



**Pacific Northwest Center of Excellence for Clean Energy (PNCECE)**  
**Advisory Board Meeting Minutes**  
**November 2, 2012 @ Cowlitz Salmon Hatchery Visitor Center**  
**9 – 11:30AM**

Randy Bachtell; New Market Skills Center  
Mike Cabacungun; Incremental Systems  
Rulon Crawford; Centralia College  
Brian Dale; Washington State Department of Veterans Affairs  
Karen DeVenaro; Seattle City Light  
Nancy Estergard; Grays Harbor College  
Micah Goo; Centralia City Light  
Lauren Hadley; South Seattle Community College  
Alan Hardcastle; Washington State University – Energy Extension  
Daniel Kay; Lewis County Public Utility District  
Mike Kelly; Grays Harbor College  
Dick Larman; Lewis County Economic Development Council  
PJ LeCompte; Bonneville Power Administration  
John Loyle; Pacific Mountain Workforce Development Council  
Pat McCarty; Tacoma Power  
Barbara Menzel; Seattle City Light  
Jay Pickett; co-chair of Curriculum Development Subcommittee  
Kairie Pierce; Washington State Labor Council  
Robin Podmore; IncSys  
John Steidel; Centralia College  
Bob Topping; Regional Education and Training Center  
Michael Wagar; TransAlta  
**PNCECE Staff:** Barbara Hins-Turner, Jamie Krause, Monica Brummer, Jenni Bitner, Andreas Keodara  
**Teleconference:** Ryan Davis; Regional Education and Training Center

**Call to Order – Pat McCarty, Chair**

Introductions

**Incremental Systems Presentation and Discussion – Robin Podmore and Mike Cabacungun**

PowerSimulator for Veterans and Community Colleges

- Inc Sys is a “PowerSimulator” created to address the need of a distributed, reliable power generation (smart grid) system.
  - PowerSimulator is software that is accessible, affordable, flexible, high performance, offering shared or private sessions on a cloud server.
- PowerSimulator can be customized and scaled from single-user to massive drills with hundreds of participants to train energy operators.
  - Hypothetical systems are available for use to address current as well as future problems in the grid. Being able to customize drills from simple to complex

scenarios encourages operators as well as policymakers to collaborate in troubleshooting issues that may arise within the grid.

- The software includes grid restoration drills in case of emergency and substations modeled after real systems are made available for training purposes.
- Hypothetical models for training include but are not limited to generic training models as well as WA state terrain. All types and sources of energy may be input in the model for complex simulations.
- PowerSimulator is based on the EPRI Operator Training Simulator (OTS) power system model and is in compliance with a number of NERC Standards.
- IncSys has been collaborating with Power4Vets for a “System Operator Training Pipeline” program.
  - This joint effort recruits, trains, certifies, and places military veterans as power system operators – a pathway that can lead to NERC certification for veterans.
  - The program is focused on veterans who have prior power background.
  - More than 500 veterans have signed up and 280 are in the emergency operations program
  - The Power4Vets program goal is placing 120 students into jobs; As of today, 29/29 students have passed NERC certification tests while 73 students have been placed into jobs across the United States.

PowerSimulator program at Front Range Community College

- Front Range CC has had the greatest progress so far with the PowerSimulator program
- Nine second-year students at Front Range CC have completed all 10 courses.
  - One veteran has received NERC certification, two civilians want to study for the NERC certification and Mark Sickles, a retired system operator will teach in the program next year.

PowerSimulator program at Centralia/Grays Harbor Colleges

- 2011/12 year 2 - 39 students completed Course 2 (focused on the introduction to running a simulator) and 3 (focused on basic switching)
- Inc Sys provided hands-on demonstration at Centralia and Grays Harbor Colleges

IEEE PES Collaboration

- Barbara Hins-Turner is leading a national outreach to community colleges to engage electrical engineering students in IEEE PES student membership
- Community Solutions Initiative – “Light Up the World”
  - This initiative is focused on sustainability (solar and wind), scalable energy, and community empowerment.
  - More than 100 engineers, scientists, humanitarians, etc. are working on this project
  - The program was started in Haiti and now expanding to Cameroon, southern Sudan, and Nigeria. The goal is to raise \$2 million a year and seed funding for future startups.

### **Community College Program Student Reports**

Energy Technology Centralia College/Grays Harbor/SCC IEL Ione (Rulon Crawford and John Steidel)

- 1<sup>st</sup> year class (Rulon C) - 30 at CC, 11 at GHC, 7 at Ione
  - Two ITV classed are being offered: one in the afternoon and one in the evening.

- A one-week, summer job preparation course was offered at CC, GHC and in Ione. Prepares for interviewing, writing skills, resume-building, job searching/applying in general. Students visit different power companies such as BPA and TransAlta to introduce them to transmission and different sources of power generation.
- 2<sup>nd</sup> year class (John S.)
  - Students have been encouraged to be resilient in “searching and digging” for jobs. A no-calculator policy has been implemented during tests to prepare students for pre-employment testing where the use of calculator is prohibited during the test portion.
  - In Winter 2013, 2<sup>nd</sup> year will include a new elective course dedicated to the first 5 modules of PowerSimulator with IncSys, Spring 2013, an elective course dedicated to the second (last) 5 modules of PowerSimulator with IncSys
- Barbara H-T. stated that Summit scholarship fund will fund 2 scholarships NERC certification which costs \$600.

#### Grays Harbor College (Nancy Estergard)

- 11 new students are enrolled in the first year program, 16 are enrolled in the second year. GHC lost 4 students due to paper mill opening back up but gained four CC students.
- 8 new students are on the transfer to 4 year college track (AAS-T). 5 alumni with AAS-T degree are now at Evergreen in sustainable/renewable resources program.

#### New Market Skills Center (Randy Bachtell)

- NMSC has a new director, Kris Blum came into budget in the red and declining enrollment
- An increase in academic requirements and budget cuts have made a challenging year, staff is working hard in this transitional year to establish lines of communication
- NMSC started out with 20% decrease in enrollment from previous year, but slightly recovering. Currently 2 energy classes with 32 students total.
- A new math credit was incorporated last year, new AP science credit started this year, an AP physics course offering being developed.

#### South Seattle Community College (Lauren Hadley)

- Programs at SSCC focus on building science; currently working with Community Power Works, an energy program in Seattle to provide safety certifications courses such as OSHA 10 and lead RRP.
- Courses that are offered as short-term training with a 20-hour class on insulation air sealing and performance tested comfort systems and cushioning for energy efficiency.
- Funds from Workforce Development Council grant to develop college courses is the providing foundation for development of SSCC building science Baccalaureate program.

### **National Training and Education Resource (NTER) – Bob Topping, Jamie Krause, Ryan**

#### **Davis**

- NTER, a Dept of Energy effort, is an open-source platform for online learning that allows individuals and/or organizations to upload and offer curriculum online. NTER content can be available for free and/or can be partnered with a monetary-payment mechanism. Curriculum can be sustained and improved online, learning can be interactive by using GoToMeeting.

- NTER is a complete online learning management system that includes tools for student tracking, grading, and the ability to update content/materials. Co-authors can make online suggestions to the content.
- Bob T. is currently using/testing NTER with his own materials: 10 modules and 1 workshop are currently uploaded onto NTER. .
- Utilizing a platform such as NTER can provide broader access to important training materials such as the interoperability standards put out by the National Institute of Standards and Technology (NIST).
- Jamie K. is currently researching the cloud service options to use and host NTER for PNCECE.
- Barbara H-T. said that NTER is a resource to house the 300 modules being by Bob T., Avista, and other individuals/utilities.

### **U.S. Dept. of Energy Smart Grid project update – Jamie Krause**

- The Smart Grid project is currently in its 3<sup>rd</sup> (final) year with 15 sub-contracts.
- The major curriculum development project underway is aligned with the use of NTER, which will be up and running later this year.
- There was a training target of 1,215 individuals over the 3-year project in the 5-state region – 4,251 individuals have been trained since the beginning of the grant in 2010 through September 2012. .
- There was a new hire target of 234 individuals over the 3-year project in the 5-state region – 188 new hires through September 2012, which is equal to 80.3% progress. .
- A smart grid for consumers video, a collaboration among BPA, Pacific Northwest Smart Grid Demonstration Project, NorthWestern Energy, and Avista Utilities, was shown. Feedback included catering the video for different demographics, such as populations that experience “double hump utilities” and using “intermittent renewable energy” in place of “renewable energy”.
  - The “Smart Grid 101 for Consumers” video, FAQs, and Fact Sheet produced under this project are all available online at the PNCECE website.

### **Labor Market Survey and Customer Service Representative (CSR) Skill Standards – Alan Hardcastle**

#### **CSR Skill Standards**

- “What is Smart Grid?” – This question implies the need for new training resources.
- Technology is a popular topic for smart grid. For example: How do we handle more data and information? What new knowledge and skills are needed? What new niches or specializations will be required from different positions and occupations?
- Case studies are needed to learn more about these points. There are a few studies out there, but often overlooked is the CSR position, the individuals who interact most with customers.
- CSR skills standards: CSRs will take on a different role - transaction between CSR and customer will turn into more of a helpdesk scenario, a consultative embarkment about pricing, about energy use, etc.
  - We must documents the knowledge and skills of the people in these occupations - as smart grid is becoming mainstream, how will these CSR job duties change?
  - Companies such as Seattle City Light have helped provide insight on these points of concern to create a guide/handbook for CSR occupation within a smart grid

project. The completed content is in the process of the graphic designer and should be available in a guide/handbook form by the end of the year.

#### Labor Market Survey

- There has been an observed “flatline” of employees retiring/newly hired during this recession because of the many individuals who have held off retirement. As 2013 nears, these individuals may begin to retire all at once – so research is needed to address the future of a trained workforce.
- A comparison of data in 2013 and 2008 will take place. Data from 2008 has been retrieved from 12 large utilities employers and plans for 2013 data collection includes a systematic survey (beginning December 2012) that will address (1) turnover expected in utility partners and (2) retirees, new & highly skilled hires.
  - This comparison will help find the new challenges as we move forward and will help fine-tune emphases on where to spend future efforts – program development, how we can work better with utilities and be better responsive to their needs. These comparison and results will help to train workforce, prepare CTC, 4-year universities, etc. to meet future needs in the industry.

#### **Careers in Energy Week (CIEW) – Kairie Pierce**

- CIEW is a nationwide initiative to engage K-12 students, teachers, counselors, and parents in activities that increase awareness of high-skilled, high-wage jobs. This year, middle school students participated.
- **Summary:** There were 19 events held during careers in energy week statewide with more than 900 participants (compared to about 450 from last year). The breakdown of participants include: 568 students, 18 counselors, 27 teachers, 15 parents, and 290 community members. Events included but were not limited to: dam tours, plant tours, career fairs, and fieldwork.
- *Daniel K. asked, “How do we work on recruiting more engineers instead of just the skilled-trades worker background?”*
  - *Barbara H-T.: We are starting more on this focus, especially with the new collaboration with IncSys.*

#### **Director’s Report – Barbara Hins-Turner**

- Attended 5-day IEER PES San Diego conference, Barbara H-T. was the only non-engineer among 3,033 people in total attended and 700 were students. John Hoffman, a Centralia College student, was funded by DoE grant to attend. John H. received a \$5,000 dollar scholarship, the first community college transfer student in the country to receive award. John graduated pre-engineering from Centralia College and transferred to WSU
- Attended AACC conference in Racine, WI with Troy Nutter, participated in a panel with colleges and industry on how to create collaborations (educational partnerships).
- Co-PI conference in Washington DC for Edmonds CC Energy Management grant.
- Jamie attended a conference sponsored by Corporation for a Skilled Workforce held in Lob Beach that focused on accelerating business input in credentialing process.
- Save The Dates:
- **June 19 & 20, 2013 (Wed & Thurs): 8<sup>th</sup> Annual Energy and Construction Best Practices Summit**
  - Educator industry forum on Wednesday; Main day on Thursday

- **May 10, 2013: Advisory Board Meeting**

### **New Business**

New Scholarship Opportunity – Dan Kaye

- Announced new scholarship opportunity to be approved by the board of American Public Power, students eligible Fall 2013. The scholarship is \$2,000-5,000 for apprenticeship level to 4 year degree programs.

PAC 5 Energy Program – Dick Larman

- There are currently several projects among the rural counties in regards to the PAC 5 Energy Program.
  - In Thurston County, there is an energy efficiency program with PSE using WSU dollars, which has expanded to all 5 counties. Each county program is to look differently across counties and meeting unique needs of their respective populations.
- Jim Lowery was hired to coordinate the program for Lewis County.
- The results of an industry cluster analysis found that 36,000 employees in 5 counties are in the food manufacturing industry which is a \$4 billion dollar/year business (largest industry in region) followed by wood, healthcare, internet technology, and plastics/chemicals.
- Looking to the future: How do we as a region look at our major industries and better incorporate energy, transportation distribution/logistics into them? How do we integrate the role of energy jobs in these industries?
- **4<sup>th</sup> Annual Innovation Expo** at Great Wolf Lodge for the region's 5 economic development councils on Dec. 13, 2012, the Thurston County EDC website has more details on event.

**11:47 (meeting adjourned): Lunch and Visitor Center exploration**