



Pacific Northwest Center of Excellence for Clean Energy (PNCECE)
Advisory Board Meeting Minutes
May 11, 2012 @ Centralia College
9 - 11:30am

Pat McCarty, Tacoma Power (chair)
Arlene Abbott, NUTEC
Randy Bachtell, New Market Skills Center
Rulon Crawford, Centralia College
Nancy Estergard, Grays Harbor College
Judy Guenther, Summit committee member
Daniel Kay, Lewis County PUD
Mike Kelly, Grays Harbor College
Melanie Kincaid, RETC
Dick Larman, Lewis County Economic Development Council
Jim Lowery, Centralia College
John Loyle, Pac Mt WDC
Jim Malinowski, Clark College
Troy Nutter, PSE
Joel Rett, GH College
Kairie Pierce, Washington State Labor Council
Michael Wagar, TransAlta
Jim Walton, Centralia College
Ed Williams, Centralia City Light
PNCECE Staff: Jenni Bitner, Monica Brummer, Barbara Hins-Turner, Jamie Krause
Guest student speakers: Kelly Fetters, John Hofman, Travis Kinney, Centralia College; Mark Eirhart, Clark College; Jared Schexnider, New Market Skills Center
Teleconference: Mike Hanson, Avista Utilities; Rob Costello, Bellingham Technical College; Dennis Skarr and Brian Dale, WDVA

Call to Order – Pat McCarty, Chair

Introductions; minutes dated December 2, 2011 were approved without changes

Dr. Walton gave an update about Centralia College Bachelors of Applied Science in Management (BASM); loan fund for fall quarter students; financial aid will be available winter quarter.

Community College Program Student Reports

Centralia College (Rulon Crawford, instructor; Kelly Fetters, Travis Kinney, John Hofman - students).

- Had a few students drop out due to health reasons and grades.
- Spending more time with alternative power; solar panels were outside during the week. Dealing with technical glitches with wi-fi and computers and ITV
- Recent student hires: CO Springs; one in Canada; and locally (Lewis County PUD intern)
- One of our first year students has been elected 2012/13 Centralia College student body president

Kelly Fetters – has honed in on renewable energy and energy efficiency. Kelly is working with Jerry Pratt, Mayor of Toledo, to produce a new energy generation source using Bill Creek. Will have business plan and feasibility study in June; surveying done by July; permit by Sept. 2012; keeping costs below \$400,000

Travis Kinney (newest hire of LCPUD): 17 power technology students conducted an energy audit on Centralia College's Technical Building beginning fall of 2010

- Reviewed building history : Original insulation; roof 3 years old; diesel shop added in 1991; lighting is C-12 fluorescent
- Reviewed audit process: Divided building into six sections; calculated energy consumption of electrical loads and lighting; examined building envelope

- Tools used: watt hour meter; infrared thermometer; excel spreadsheet to remove errors.
- Recommendations: No-cost fixes: turn off computers when not in use, fix vending machine bi-passes and set thermostats. Low-cost fixes: install occupancy sensors, caulking, weather stripping and window coverings. High-cost fixes: replace lighting, windows, doors; would like to try cutting number of lights per fixture; Pat, FYI, high efficiency fluorescents are more cost effective.

John Hofman: STEM electrical pre-engineering student accepted to WSU/Vancouver Electrical Engineering Program the fall; also coordinating design of the Keiser Natural Outdoor Learning Lab (KNOLL) clean energy lab. John engineered the project by researching and obtaining products to create a dual-generation clean energy lab. Power generated by the lab, which consists of an Energy Ball wind turbine and six solar panels will produce three times more power than what is needed in KNOLL. John thanked Centralia City Light, Travers Electric, Mark & Laura Johnson Funds (Energy Ball), and Lewis County Economic Development (solar panels) Meters will be installed to see how much power is being produced.

Dick Larman, Lewis County EDC

- Board approved marketing outreach dollars.
- Will fully fund an auditor position for a year.
- Will layer in broadband – energy efficiency and broadband
- All came as a result of energy retrofits.

Clark College (Jim Malinowski)

- At limit with 24 students. Two dropped out because they took jobs
- Initiated energy tech estimator AA program; adding system protection element; BPA donated test sets; digital relays; moving onto using new software

Mark Eirhart – was deployed to Iraq last year; back this spring; Is in the Power4Vets – power industry as second career. Has a background in aviation maintenance. Worked for Horizon Airlines for 18 years – ran three shops; being an actual mechanic for 13 years, made sure he knew every job well; concentrated on training and safety

- Has always been interested in power; father-in-law retired from BPA
- Clark C has the hands-on labs not just theory. He's impressed by the computer simulations. He noticed that students in the program understood the theory, yet they struggled with the hands-on.
- LabVolt gave us the opportunity to see how equipment worked. See it after wiring it and see results on the meters.

Grays Harbor College (Nancy Estergard) 23 students started; now down to 19; 3 went to other programs; 1 got job. 13 second-year students will be graduating; 8 took POSS test; 1 is working; 7 applied to BPA, one was interviewed

- GHC is making changes to program to enhance math component. Second year students are struggling because of math.
- Economy isn't where they thought it would be, so students are frustrated. Students need to work harder at finding jobs.
- Lab not as successful because it's hard to manage. Wants to bring that back into the program. Tearing down building where class is held, so class has a new spot; May lose 4-5 students next year due to work

New Market Skills, (Randy Bachtell, instructor; Jared Schexnider, student

22 students at beginning now up to 28. They offer an open program. Electrical industry – high school level.

- Jared is a second year student. Program isn't as inviting as some of the other programs because students aren't seeing the need and want to do something that is fun. They do stay after entering program. Randy recruited Jared from an overfilled automotive program. Jared has been accepted into Northwest Renewable Energy Institute wind technician program in Vancouver.

Spokane Community College/Avista Pre-Apprentice Lineworker School, Mike Hanson

Just completed winter class started summer registration for July class. 38 graduates. 75% placement in winter class. Working on smart grid project. Barbara thanked Mike for hosting a couple of weeks ago. Training center is looking great!

Incremental Systems Presentation and discussion/Troy Nutter

- Power4Vets, cert through NERC. Focusing on veterans. Bellingham Tech., GHC, Clark, Centralia colleges are pilot colleges for Incremental Systems Grid Simulator.
- There is a need for system operations people. Jobs start at \$29.41 an hour. There are some gaps in training. Exploring curriculum to support a certificated or degree program. Need to start now.
- Setting up a taskforce to address those who want to go through program. Commitments from Rob Costello, Jim Malinowski, and Rulon Crawford to participate on taskforce – knowledge skill piece. Center to coordinate
- Small opportunity through federal grant. Looking for a small number of people.
- Centralia and Clark Colleges are adding IncSys program onto a different path for the second energy year students. Similar to Power4Vets.as a pathway to NERC certification.

Idaho State University is leading a Dept of Labor TAA to integrate Incremental Systems into community college energy programs. ISU has an amazing program and 50,000 square feet facility. Melanie Kincaid is writing the Washington piece of the grant. Power simulator software is the focal point on the grant. ISU, Eastern Idaho Tech, and three Washington Community Colleges (Clark, Centralia and Bellingham Tech). Looking into energy entrepreneur program will be added as well with Peninsula College. Credit for prior learning will be applicable. Need industry support for NERC. Gonzaga is willing to do the train-the-trainer for faculty. Grant due May 17. John Loyle signed a letter (workforce development piece). Barbara asked for industry signatures.

Jim Malinowski would like to see a lab which provides a landscape of a true systems operator work area. What will the fees be for the simulation? Should use real systems such as Bonneville vs. a fictitious system (they need to see what they see in the real world). **BHT**: \$2 million has been allocated to upgrade Incremental Systems. This is a four-year grant, approximately \$8-million will be the ask. **Daniel Kay**: are we duplicating or enhancing programs that are already there? Getting people into public power is challenging; APPA is developing scholarship fund \$5,000 to bring people in.

Bellingham Technical College/CoE discussion, Rob Costello

Opened the discussion of roles of advisory committees. How can we better connect the advisory committee with the center level with those within other program? How can we strengthen and develop best practices of involvement? How can we use the CoEs as a conduit to strengthen other boards? Should the Centers of Excellence be branching out?

- Troy Nutter has been a strong member of CoE of industry/electrical and energy. It's difficult to be on a lot of boards (Troy) Energy has a huge base. Important to keep networking together.
- Rob would like to see a networking of CoE advisory boards. Industry sees 34 separate colleges vs. centers of excellence systems or 1 college system. Maybe find ways to invite representatives to participate via distance or make minutes more available.

Rob reviewed Bellingham TC's involvement with a consortium grant - Energy production of petroleum refineries. Electrical/mechanical technical programs train operators. Most numerous technical programs in the state. Take elements from programs to build more directly to energy and utility industry. Issue: needs support from faculty and administration. Administration has concerns about employment opportunities within northwest. How well are the employment opportunities being met? (Needs that type of input from industry). Barbara: that's a side conversation with Robin Podmore. We can use IncSys placement services. Dedicated to help us place new students. Barbara will follow up with Rob next week.

Northwest Utility Training & Education Center (NUTEC), Arlene Abbott

NUTEC sits on a 70-acre site within Richland, bought by Local 77 in 2009. Neighbors include Hanford training center, PNNL, Energy NW and Hammer. Center has lineman training pole yards. BPA uses the site for long haul rescue helicopter training

- Held a needs assessment in Sept/Oct 2011. Six PUDs plus BPA, Grand Coulee, City of Richland and Benton REA participated. Met with operations managers. Results: Need to provide hands-on activities for troubleshooting underground systems, safety training, line locate certification, foreman leadership training and opportunities/training for vets.
- Held a vision session in January 2012 with more than 30 Local77 journeymen. Results: need post-journeymen training such as thumper/underground fault locate, troubleshooting skills, hot sticking, grounding, rigging, pertinent safety and military veterans.
- There are many classroom training opportunities for the utility industry. What we lack is hands-on field training for our craftsmen.
- NUTEC has a 14-member advisory board which is co-chaired by labor and industry representatives (BPA and IBEW Local 77) - met Feb. 17.
- *Vision: Provide needed training for the incumbent and future utility industry workforce (military veterans) to perform work in a safe manner to remain competitive at present and into the future with high-skill high-wage energy jobs...with particular focus on providing skills upgrade training to journeymen. Specifically new leaders as baby boomers retire; proficient in operating/troubleshooting merging technologies; prepared to transition to emerging technologies.*
- First training was held in January with Bob Topping. BPA sent 12 employees for training.
- Columbia Basin College was awarded a small grant from Spokane WDC. It will fund a three day summer pilot program (slated for June 26 – 28). Troubleshooting energized systems training was identified and recommended. Hammer is bringing in electricians. Teams of three high voltage electricians will be matched with veterans (who will observe).
- Next up: Creating a NUTEC website, building relationships and potential partners, nurturing advisory board, writing grants, hoping to participate in Careers in Energy week in October

U.S. Dept. of Energy Smart Grid project update, Jamie Krause

- **Smart Grid Grant** reached mid-point January 31, 2012. Budget Director, Vicki Oakerman and Project Manager, Jamie Krause, implemented a comprehensive review of budgets and program activities. One-on-one follow-up was conducted and strategies implemented to ensure all sub-recipients remain on task and on time
- **Year 3 Budget Process** – The budget process for the third and final year of the DOE Smart Grid Workforce Development project has begun. A Request for Information process is underway with all sub-recipients. Project and fiscal recommendations will be sent to the budget committee in early June for review. Final recommendations for year 3 funding will be forwarded to the Governance Board June 20th.
- **Montana** – April 18 – 19, 2012. Roll-out of the fifth state for the DOE Smart Grid Project. NorthWestern Energy hosted the Educational Taskforce, Curriculum Development Subcommittee and Manufacturing Taskforce meetings over two days. Anchor partner, Montana State University (MSU) and its utility partners will identify consumer focused educational products for Smart Grid Technology. MSU Bozeman Weatherization Center will collaborate on product development of education tools that reduce barriers to implementation of smart technology for residential and commercial customers. Products and information will be disseminated through the web portal and regional partner organizations.
- **Curriculum Development**
 - Introduction to Substations: Substation and Transmission Equipment (Avista)
 - Substation and Distribution Automation: Introduction and Evolution of Electric Distribution Systems (Pacific Northwest National Laboratory for UW/WSU. A leveraged DOE project)

- Job Safety and Hazard Analysis (Chemeketa Community College)
- **Training Targets**
The project has exceeded the target of 1,215 individuals slated for training under the grant. Beginning August 2010, through March 31, 2012, **2,814** individuals have received smart grid related training. This includes pre-apprenticeship, apprenticeship and incumbent worker courses, as well as, high school students participating in hands-on learning sessions and high school STEM teachers receiving in-service training.
- **New Hires**
The new hire target for the project is 234 workers. As of March 31, 2012, **127** individuals (54.3%) have found employment with 37 different organizations in occupations such as, ground crew, substation operator apprentice, plant operator trainee, boiler operator and hydro utility worker at an average starting wage of \$15-24 per hour.

Director's Report, Barbara Hins-Turner

Smart Grid Project Meetings

- Portland – December 8
- Utah – January 30- Feb 1
- Montana – April 17/18

STEM Summit, Bellevue, Feb 9/10

Centers of Excellence for IT, Education, Aerospace and Adv Mfg and Energy, 120 people
Representing community college and high schools across the state
Energy speaks – Randy Stearnes, Tacoma Power, Sally Zeiger Hanson, WSU

Green Jobs, Good Jobs, Blue Green Alliance, March 15/16, Los Angeles, CA

Barbara Hins-Turner, Diane Quincy, Avista Utilities, Kairie Pierce, Washington State Labor Council, Sally Zeiger-Hanson, WSU Energy Program and Arlene Abbott, IBEW 77 Consultant presented as a panel on the Washington Center of Excellence model and partnership. Barbara also visited LA Trade Tech College to discuss potential future joint grant opportunities.

Center for Energy Workforce Development (CEWD) Community College Forum, March 6/7, Arlington, VA

Barbara Hins-Turner and Ryan Davis, Director of Regional Education and Training Center, Satsop Campus attended the national CEWD Conference first annual Community College Forum at the invitation of the Dept of Energy Smart Grid Project Officer. Barbara presented on a panel with three other community colleges funded in the same round. Legislative visits included Senators Cantwell and Murray, Congresswoman Herrera, Congressman Inslee and the Senate HELP Committee

Grants:

Department of Commerce University Center Grant Application

PNCECE submitted a grant application to the US Dept of Commerce to establish the Academy of Energy Entrepreneurs. The project builds on the current Energy Technology program adding an entrepreneurial and business development track. College partners include Grays Harbor and Peninsula Colleges and WSU Energy Program. Other partners include Institute of Electrical and Electronics Engineers, Lewis/Thurston/Mason Labor Council, Economic Development Councils of Clallam, Grays Harbor and Lewis Counties and the Port of Chehalis.

Department of Labor Trade Act Applications

Idaho State University – Incremental Systems integration in Clark, Bellingham and Centralia College (GHC and SSC Ione) energy programs
Los Angeles Trade Tech – I-5 Vehicle Electrification Project, Shoreline, RETC/Grays Harbor College

New Business

Energy Efficiency video will be produced by the end of July to promote energy efficiency education and careers.

Melanie Kincaid reviewed Try-A-Trade. The raining day event included 454 students, 50 teachers, 15 counselors and 75 support personnel. She thanked all who participated – including IBEW 77, Tacoma Power, Grays Harbor College, Grays Harbor PUD

11:35 Meeting adjourned