To: Members of Center for Power Systems Studies
   Associate Members of Power Systems Studies
   Guests in attendance

The Center for Power Systems Studies is entering its 45th year of operation. Below is a summary of some of the past years’ power-related activities and events, since the spring meeting.

I. Summer 2012: Faculty and Student Summer Projects/Research Update

Hietpas
a. Served on the IEEE PES Scholarship Plus Initiative Committee
b. Worked with conference committee planning for 2012 CPSS South Dakota Regional Power Conference
c. Attended DOE University Consortium Workshop (August)
d. Directed move of Energy and Machines Lab from Crothers Engineering Hall to new West Wing addition of the Daktronics Engineering Hall

Tonkoski
a. Supervised 4 MSEE graduate students
   • Grid Integration or Renewable Energy Systems
   • Power Management of Microgrids
   • Operation of Grid-connected Microgrids as Virtual Power Plants
b. Supervised 1 PhD graduate students
   • Power Management of Microgrids
c. Served with the Power Position Search Committee
d. Served with the EE Scholarship Committee
e. Attended DOE University Consortium Workshop (August)
f. Attended IEEE PES General Meeting 2012 (July)g. Attended National Effective Teaching Institute (NETI-1) Workshop 2012 (June)h. Developed a Multidisciplinary Research Proposal for the Development of Smart Sustainable Energy Systems for Agricultural Communities
II. Power-Faculty Course Update

Hietpas

Summer 2012:
- EE221 (1 cr) Circuits II – Remediation, 3 students
- EE494 (1-2 cr) Internship, 7 students

Fall 2012:
- EE420/420L (3+1 cr) Electronics III and Lab, 8 students

Spring 2013:
- EE315 (3 cr) Linear Systems

Tonkoski

Summer 2012:
- EE792 (3 cr) Wind Energy Systems, 9 students

Fall 2012:
- EE430/430L (3+1 cr) Electromechanical Systems and Lab, 27 students

Spring 2013:
- EE691 (3 cr) Power Electronics

III. Power Faculty Search Update

- Hired: Dr. Wei Sun
- Start Date: December 17, 2012
- Biography:

Wei Sun is currently a power system engineer with the Energy Management System (EMS) group in Alstom Grid, Redmond, WA. Dr. Sun received his B.E. and M.S. degrees from Tianjin University, China, in 2004 and 2007, and his Ph.D. degree from Iowa State University in 2011, all in Electrical Engineering. In 2007, he co-organized the National Science Foundation (NSF) Workshop on the Future Power Engineering Workforce at Arlington, VA. In summer 2010, he worked as a Regional Transmission Planning Engineer at California Independent System Operator (ISO). In 2011, he was a Visiting Scholar in the Department of Electrical and Electronic Engineering at University of Hong Kong. His research interests include power system restoration, renewable energy integration, carbon dioxide emission regulation, generation scheduling, and optimization methodologies applied to power system problems.

IV. Student Activities

Starting in fall semester, Dr. Tonkoski initiated a power student group meeting, for both under and graduate students, to bring more awareness about opportunities offered by the CPSS, regional conferences, the SDSU power curriculum, etc. The first meeting was held October 17, and the agenda for the meeting is shown here. The meeting was attended by 10+ students.

- The CPSS
- Opportunities for Students (Conference Support and Extra-curricular activities)
- MIPSYCON
- The New Power Curriculum / Professors
- Power Journal Club
V. Scholarship Activity – Power Company Sponsored Scholarships

The department awarded approximately $35,000 in scholarships. Approximately 60% of these funds are a direct result of the power community.

Recipients for 2012-2013 Academic Year

The Center for Power Systems Studies Scholarship
Richard Fitzpatrick

CPSS General Scholarships
Reece Chambers  Ben Gaspar
Ryan Kleinjan  Andrew Larson
Brian McBride  Sarah McMahon
Brendan Metzger  Jeremy Nelson
Frank Pesta  Jared Quenzer
Brian Schulte  Ayush Shrestha
Yihan Zhong

Bradley D. Schultz Power Engineering Scholarship
David Kroon  Matthew Lingscheit
Michael Maliske  Jacob Miller
Kevin Murray  Travis Rennich
Jake Swensen

DeWild Grant Reckert & Associates Scholarship
Christopher Steffen

East River Electric Power Coop Scholarship in Honor of Virgil Hanlon
Ryan Kleinjan
Sarah McMahon

Heartland Consumers Power District Scholarship
Wesley Davis

Interstates Electric & Engineering Scholarship
Jeremy Nelson

Jeffrey L. & Trudiann Nelson Scholarship
Logan Janssen

John G. Kappenman Scholarship
Andrew Albing
Laura Froehlich

Jim and Doniese Wilcox Scholarship
Travis Rennich

Xcel Energy Services Scholarship
Laura Froehlich

Xcel Energy Nuclear Engineering Scholarship
Tsenguun Byambadorj
Cole Sandness
VI. IEEE PES Scholarship Plus Fellows from SDSU

- Richard Fitzpatrick (2nd year)
- Jeremy Nelson (2nd year)
- Ryan Kleinjan (2nd year)
- Cole Sandness (2nd year)
- Kelly Nelson (1st Year)
- Connor Schuler (1st Year)

- 100% acceptance in first two years
- Average GPA of all Recipients is 3.86
- Average SDSU is 3.80.

<table>
<thead>
<tr>
<th>IEEE-PES Region 4 School Recipients</th>
<th>Total Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Illinois at Urbana-Champaign</td>
<td>7</td>
</tr>
<tr>
<td>South Dakota State University</td>
<td>6</td>
</tr>
<tr>
<td>University of Minnesota - Duluth</td>
<td>3</td>
</tr>
<tr>
<td>Iowa State University</td>
<td>2</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>2</td>
</tr>
<tr>
<td>University of Wisconsin, Platteville</td>
<td>2</td>
</tr>
<tr>
<td>Illinois Institute of Technology</td>
<td>1</td>
</tr>
<tr>
<td>Indiana University Purdue University Indianapolis</td>
<td>1</td>
</tr>
<tr>
<td>Kettering University</td>
<td>1</td>
</tr>
<tr>
<td>Lawrence Technological University</td>
<td>1</td>
</tr>
<tr>
<td>Marquette University</td>
<td>1</td>
</tr>
<tr>
<td>North Dakota State University</td>
<td>1</td>
</tr>
<tr>
<td>Purdue University</td>
<td>1</td>
</tr>
<tr>
<td>University of Illinois at Chicago</td>
<td>1</td>
</tr>
<tr>
<td>University of Iowa</td>
<td>1</td>
</tr>
<tr>
<td>University of Wisconsin, Madison</td>
<td>1</td>
</tr>
<tr>
<td>Valparaiso University</td>
<td>1</td>
</tr>
</tbody>
</table>
VII. Status of Power Students

I. Power Graduates Update

<table>
<thead>
<tr>
<th>Student</th>
<th>Graduated</th>
<th>Place of Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph Dold</td>
<td>Spring 2011</td>
<td>Otter Tail Power Company, Fergus Falls, MN</td>
</tr>
<tr>
<td>Matt Bult</td>
<td>Fall 2011</td>
<td>Westar Energy, Wichita, Kansas</td>
</tr>
<tr>
<td>Bradley Seely</td>
<td>Fall 2011</td>
<td>WAPA, Aberdeen, SD</td>
</tr>
<tr>
<td>Emily Miller</td>
<td>Spring 2012</td>
<td>Interstates Electric, Sioux City, IA</td>
</tr>
<tr>
<td>Greg Zimmerman</td>
<td>Spring 2012</td>
<td>Interstates Electric, Sioux City, IA</td>
</tr>
<tr>
<td>Amanda Kauer</td>
<td>Spring 2012</td>
<td>ENERCON, Overland Park, KS</td>
</tr>
<tr>
<td>Karl Vanderlugt</td>
<td>Spring 2012</td>
<td>Malloy Electric, Sioux Falls, SD</td>
</tr>
<tr>
<td>Casey Larson</td>
<td>Spring 2012</td>
<td>I &amp; S Group in Mankato, MN</td>
</tr>
</tbody>
</table>

Of the 28 students that graduated in 2011-2012, 7 obtained employment in the power sector, which is 25% of this graduating class. Since the spring of 2000 to present, 76 of 315 (approximately 24%) of SDSU EE graduates either obtained or have pursued a career in the power industry.

II. Power Engineering Student Internships, Expected Graduation, and Recent Internships

<table>
<thead>
<tr>
<th>Student</th>
<th>Expected Graduation</th>
<th>Declared Power</th>
<th>Past Summer Internship/Employment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dusty Botz</td>
<td>Spring 2013</td>
<td>Yes</td>
<td>WAPA, Watertown, SD</td>
</tr>
<tr>
<td>Jeremy Nelson</td>
<td>Spring 2013</td>
<td>Yes</td>
<td>East River Electric Power Cooperative, Madison, SD</td>
</tr>
<tr>
<td>Reece Chambers</td>
<td>Spring 2013</td>
<td>Yes</td>
<td>MRES, Sioux Falls, SD</td>
</tr>
<tr>
<td>Ryan Kleinjan</td>
<td>Spring 2013</td>
<td>Yes</td>
<td>DGR, Rock Rapids, IA</td>
</tr>
<tr>
<td>Cory Kostboth</td>
<td>Spring 2013</td>
<td>Yes</td>
<td>Interstates Control Systems, Sioux Falls, SD</td>
</tr>
<tr>
<td>Richard Fitzpatrick</td>
<td>Spring 2013</td>
<td>Yes</td>
<td>Coteau Tiling, Revillo, SD</td>
</tr>
<tr>
<td>Cole Sandness</td>
<td>Spring 2014</td>
<td>Yes</td>
<td>Nuclear Engineering Institute - University of Texas, Austin</td>
</tr>
<tr>
<td>Kelly Nelson</td>
<td>Spring 2014</td>
<td>Yes</td>
<td>WAPA, Watertown, SD</td>
</tr>
<tr>
<td>Brendon Metzger</td>
<td>Spring 2015</td>
<td>Yes</td>
<td>DGR, Rock Rapids, IA</td>
</tr>
<tr>
<td>Connor Schuler</td>
<td>Spring 2015</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>
VIII. Review of CPSS Impact

1. CPSS and IEEE-PES Scholarships – immediate attraction and attention getter
2. Internship and/or Cooperative opportunities -- have a positive impact – absolutely important to the sustainability of the SDSU Power Program
3. Field Trips and the Power Technology Tour – great exposure to a variety of power-related industries
4. CPSS-Sponsored Design Projects – hands on challenging designs
5. Electromechanical Systems and Lab (EE430/430L) – Machines and Drives
6. Power Systems Analysis and Lab (EE434/434L) -- First course dedicated just to power
7. Photovoltaics Applications (EE436) and Power Electronics (EE492)
8. Fall Awards Banquet – A glimpse into the future for our students and shows importance of remaining connected to academia
9. Biannual Regional South Dakota Power Conference – An excellent professional setting the introduces power students to the big picture

Respectfully submitted,

[Signature]

Steven M. Hietpas, Ph.D., P.E.
Coordinator, Center for Power Systems Studies