

**APPROVED MINUTES OF PSNES QUARTERLY MEETING (WASHINGTON DC & Telecon)
NOVEMBER 16, 2009**

17:00 Welcome and Member Roll Call – Pat Loftus called the meeting to order and confirmed a quorum to conduct business. Dial-In number provided by Jim Tusar. (Thank you!)

Board Participants:

Pat Loftus – President *
Rick Etling – VP/President Elect (via telecon)
Dr. Kenan Ünlü – RSEC Director/Faculty Member *

PSNES Directors:

Doug Wood *
Jim Tusar *
Jim Stavely *
Ed Klevans *
Jeff Jeffries *
Mark Lloyd (via telecon)
Richard Martin (via telecon)

PSNES Members:

Eileen Supko *
Ron Brown (via telecon)

Other:

Don Lenze – College of Engineering *

Board Proxy Votes (designated via e-mail to PSNES President):

Dick Gill
Bill Naughton
Len Pasquini
Jack Brenizer (report provided via advance telecon & slide pack)

* **Participation in Washington, DC**

Old Business

- **Meeting Minutes Approval** - The October 1, 2009 Meeting Minutes were approved as written. (See Attachment 1)

PSNES Financial Report

- PSNES Undergraduate Student Awards
 - Total Alumni contributions designated for PSNES Student Awards: \$6900
 - Board approved expenditures for two (2) 2008-2009 Academic Year Awards: \$2000
 - Board approved expenditures for 2009-2010 Awards with Selection in October 2009
 - Balance (after awards expenditure): \$2900
 - Additional funds will be needed to sustain the awards beyond the 2010-2011 Academic Year
 - Individual alumni can make contributions to directly support the Student Awards. To ensure that gifts go to the intended organization, place "Nuclear Engineering - PSNES" on the check for it to end up in the PSNES general gift fund. For a specific gift to the Awards Initiative, place "Nuclear Engineering – PSNES Service and Leadership Awards" on the check.
- PSNES General Account
 - Total Alumni contributions balance: \$3694
 - Board approved expenditures for 50th Anniversary Banner: \$324
 - Balance (after Banner invoice paid): \$3370
- Alumni Contributions to support other Initiatives should be sent to the Nuclear Engineering Program with a brief note indicating the intended purpose. The Program is continuing to work with the University to make it possible to designate funds contributed in other ways to reach the PSNES accounts.

Nuclear Engineering 50th Anniversary Celebration Update and PSNES Support - Jack Brenizer/Volunteers
(Doug Wood, Jeff Jeffries, Jim Tusar, Pat Loftus, Rick Etling)

Pat received a briefing from Jack and plans remain as defined:

- Celebration of 50 Years of Nuclear Engineering at Penn State will take place through a series of events throughout the 2009-2010 academic year.
- The celebration commenced September 3rd with the first speaker in the L. E. Hochreiter MNE Distinguished Lecture Series, Dr. Aris Candris, President and CEO Westinghouse Electric Co. It was estimated that approximately 300 people attended this Lecture held at the HUB.
- PSNES completed the initiative to create a re-useable, easily transportable 50th Anniversary Banner (including banner stand) which was on display at the PSNES reception in Washington DC.
- Nuclear Energy Symposium 2009 was held at The Penn Stater Hotel and Conference Center on October 15-16, 2009. The Nuclear Power Advisory Board assisted the Program under the lead of Dr. Arthur Motta. Tom Ridge was the plenary speaker. A poster session at the end of the day on October 15th highlighted research done at Penn State that is related to nuclear power.
- The annual Nuclear Engineering Program/PSNES Reception was held on November 16, 2009 from 6:30 PM – 8:30 PM in the Palladian Ballroom at the Omni Shoreham Hotel in Washington DC (site of the ANS Winter Meeting).
 - Posters displayed at Nuclear Energy Symposium 2009 as well as additional posters and information were available to alumni and friends of the NucE Program.
- After further consideration following the October PSNES Meeting, the “50th Anniversary Fellow concept has been withdrawn from consideration at the request of the Program. The Program recommended that PSNES consider an Ambassador Concept instead (see Alumni Outreach section for further discussion).
- The 2nd speaker in the L. E. Hochreiter MNE Distinguished Lecture Series will be Mr. Jacques Besnainou, President of AREVA. This lecture is scheduled for January 21, 2010 at Penn State.
- The MNE Department, with support from PSNES, will host the Nuclear Engineering Alumni & Friends Dinner @ the Nittany Lion Inn on April 26, 2010. This will be the last major event in the year-long celebration. This event will include a dinner and an after dinner speaker. Action: Traci Shimmel to determine if blocks of rooms can be reserved for this event given that the President's Campaign on-campus activities are currently scheduled for Blue-White Weekend which ends on April 25, 2010.
- The PSNES 2010 Annual Meeting will be held on Monday, April 26, 2010 at Penn State. Dial-In access will also be provided.

Alumni Outreach

- PSNES Members, all Nuclear Engineering Alumni and Friends of the Nuclear Engineering Program are requested to share photos, including pictures of PSU buildings, faculty and students working together, etc, plus any anecdotal stories about their nuclear engineering experience at PSU including insights on the faculty. **Action: PSNES will work with the Program to broadly communicate this request. The preferred method of sharing this information is via electronic means. (Digitized versions of hardcopy materials are preferred.) Check the MNE website for details.**
- Don Lenze discussed opportunities to engage Nuclear Engineering alumni who have not previously been engaged. One concept discussed was to have Nuclear Engineering alumni class ambassadors for a five or ten-year time period. Alumni could volunteer for a short-term involvement in this role. Another concept was to encourage alumni to submit a bio and picture for the PSNES website. The 50-year celebration is an engagement opportunity and we should use it to encourage additional alumni to become PSNES Members as well as to indicate interest to participate in new initiatives including the future student mentoring program. Don committed to develop a draft letter that ambassadors or points of contacts within companies with a large number of NucE alumni could distribute. **Action: Don Lenze to develop a draft letter for ambassadors or other points of contact to distribute to alumni. The Board will review and comment on the draft.**

PSNES 2009-2010 Undergraduate Student Awards - Update from the Awards Committee (Pat Loftus, Jim Tusar, Ed Klevans, and Jeff Jeffries)

- Four (4) nominations were received for the Leadership and Service Award. The overall quality of the nominations was a step above last year. Recent modifications to the forms by the Committee helped to get the nominations focused on the specific leadership and service attributes that the committee desired.
- Jim Tusar developed a matrix scorecard to evaluate each candidate. This was a helpful tool that should be used going forward.
- The winner of the PSNES 2009-2010 Undergraduate Student Service and Leadership Award was Emily Stumbris. The other nominees were Rachael Sakurai, Zachary Kosslow, and Zacchary Van Horn.
- The winner of the PSNES 2009-2010 Undergraduate Student Academic Award was Christopher Joe Ulmer. This award is presented to the student with the highest GPA.
- The two awardees received monetary recognition (\$1000/award) made possible through generous alumni gifts. Formal Award recognition will take place at the February 15, 2010 MNE Senior Recognition Banquet.
- The Committee felt that critique/lessons learned session was not necessary.
- Congratulations cards for the award winners and other nominees were signed by the PSNES Officers and Board of Directors.
- Pat congratulated the Undergraduate Student Awards Committee for a job well done.

Potential New Initiative – PSU Nuclear Engineering Living Memorial Proposal

Rich Martin provided the following overview on the potential PSU Nuclear Engineering Living Memorial Proposal:

- As for the 50th anniversary (online) display at the department, here are budget related data points:

Expenses:

1. Display monitor: LG 37" HG37 \$545
2. Display Mount, wall: \$49.00
3. Display Mount, floor stand: \$840.00 (optional)
4. DVD Player (stand alone): Sony DVP-SR200P: \$39.95
5. Misc Power Strip/Surge Protectors, cables: \$100.00
6. Blank DVD (sleeve): \$15.00
7. Duplication for resale to PSNES members/Alumni (\$4/DVD copy)

Estimated Expenses: \$748.95 (not including optional stand and duplication)

Donations:

1. Time for scripting and resource gathering: 80 - 120 hours
2. Video Shooting: 16 - 24 hours
3. PSU College of Arts, TV Production time/editing: 20 hours
4. Video Shooting: 16 - 24 hours

A discussion occurred on the potential of convincing the PSU Communications Department / School of TV Production to take on this project. The overall cost is estimated to be less than \$1000. The overall feedback was that it is a good initiative and can be used by the Department in several forums including a recruiting tool.

Action: Rich to discuss with Jack and establish a contact in the Department for follow-up.

Nuclear Engineering Fact Sheets (Rich Martin, Jim Stover, Mark Lloyd, Joe Sholtis, Pat Loftus)

- **Action: Rich and Mark to send the draft Nuclear Engineering Fact Sheet and individual/company contact information to the Board for final action.**

Nuclear Engineering Student Mentoring Program and ANGEL Pilot

ANGEL could be used as a communication vehicle for the mentoring program and then the individual mentor-mentee relationship would be managed per the agreement between the two parties. The program would include both graduate and undergraduate students. Mentors would be allowed to choose who they would prefer to mentor. Pat Loftus, Doug Wood, Jim Tusar and Mark Lloyd indicated that they were willing to mentor either graduate or undergraduate students.

- Everyone on the Board signed up with ANGEL. Traci Shimmel will provide Board Members with access instructions soon (now complete). **Action: Board Members to go to the ANGEL site and add picture and bio and let others know if successful and if there were any issues.**
- A couple students requested that a resume review be performed. Jim Stavely and Mark Lloyd volunteered to perform the reviews. A Word version of the resumes was requested so that the resumes could be edited during the review cycle. **Action: Jim Stavely and Mark Lloyd to perform the resume reviews.**

New Business

• RSEC News

- The RSEC includes the following facilities: 1) Breazeale Nuclear Reactor, Gamma Irradiation Facilities, Hot Cells, Radiation Detection and Measurement Facilities, Neutron Beam Lab, Radio- Nuclear Application Lab, Angular Correlation Lab, Low-Pressure Integrated Test Facility and support Facilities.
- Dr. Ünlü provided an update. To summarize:
 - 1) We are working very closely with DOE- NNSA to voluntarily improve safety and security at the RSEC. Some security components of the project are complete. We will also have a new fence, new kiosk and new gate at the facility. Construction of the fence started recently and will be completed by March 2010. Overall cost of these improvements is approximately \$2M. A majority of the funds are being provided by DOE-NNSA.
 - 2) Our License renewal was in the final stages of NRC approval when we had the meeting. As of November 20, 2009, we have the new license for the next 20 years. An article appeared in the WNN related to this topic.
 - 3) We received \$250K from DOE Nuclear Engineering University Program (NEUP) for infrastructure improvement at the RSEC.
 - 4) We also received \$90K from the NRC for curriculum development for radiochemistry education. The education and curriculum grant will focus on a radiochemistry education program at Penn State. Part of this effort includes establishment of a new course, Laboratory Experiments in Applied Nuclear and Radiochemistry, to provide hands-on experience for students. The course will improve general nuclear education and provide expertise in safe, secure and environmentally sound handling of radioactive materials.
 - 5) We applied for a NIST Construction Grant for expansion of the RSEC facilities. The total grant application is for \$6.5M. The State of Pennsylvania provided a \$1.5M match. The result of this application will be announced in February 2010.

- **Department, Program News (On behalf of the Program Chair, Pat extracted key information from a state of the MNE Department/Program presentation for discussion with a more complete summary included in these minutes)**
 - Conclusions:
 - Good time for PSU's NE Program.
 - New faculty hires in NucE will be important.
 - NucE well positioned to continue to play a major role in national resurgence of nuclear power.
 - NucE has strong relationships with industry and key government labs and agencies. NucE is conducting research in key areas of interest.
 - Good collaboration with other universities.
 - MNE awarded a high number of degrees: 35 BS NucE and 14 Concurrent Major, 11 NucE MS, 20 NucE Masters Engineering, 4 NucE PhDs.
 - PSU was successful in being awarded a Faculty Development Grant from the US NRC.
 - \$400K funding for the PSU Nuclear Engineering Education Fellowship Program sponsored by the US NRC was received which included two \$50K graduate fellowships for a 4-year period.
 - Toshiba-Westinghouse awarded PSU MNE a \$2M gift to be spent over 10 years. Among the applications are alterations to NucE 431 (NucE Capstone Design Course), creation of Toshiba-Westinghouse Undergraduate and Graduate Research Fellows programs, and a PSU-Westinghouse day.
 - PSU NucE Goals:
 - Turn out the best nuclear engineering students in the country.
 - Have the top ranked BS NE program in the U. S.
 - Have the top ranked Graduate NE program in the U. S.
 - Be the first place recruiters visit.
 - Be the first place people turn to for research projects.
 - Involve our Alumni.
 - PSU MNE Fall 2009 Enrollment – NucE: ~ 164 Undergraduate and 50-70+ graduate; ME: ~ 662 Undergraduate and 226 graduates.
 - NucE Fall 2009 Enrollment: ~ 164 juniors and seniors in BS, 26 MS, 24 PhD and 70 in MEng (distance learning). Approximately 35% of majors chose concurrent degrees. Undergraduate enrollment increased at steady 12% rate from 2000 to 2005 but is now growing again. NucE is attracting the very best (academics) students in the College of Engineering.
 - NucE Graduate Program: Granted an average of 14 graduate degrees per year (~ 9 MS and 4.6 PhDs). Active research programs in both nuclear power and nuclear science. Good mix of industry and federal funding with current projects sponsored by DOE, NRC and Naval Reactors.
 - NucE Distance Education – Currently offered as Masters of Nuclear Engineering (MEng). The program started in the Summer 2002 and now enrolls over 135 students with approximately 70 degree status. Courses are taught to Westinghouse, Bettis, KAPL and others. Visit the website for additional info: <http://www.engr.psu.edu/cde/nuce/index.html>
 - Funding – ME and NE programs are among the largest in the U. S. Together MNE conducted ~ \$30M in research last year vs. a College of Engineering total of \$105M and a PSU total of approximately \$717M. NE and ME ~ \$600K/faculty member.
 - Research Activities – Historically the majority of the research has been focused on Nuclear Power Engineering. In the last few years, research has begun on HTGRs and FBRs as part of the Gen IV and GNEP initiatives. Four new areas are receiving strong funding nationally: nuclear fuels, radiation detection and measurement, materials science and radiochemistry.
 - Impact of Current Trends on PSU's NucE Program:
 - Undergraduate: 1) Enrollment continuing to grow, 2) GPAs are up+, 3) stronger students, and 4) ~ 100% placement – multiple job offers or grad school.
 - Graduate: 1) Increased number of US students, 2) Equal mix between PhD and Masters, 3) Distance Learning (MEng) enrollments increasing, 4) graduate stipends are growing nationally.
 - Research funding grew from 2000-2004, steady in 2005-2007, now is slowing rising.
 - DOE NE restructuring has changed their programs.

- **Recognition Initiatives** – As previously reported under Undergraduate Student Awards, NucE 50th Anniversary, and PSU Nuclear Engineering Living Memorial

2009-2010 PSNES Priorities and Focus Items:

On behalf of the Program Chair, Pat summarized four proposed focus areas. Priorities for 2010 were discussed and consensus was achieved on the following four priorities which aligned with the Program needs:

- Continue PSNES Undergraduate Student Awards for the 2010-2011 academic year. These awards are made possible by generous alumni gifts. Note: Sustainability beyond the 2010-2011 academic year is contingent upon new gifts from alumni.
- Strengthen Alumni Outreach activities to enable reconnection & participation.
- 50th anniversary celebration support – Special attention to share stories, photos and help with the “history of the program (Jan-Feb 2010).
- Student Mentoring Program implementation including ANGEL application.

The Board agreed to consider additional initiatives throughout the year provided that they can be accomplished without loss of focus on the above priorities.

Upcoming Events & Meetings

- January 21, 2010 – L. E. Hochreiter Distinguished Lecture: Mr. Jacques Besnainou, President of AREVA
- February 15, 2010 – PSNES Quarterly Meeting (via telecon & On-campus)
- February 15, 2010 – MNE Senior Recognition Banquet (Penn Stater Conference Center)
- April 26, 2010 – PSNES Annual Meeting @ PSU
- April 26, 2010 – Nuclear Engineering Alumni & Friends Dinner @ The Nittany Lion Inn @ PSU

Adjourn at approximately 18:10