** Lloyd Linke moved and Jim Edwards seconded to accept the agenda as submitted. Motion carried.
5. **Approve Minutes of Sept. 17th, 2003 Annual Meeting:**
Greg Vaselaar moved and Jim Edwards seconded to accept minutes. Motion carried.
6. **Coordinator's:**
 - **Semiannual Report:** See report included in packet. Some of the highlights were:
 - * Dr. Hietpas has advised graduate students on design and thesis papers along with other research activities involving; DC 4-quadrant Motor drive, AC-AC converter, and design of a 3-hp V/Hz 3-phase Induction Motor Drive using a dSPACE rapid prototype system.
 - * Dr. Ropp began his work on the NSF-CAREER award to develop two photovoltaic projects in the next five years and was invited to be a reviewer for NSF renewable energy proposals.
 - * Dr. Ropp will be installing another PV array in Yellowstone National Park this summer. The array is a 7.6 kW unit paid for by a UNPEPP grant.
 - * For the academic year 2003-04, 24 CPSS scholarships have been awarded. .
 - * Since spring of 2000, 25 of 113 or 22% of the graduates have obtained or are seeking employment in the power industry.
 - * Three out of seven 2003-04 power graduates are employed or have positions lined up in the power industry.
 - **Thank You Letters:**
 - * Thank You Letters from 15 students who received scholarships were distributed.
 - * Dr. Hietpas emphasized how valuable it is to be able to offer scholarships to freshmen and sophomores, to both attract and retain students interested in power systems studies.
 - **CPSS Student Report:**
 - * Due to the students not being able to attend the mtg., Dr. Hietpas gave a brief summary of the project and distributed a preliminary report. The project is a continuation of the previous year's project for a 250 W Bi-directional AC-DC converter. The converter is intended to work with the AC power grid, while the load and local generation consists of

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DC components. The idea is that one can have a system that imports power from the AC grid when DC generation (PV array, fuel cell, etc) is less than the DC load, and export power when the generation is greater than load.

- * The previous group's attempt nearly had the AC to DC portion of the converter working. This year's group completed the AC to DC, which functions well up to around 150W. The biggest challenge of the design is the power factor correction. A final report will be mailed to the CPSS members once it is completed.

7. ***New Business:***

- ***CPSS Student Project for 2004/2005:***

Lloyd Linke moved and Jim Edwards seconded to accept the Bi-directional AC-DC converter for the 2004-2005 Student Project.

Discussion:

- * The project will be a continuation of the project with the goal of getting the AC to DC converter functional at the 250W level, and to complete the DC to AC converter.
- * The budget has been reduced from \$3000 to \$2000 for student pay due to the historical trend that students do not elect to receive the available pay for extra time dedicated to the project due to other time constraints.

Motion carried.

- ***2004/2005 Proposed Budget:***

No formal motion was made, as the vote for approving the proposed budget is being conducted via email response.

Discussion:

- * The membership dues were proposed to be increased from \$2500 to \$2800 for full membership and increased from \$250 to \$300 for associate members. The main reason for the change is that Northwestern is no longer able to participate due to the bankruptcy filing. The last increase in dues was initiated five years ago when the dues were stepped up over a period of time from \$2000 to \$2500.
- * The student funding balance for undergraduates and graduates has been adjusted due to graduates typically using more of the funding available.
- * There was a suggestion to solicit Florida Light and Power to see if they would be interested in membership in CPSS. It was suggested that since they are not necessarily a local utility, they could be offered an associate membership vs. a full membership. Energy Management Systems, who operate and maintain wind farms on the Buffalo Ridge and Montana Dakota Utilities were also suggested as possible members. All present agreed that this would be a good idea to offer new membership.
- * The estimated end of year balance ranged from \$9000 to \$12000, depending on certain projects and if all of the outstanding dues would be paid.

A straw vote was taken by those in attendance. All present were in favor of the suggested increase in member and associate member dues increase. Hietpas will contact member companies not present seeking their position on the proposed increase.

- ***2004/2005 Fall Conference:***

- * Several presentations have already been lined up for the conference. Some of the topics include; renewable energy projects and issues, the Rapid City DC-Tie, the Lake Yankton SVC, and others (See distributed sheet for the specific topics).
- * Professors are proposing to require student attendance, both to increase student involvement and awareness of the power industry.
- * The Conference will be held at the Brookings Inn, due to the SDSU Student Union being under construction.

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8. *Date for fall 2004 Annual Meeting and Regional Power Conference*

The Conference will be held on October 19th and the Annual business meeting will be held on Oct. 20th, both at the Brookings Inn.

9. *Appreciation:* Thank you to Black Hills Power for hosting meeting.

10. *Adjourn:* The meeting adjourned at approximately 9:45 AM

Respectfully submitted,

John Weber, Missouri River Energy Services
Recording Secretary
April 29th, 2004
Typed and submitted May 5, 2004