



**Pacific Northwest Center of Excellence for Clean Energy  
Advisory Board Meeting  
Centralia College  
November 12, 2010, 10 a.m. – 12 p.m.**

**In attendance:**

Pat McCarty, Tacoma Power (chair)  
Yvonne Chase, Pacific Northwest Center of Excellence for Clean Energy  
Rulon Crawford, Centralia College  
Judy Guenther, Trustee, Centralia College  
Fred Hennigie, Grays Harbor College  
Barbara Hins-Turner, Pacific Northwest Center of Excellence for Clean Energy  
Jamie Krause, Pacific Northwest Center of Excellence for Clean Energy  
Dick Larman, Lewis County Economic Development Council  
John Loyle, Pacific Mountain Workforce Development Council  
Angela Mallow, TransAlta  
Jay Pickett, Centralia City Light  
Kairie Pierce, Washington State Labor Council  
Durrell Sullivan, Workforce Dean, Centralia College

**Teleconference:**

Tom Bougher, WDVA - Veterans Conservation Corp  
Ed Bowen, WDVA - Veterans Conservation Corp  
Troy Nutter, Puget Sound Energy  
Dale Singer, Avista

**Welcome and Introductions**

Pat McCarty, Chair brought the meeting to order and introductions were conducted.

**Updates**

Centralia College – Rulon Crawford presented an update of the AAS Energy Technology Power Operations program.

Some highlighted items were:

- 90 credits are required for the AAS Energy Technology Power Operations degree.
- Colleges included in ITV broadcast are Grays Harbor, Peninsula, and Wenatchee Valley. The new Centralia College equipment allows the PowerPoint and video to go through the system as well as the capability to zoom in and out so remote areas receive better quality, they are able to ask and answer questions, and feel as if they are in the same room as the instructor.
- Angel system: The online class system is a hybrid of lecture and on-line format. Students must have access to a computer. Most students use their home computers rather than the college computer department. This format was piloted '09/10 academic year for first year delivery and is working well.

- The partnership with General Physics has continued offering on-line course modules of up to 6000 offerings. Each module can be completed in approximately 15-45 minutes and students must pass with an 80% or better. If they are unable to pass the first time, they have the option to retake the tests. GPI allows the instructor to print off reports for grading purposes.
- Courses for the first year Energy Technology Power Operations program taught by Rulon Crawford include: Introduction to Energy Industry, Print Reading, Power Generation, Electric Utility Distribution System, Industrial Safety and Power Plant & Substation Tours.
- Second year classes taught by John Stiedel include: Plant Systems and Equipment, Plant Maintenance, and Refrigeration & HVAC with a heavy concentration on Steam basics.
- Plant Tours Class: Students are surveyed at the end of the tours and responses received are very positive. Examples of tours include TransAlta, PSE Snoqualmie Falls, Regional Education and Training Center and BPA Substation. The purpose is to expose students to various forms of power generation including hydro, gas and coal as well as transmission. The 2010 class included preparation for job applications, options to complete applications, resume tips, and interview guidelines. Two job application types are discussed (example: Columbia River PUD and Bonneville Power Administration) so students can practice completing and become familiar with the application process.
- BPA recruits once each year in the fall for apprentice pool. Applications take approximately 40 hours to complete. Students are given websites to review for possible positions with energy companies and it is suggested that students check the various websites weekly to monitor the most updated information.

Questions and answers received in the past.

- Any troubleshooting areas in the Energy Technology Power Operations course?
  - Smart Grid and distribution reliability (troubleshooting simulation) is a new course considered for development. It will be reserved for about 12 advanced students who have a strong desire to work in this area. Through the Smart Grid grant, Centralia is partnering with Incremental Systems for an online simulation.
- What is the student satisfaction with the instructor?
  - The average rating is 3.7 out of a possible 4.0. Students rate better at Centralia than the ITV sites.
- Following are the first year enrollments for the Energy Technology Power Operations for the last 7 years.

	Centralia	Wenatchee	Peninsula	Grays Harbor
2004	10	0	0	0
2005	19	0	0	0
2006	22	17	0	0
2007	24	26	0	0
2008	29	11	4	0
2009	67	7	2	19
2010	52	0	0	20

- The demographics of students for the Energy Technology Power Operations program is as follows:
  - Age range of students is 19-61 years of age with at least half over the age of 30.
  - All of the women in the Energy Technology Power Operations program have moved in year two. For the last four years the breakdown of women in the program is as follows:
    - 2010 = 2
    - 2009 = 6
    - 2008 = 8
    - 2007 = 8
  - The Energy Technology Power Operations programs pass rate for the BPA exam is 95% and the POSS exam is 87% (Rulon Crawford looked at why students were having difficulty passing the POSS exam. The outcome was test taking stress. The NJATC exam stats are hard to track but some are known to have taken it. It was mentioned that most application programs require some type of testing.
- Student skills and challenges – Older students have weaker computer or math skills but their writing skills are decent. They have a strong desire to learn. Younger students have great computer skills and math skills but have weak writing skills. They typically try to just “get by” in the program. Felonies and DUIs have been an issue with the older students. The industry doesn’t discount receiving an application due to a felony or a DUI. If the incident was long ago, some will review on a case-by-case basis. It isn’t always a means of not applying/qualifying.
- Graduation rate – BPA wants new applicants in student status. TransAlta wants graduates.
- Job Placement – If a student is willing to re-locate out of the state the prospect of employment is almost 100%. The students that live farther away from the metro area are unwilling to re-locate (teacher’s opinion). The first graduate has completed their apprenticeship and is now a journeyman.

Equipment - PSE and Tacoma Power have donated equipment to the Energy Technology classroom. Through a grant from the Lewis County Economic Development Council, an installation of the PV system and windmill will be located in the Keiser community garden across from the Science Center. Through the Dept of Energy Smart Grid grant, hands-on simulators have been ordered which will showcase alternative energy generation and Smart Grid technologies.

Energy Efficiency seminars - Mason County PUD and Grays Harbor PUD requisitioned the Energy Efficiency classes for their community to conduct energy efficiency seminars. Rulon delivered these classes spring, 2010.

Job Placement - Barbara Hins-Turner talked about the Energy Job Placement, Progression and Transfer Results document. Handouts were provided to the members. Barbara mentioned that they weren't sure they were capturing everyone in the placement growth. Also mentioned was the newest hire at Snohomish PUD, Samuel Riggs, the first hire from the program with Sno PUD.

#### Grays Harbor College Articulation - Fred Henninge

Fred Henninge presented Grays Harbor College report. For 2010 there were 20 students enrolled in the Introduction to Control Technology class but once they discovered what was required in the program five dropped out. All of the students are progressing through the hybrid program. It is hard to evaluate whether students comprehend the course so once a week some hands on training is conducted at Satsop. Students enjoy this part of the course. Tacoma Power donated PLC equipment to the Regional Education and Training Center and installation is in progress. Fred also provided the following information in a handout:

##### Background

Grays Harbor College (GHC) and Centralia College (CC) first partnered to meet the needs of laid off Weyerhaeuser workers in 2007. Together they offered the Energy Technology Degree to these dislocated workers.

For the past two years, GHC and CC have had a Memorandum of Understanding (MOU) which allows GHC to have a Collaborative Energy Technology program. Under this agreement, CC provides the Energy Technology Power Operations courses to GHC students via Interactive TV and GHC offers the general education courses. GHC offers an Associate Degree in Energy Technology-Power Operations and a Certificate of Completion in Power Technology.

##### 2010-11

GHC is using American Recovery and Reinvestment Act (ARRA)/Senate Bill 5809 monies to fund two cohorts of students in the Energy Technology Programs. Nineteen students have completed the first year of the program and they started the second year of the program this fall (September 2010). One (1) student was withdrawn for poor academic progress and failure to show up fall 2010, and one (1) student withdrew the last week of September when he obtained full-time employment. The remaining students are scheduled to finish their degrees in June 2011. These students currently have an average cumulative GPA of 3.39 with the median GPA being 3.7.

With the Certificate of Completion endorsed by this Advisory Committee and approved by the State Board for Community and Technical Colleges, a cohort of 20 students enrolled in the certificate program this fall as well. This funding ends June 30, 2011, and GHC is pursuing ways to continue the first and second year of these programs for 2011-12 and/or the students who finish the certificate may finish their degree at CC.

## **2011 Summit Dates**

Barbara Hins-Turner announced the 2011 Summit date of **June 23-24, 2011**. For the last two years the Summit dates have conflicted with the Workforce Training and Education Coordinating Board meetings and Skills USA Conferences. This year the dates do not conflict.

Judy Guenther agreed to coordinate the scholarship auction again this year. Contact her for donations. \$6800 was raised at 2010 summit, we would like to repeat that this year!

The planning committee worked very well together last year. Barbara asked if anyone was interested in participating this year – Karie Pierce, Tom Bougher, and Sean Bagsby have offered to help.

Barbara suggested that the theme of the Summit have something that relates to Smart Grid and how it spills over to energy efficiency. The board agreed to include Construction CoE again this year.

## **Directors Report**

### Grant Activity

U.S. Department of Energy ARRA Smart Grid Workforce Training for the Electric Sector:

- \$4,998,859 grant with \$7,000,000 leverage = \$12,000,000 grant to develop the Pacific Northwest Center of Excellence for Clean Energy in WA/OR/ID/MT/UT.
- Hired the A team!!! Jamie Krause and Yvonne Chase.
- Governance Board formed and chaired by Troy Nutter, Puget Sound Energy, Avista Utilities, Seattle City Light, Pacific Northwest Natl Lab, Washington State Labor Council, IBEW Local 77, Veterans Conservation Corp, Center for Advanced Manufacturing Puget Sound (CAMPS), Washington State University Extension Energy Program, Gonzaga University, and Chemeketa Community College, OR.
- Educational Taskforce formed – met at PSE Wild Horse Oct 12, Sue Walsh BPA Smart Grid liaison to Demonstration projects accepted role as chair. Attended by PSE, BPA, Avista, Seattle City Light, WSLC and IBEW Intl..... Next meeting scheduled for December 1, 2010, Portland to reach out to Oregon partners.
- Spokane partners meeting held – Oct 25 at Avista’s Jack Stewart Training Center – Avista, SCC, Gonzaga, Veterans Conservation Corp, Bob Topping, Chemeketa and Don Sorenson, West Camps of Utah – update on eastern WA partners and leverage tracking.
- First quarterly report submitted – pre award leverage allowed.
- Connected with Incremental Systems on community college programs positioned to implement simulation as part of energy program.

Northwest Energy Efficiency Taskforce contract (\$20,000)

- Research training and education for Energy Efficiency – hired part time hourly Jenni Bitner who was student worker.

National Science Foundation (NSF) Edmonds Community College: (\$30,000)

- Edmonds Community College was funded by NSF with a \$600,000 grant to expand their Energy Management Program in partnership with Cascadia Community College. The Center of Excellence is a partner in the project to deliver Energy Efficiency train the trainer classes for community college faculty, industry and labor trainers through summer institute.

Center for Energy Workforce Development Grant: (\$75,000)

- Bill and Melinda Gates Foundation funded 3 yr projects in 8 states to develop low income youth pipeline into energy careers through community college programs. Yvonne Chase is project coordinator.

Conferences and Events: Dissemination

- U.S. Dept of Education delegation to Germany - Globally Competitive and Sustainable Qualifications in Vocational Education and Training Forum, May 4-6, Bonn Germany - Explored potential community college partnerships between the U.S. and Germany in “green” jobs training and education. Communication and project work is continuing.
- 5<sup>th</sup> annual Best Practices Summit convened in June, was again sponsored by the Washington State Centers of Excellence for Energy and Construction.
  - Keynote address, David Allen, executive vice-president of Seattle’s nationally recognized McKinstry.
  - Industry, Organized Labor, Legislative and Regulatory organizations offered Best Practices themes and the future of the energy workforce.
  - June 25<sup>th</sup> Keynote speaker, Charlie Earl, Executive Director of the Washington State Board of Community and Technical Colleges (CTC).
  - 200 guests included CTC’s, high schools, and universities; government, industry and labor/apprenticeship.
  - Sponsorships totaled \$6250 and \$6697 in scholarship monies nearly doubled the contribution of prior years. The Veterans Conservation Corp donated a flag that had traveled through Iraq for the opening ceremony and was sold at auction raising \$750 to suEnergy Technology Power Operationsrt a student Veteran.
- Pacific Northwest Economic Region (PNWER), July 17/18, Calgary
- Center for Energy Workforce Development, State Consortia Meeting, Columbus Ohio, August 10
- Chehalis Sertoma Club, August 12
- Center for Energy Workforce Development, Northwest Regional Meeting, Clark College, August 29
- DoL Apprenticeship Conference, Boston, Sept 28/29 Jamie Krause presented
- BPA Smart Grid Road Show, Nov-2/3, \$1100 Reg fee comped
- Jamie Krause and Yvonne Chase attended Washington Future Energy Conference, Nov 9/10

- Idaho State Sector Strategy hosted by Corporation for A Skilled Workforce, Boise, November 16/17
- UC Berkeley Green Jobs Summit, Dec 8

Center for Energy Workforce Development (CEWD), Oct 25-28, Alexandria, VA  
 Yvonne Chase represented the Center of Excellence at the annual summit that brought together industry, education, and federal and state agencies to address the demand for real jobs critical to rebuilding our economy. Highlights included views of initiatives at the national and legislative front that impact the energy industry, building bridges to energy careers for women and transitioning workers, the Smart Grid and how it will impact your existing workforce, and effective approaches to address the math skills gap.

#### Centers of Excellence Directors Quarterly Meetings

- July 8/9, Walla Walla Community College
- Oct 26/27, Spokane Community College
  - Outreach to non center colleges and 10 Center Directors, SBCTC and Washington State Labor Council liaison. SCC President, welcomed the Directors and provided feedback on how the Centers can serve their statewide mission. SCC Director of Workforce, Spokane WDC Director, Spokane AFL-CIO Spokane area Sec, and , Institute of Extended Learning VP updated the Directors on Spokane workforce development initiatives. Avista provided a tour of their Jack Stewart Training Center and shared how they are partnering in the PNCECE Smart Grid Workforce Training grant.
  - Barbara's term as chair extended to 2 years – critical year

#### Walla Walla Community College Wind program

- Director – James Bradshaw hired Barbara to served on interview team

Cindy Mann has moved to the Workforce Education department of Centralia College. Barbara mentioned Jay Pickett is with Centralia City Light and is very impressed with their Smart Grid program. A possible substation monitoring system in the classroom is being evaluated. Barbara also mentioned that the CoE website is being updated and a new website will presented in around two months focusing on Smart Grid.

#### **Meeting adjourned**