

8th Annual
Energy & Construction
Best Practices Summit

EmPOWER
the workforce –
BUILD the economy



cleanenergyexcellence.org

CONSTRUCTION
CENTER OF EXCELLENCE
RTC RENTON TECHNICAL COLLEGE

constructioncenterofexcellence.com

JAY INSLEE
Governor



STATE OF WASHINGTON
OFFICE OF THE GOVERNOR

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Greetings from the Governor

June 19 – 20, 2013

I am pleased to extend warm greetings to all of those attending the *2013 Energy and Construction Best Practices Summit: EmPOWER the workforce-BUILD the economy*, sponsored by the Construction Center of Excellence and Pacific Northwest Center of Excellence for Clean Energy.

I would like to take this opportunity to congratulate our state's Energy and Construction Centers of Excellence on hosting their 8th annual Best Practices Summit. I am proud of their hard work, which has become a national model of excellence. They have helped our Community and Technical College system become a key economic engine for our state and continue to secure millions of grant dollars to strengthen and expand our educational programs. This is exactly the kind of leadership we need to ensure our workforce is well trained for the jobs of today, as well as the emerging jobs of tomorrow.

This summit represents the highly successful collaboration of industry, organized labor, workforce, education, economic development and government partners. I applaud your efforts and hope you will continue to share ideas and best practices, keeping this collaborative endeavor strong and sustainable into the future.

Thank you for coming, and please accept my best wishes for an informative and rewarding event.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jay Inslee".

Jay Inslee
Governor

Welcome

Welcome to the 8th Annual Energy and Construction Best Practices Summit. Through the years, we have heard from amazing subject matter experts representing industry, organized labor, workforce, economic development and education. This year we're proud to include two additional Washington Centers of Excellence. The Centers are flagship institutions that build and sustain a regional competitive advantage through state sector strategies.

Our common message, which is reflected in this year's theme, is "EmPOWER the workforce. BUILD the economy." Our collective goal continues – to develop a high-skills high-wage workforce that will support a regional economy.

The Educators Institute (June 19) will provide a network of connections. We are pleased to include *Train the Trainer* (updates and giveaways), and *Technology Transfers* from the Centers of Excellence: Global Trade & Supply Chain Management, and Marine Manufacturing & Technology. Together with the Construction Center of Excellence and Pacific Northwest Center of Excellence for Clean Energy, your centers offer industry trends that will help guide educational needs.

This year's keynote (June 20), Karen Elzey of The Aspen Institute, will show how building America's economic

strength depends on the education and skills its workers receive. Other regional and national experts will share how organizations are approaching changes in new technologies, workforce demographics and a new world view of a cleaner environment.

The students who will fill those roles continue to need our help to succeed. Throughout these years, you have made generous contributions to financially support students in need through scholarship donations. Thank you.

Since our last summit, we've enjoyed awarding energy and construction students in need with tuition, books, child care and most recently, student memberships in IEEE Power and Energy Society. Students who have received scholarship funds are attending programs at partnering colleges across the state at Wenatchee Valley, Peninsula, Grays Harbor, Renton Technical and Centralia colleges.

We are delighted to conclude this year's summit with our signature crab feed and scholarship auction. A special thank you goes to Bob Guenther, for transporting, cooking and serving the crab each year; and to Judy Guenther, for organizing the donations and the auction.

Your contributions are ultimately developing our future workforce. THANK YOU all for your generosity!



Barbara Hins-Turner, Executive Director (Right)
Pacific Northwest Center of
Excellence for Clean Energy
"A Centralia College Partnership"

Shana Peschek, Director (Left)
Construction Center of Excellence
Renton Technical College

The Construction Center of Excellence (CCE) at Renton Technical College

2012/13 has been an exciting and busy year

CCE was awarded two Labor and Industries Safety and Health Investments Project Grants to develop Green Building Safety curriculum and deliver multiple trainings around the state. We're partnering with Sellen Sustainability to create this first-of-its-kind training in the nation, which will provide certificates to more than 211 individuals. The training, along with content from WorkSafeBC safety talks, young worker safety training and job site behavior, will be incorporated into Toolbox Talks, which will be translated into Spanish and accessible via smart phone. The curriculum and videos are available at:

<http://www.constructioncoejobs.com/small-business-incubator/sustainability-resources-and-trainings/green-building-safety-curriculum/>

CCE continues to support construction career pathways.

Our partnership with Apprenticeship and Nontraditional Employment for Women and other stakeholders has created the **Apprentice Academy**, which supports critical training in leadership. This "soft skill" has been identified as essential – in an industry that is beginning to experience large retirements with no pipeline of experienced workers with leadership skills.

Networking educators and industry: In April we took a delegation from Washington state to the British Columbia Institute of Technology. Guests spent two days touring the schools of Construction and the Environment, Energy, Transportation, Marine and Aerospace. A networking reception ended day one and the attendees were joined

by additional BCIT administrators, instructors, and employer partners. The event was so well received that we will offer a tour again this year as well as a week-long "program shadow" opportunity. Watch our new website for announcements.

K-12 outreach includes attending, supporting and exhibiting at events such as the Pierce County Construction Career Days; Pizza, Pop and Powertools; King County Construction Days; and the Regional Education and Training Center's Try-A-Trade. These events give students age-appropriate hands-on experiences with equipment tools and fun projects.

CCE's new web sites www.constructioncenterofexcellence.com Educators, counselors, industry and students will find free curriculum, college program resources, industry news and information on sustainability. The website will showcase "excellence" in Construction and will include features about education, companies, new and emerging trends or materials, and much more.

Need a job or help with your construction business? Check out www.constructioncoejobs.com. This small business online incubator offers resources for construction business owners and entrepreneurs. You'll find legal, human resource, marketing and licensing information. The site also offers job postings and resume-posting pages, for veterans, women and apprentices.

Sign up for our quarterly newsletter – contact Vicki Plemmons at vplemmons@rtc.edu.

More than 500 students from 23 high schools participated in Try-A-Trade at RETC May 2, 2013.





PNCECE and Centralia College partnered with Centralia City Light to install the Energy Ball wind turbine. The power that is produced is sent back to the local power grid and is used by Centralia College. The turbine was purchased by the Mark and Laura Johnson fund.

On behalf of Centralia College and the Pacific Northwest Center of Excellence for Clean Energy (PNCECE), I would like to express our sincere gratitude for your support of the ***U.S. Department of Energy's Smart Grid Workforce Training Grant*** during the past three years. Through your participation, the project has been a huge success, bringing together industry, organized labor, education, workforce and economic development organizations across the Pacific Northwest region. Collaborating throughout the five state region including Washington, Oregon, Idaho, Montana and Utah has not been easy, but the networking that has resulted has been worth the effort.

In 2009, the Northwest Energy Efficiency Taskforce (NEET) had a vision to create a clearinghouse that would serve the energy workforce needs across the region. NEET reached out to the Center of Excellence and encouraged it to expand its focus from a statewide model to one across the Pacific Northwest. NEET's support of the smart grid grant and the \$5 million it brought to the state created PNCECE. The grant application was endorsed by four governors and 11 U.S. Legislators representing Washington, Oregon, Idaho, and Montana.

I am very appreciative that the vision was carried to fruition.

The U.S. Department of Energy considers this collaboration one of the most successful projects in this funding round of \$100-million - one of three of the largest awardees. I am pleased that collectively, we produced more than \$7-million in match/leverage, developed more than 50 new smart grid classes that will be shared in an open source format, trained well over 5,000 students and incumbent workers, and most importantly created 259 jobs. This grant was funded through the American Recovery and Reinvestment Act. We can proudly say that our partnership is a stellar example of success that contributed to the economic recovery of our region and our nation.

This has been one of the largest grant-funded projects, in terms of dollars and regional outreach, in the history of Centralia College. Special recognition goes to those who served as board and committee chairs: Troy Nutter of Puget Sound Energy, Ryan Fedie of BPA, David Sorensen of WestCAMP, Inc., Bob Topping of RETC and Jay Pickett of U.S. Army Corps of Engineers.

Thank you for making the Pacific Northwest Center of Excellence for Clean Energy – a Centralia College partnership – a resounding success.

Sincerely,



Dr. James M. Walton
President, Centralia College

Energy Educators Association

The Energy Educators Association (EEA) is a regional professional group whose mission is to address the challenges of a carbon-constrained world by supporting energy educators. Members value the opportunity to meet with other energy educators on a semi-regular basis. Borne out of a National Science Foundation grant, the EEA is planning for future sustainability by electing officers and creating a slate of activities drawn from membership requests. Currently, the EEA's activities focus on the following categories: collaboration, support for program/course development, and creating infrastructure for the long-term viability of the EEA and its members. There is no fee to join the EEA at this time, and any educator who teaches energy-related content is eligible to join (K-12, college, and trades are all welcome). To join the EEA, contact Alison Pugh, alison.pugh@edcc.edu or 425-640-1509.



Alison Pugh and Tom Barr

Center of Excellence for Global Trade and Supply Chain Management presents *TOTE and How Does Your Rain Garden Grow?*

Totem Ocean Trailer Express (TOTE) has been named a 2012 Puget Sound Champion by the Puget Sound Partnership – courtesy of <http://www.totemocean.com/>

TACOMA, Wash. – TOTE was nominated by the South Central Action Area in recognition of their efforts to advance Puget Sound recovery through the industrial rain garden project.

The rain garden project, the first of its kind in Puget Sound, has proven the efficacy of low impact development on the treatment of storm water in industrial settings. TOTE is proud to be a leader in proving that rain gardens are cost-effective for businesses to meet pollution prevention requirements.

The rain garden, which features almost 600 native plants, is designed to filter pollutants from water that runs off building rooftops. Plantings included coast strawberries that were generously donated by The Tacoma Garden Club.

TOTE's rain garden was installed with help from the non-profit Stewardship Partners, which is working with Washington State University to install 12,000 rain gardens in the Puget Sound region over the next five years.

"TOTE's leadership putting in one of the first industrial rain gardens in the region, serves as a great example of what we believe will be many more to follow as businesses recognize the outstanding value and return on investment rain gardens provide," David Burger, Stewardship Partners executive director, said.

The rain garden is expected to eliminate more than 80 percent of the heavy metals in the stormwater that otherwise would flow into Commencement Bay. The annual rainfall collected and filtered by TOTE's rain garden is estimated to be over a quarter million gallons.

"TOTE achieves three objectives with this rain garden," Rand Lymangrover, TOTE's terminal, environmental and security manager, said. "It improves stormwater quality, it demonstrates to others in the industry that it works, and it helps beautify our site."

The Center of Excellence for Marine Manufacturing and Technology presents *Recycling and Lifecycle Management of Composite Materials*

The Center of Excellence for Marine Manufacturing and Technology, at Skagit Valley College, has funded a pilot program at Peninsula College focused on the recycling and lifecycle management of composite materials. Peninsula College, in partnership with the Center of Excellence, and the University of Alabama at Birmingham (UAB), developed and delivered a three credit-hour course that can be replicated statewide. Industry partners, Ashland Chemical and Janicki Industries, have provided critical project support for the pilot.

The pilot course had five main objectives:

1. Introduce students to the lifecycle of composite materials
2. Introduce the challenges of recycling composite materials
3. Introduce methods of recycling composite materials
4. Review current research addressing composite material recycling
5. Facilitate student projects aimed at development of new parts from recycled composite material

The three credit hour pilot course took place this spring at Peninsula College (mid-April to mid-May), taught by Norm Nelson of Mervin Manufacturing, www.mervin.com. Seven students completed the course. ***With Phase I of the project complete, planning is underway for Phase II, which will include the following priorities:***

1. Review and assessment of pilot: content, structure and completion of student outcomes – the assessment will be shared with industry and system partners
2. Expansion of curriculum to include a sequence of courses, leading to a certificate
3. Conduct a Composite Lifecycle DACUM
4. Establish live lab feeds between UAB, Peninsula College and Skagit Valley College
5. Develop research project for students, allowing direct interaction with industry

Phase II curriculum will be delivered during the spring 2014 quarter.

Pre-Summit – Educators Institute, June 19

8:30 – 9:00 a.m. Check in/continental breakfast

9:00 a.m. Welcome

Barbara Hins-Turner, Executive Director of the Pacific Northwest Center of Excellence for Clean Energy, and Shana Peschek, Director of the Construction Center of Excellence

9:10 a.m. – noon

Smart Grid Train the Trainer: This session, developed and taught by world-class faculty – Dr. Robert Topping, System Design Consultant; Dr. Kevin Schneider, Pacific Northwest National Laboratory; and Jeff Hammarlund, PSU Public Policy Expert – will introduce NEW open source programs and classroom materials. Educators and industry trainers will learn how implement competency based programs and learning outcomes; as well as how to use Train the Trainer materials, new online courseware using the National Training & Education Resource (NTER), smart grid tools and PNCECE's website to enhance existing programs. Each participant will also receive a free smart grid toolbox filled with educational materials to use in the classroom. The new open source curriculum and smart grid toolbox were funded by the U.S. Dept. of Energy Smart Grid Workforce Development Grant.

Noon – 12:30 p.m. Lunch

12:30 – 3:00 p.m.

Technology Transfer through Washington State Centers of Excellence:

Centers of Excellence for Construction, Global Trade & Supply Chain Management and Marine Manufacturing and Technology present emerging trends and innovations for educators.

Construction Center of Excellence presents: A tour the Tunnel Boring Machine – the only hands-on training of its kind in North America. Northwest Laborers-Employers Training Trust Fund will use the TBM for a new class on bored tunnels that is expected to kick off this fall, adding the training to its SHAFT (Safety Hazard Awareness for Tunnels) program.

Center of Excellence for Global Trade & Supply Chain Management presents: "How Does Your Rain Garden Grow?" Totem Ocean Trailer Express (TOTE) has been recognized as a company on the forefront of environmental policy, programs and employee participation. Their achievements and industry leadership are a source of pride and motivation for the entire company. Rand Lymangrover will present industry trends of the following environmental projects:

- Industrial Rain Gardens – including plans and materials needed to build rain gardens at schools
- Ship Shore Power Plug In – shore power is becoming more prevalent at seaports and within marine electrical, terminal operations and shipper programs
- HVAC Conversion
- Yard Lighting Upgrade
- Recycling Program

Center of Excellence for Marine Manufacturing and Technology presents "Recycling and Lifecycle Management of Composite Materials." This Center of Excellence in partnering with Peninsula College and the University of Alabama at Birmingham to develop and deliver a three credit-hour course that can be replicated statewide. Industry partners, Ashland Chemical and Janicki Industries, have provided critical project support for the pilot, which includes these objectives:

- Introduce students to the lifecycle, challenges and methods of recycling composite material
- Review current research addressing composite material recycling
- Facilitate student projects aimed at development of new parts from recycled composite material

3:00 – 3:15 p.m. Break

3:15 – 5:00 p.m.

Energy Educators Association: Training Programs: 400 ppm – What's next? Many scientists agree that our "safe" level of carbon is 350 parts per million (ppm). We just crossed the 400 ppm threshold. Facilitated by NSF Grant Education Subcommittee (Grant no. 1002931): Tom Barr, Chair, Randy Sibley, Alison Pugh (all Edmonds Community College), and Gail Alexander (Cascadia Community College).



This project is supported by the National Science Foundation under Grant No. 1002931.

Energizing Futures: From Oregon to Africa

Oregon High School Advanced Construction Students create LightStick factory (and demonstrate at this year's summit)

Competency based learning is igniting critical thinking and problem-solving skills within high school students in Oregon. So much so that students are researching cultures, developing products, creating business plans and designing factory models to send to third world countries, such as Cameroon, Africa. These students are celebrating successes alongside of failures and are learning every step of the way.

This all started in September 2010 when ABC's Extreme Makeover/Home Edition adopted a project in Salem, Ore. The show's crew invited local high school students to get involved – and they jumped at the chance. The students developed energy efficiency products and built benches, boxes and landscaping lights. Dr. Bob Topping, Director for Strategic Partnerships at the Regional Education and Training Center, was involved with training volunteers.

Dr. Topping recognized the significance of the learning processes the students utilized and felt compelled to continue that process throughout other Oregon schools. He realized he needed innovative instructors who believed in competency based learning and found Britt Tucker, the construction and infrastructure teacher at Oregon City High School (OCHS).

"Britt is very innovative," Dr. Topping said. "The students in his program are doing capital improvement projects and are building things such as shelters and structures in parks. They are really helping their community."

Tucker is weaving curriculum throughout his program and has found that the projects really connect with the students. Students are learning real-life skills that involve more than a hammer and a nail.

"The students are pulled to do this – not pushed," Tucker said. "They are pulled along by the need of the community."

Together, Dr. Topping, Tucker and Roger Parish, of Spectrum Consulting Group, are running a Lean/Six Sigma program in

an advanced construction class that connects students to career pathways. The program is helping students organize and manage projects – designing a plan, called a Project Charter, which includes "situation, solution, action, objectives, critical to quality and benefits" which will align them with earning white and yellow belts. Spectrum Consulting Group is providing all of the certifications and licensing (\$400 per student).

"Last year, the students designed and built a mobile battery charging system," Topping added. "It's a solar powered station that allows them to re-charge tool batteries while they are on a construction site."

This year's project focused on the culture of Cameroon. Villagers live without electricity and safe lighting. Women walk miles to buy a gallon of expensive kerosene oil to fuel lamps. The fuel is dangerously unhealthy.

So the students set their goals to help. After learning about the villagers, the students created a plan which included the following:

The focus of the project is to apply the concepts of Lean/Six Sigma to design and build a prototype for a rechargeable LED lighting and charging system capable of providing 16 hours of light for a small 100 square foot house.

They re-created a product called the LightStick, which was introduced to them by Community Solutions Initiative, and found that it could be useful in more ways than one. Not only will it light up a room, the LightStick will create economic development as well. And it's an easy-to-assemble product made from common materials that will cost less than \$3 to build.

"Dr. Topping started with us last year," Dillan Albrich, an OCHS senior and one of the project managers, said. "He brought us a light and we figured out how to make it. Our plan is to ship these to an African village to light up a dark place," he added.

(Continued on page 10)



Summit, Signature Crab Feed & Scholarship Auction, June 20

8:30 – 9:00 a.m. Check-in, vendor booths open, continental breakfast (upstairs)

9:00 – 9:30 a.m. Opening Ceremony and Welcome by Dr. James Walton, President, Centralia College; Barbara Hins-Turner, Executive Director, PNCECE; and Shana Peschek, Director, Construction Center of Excellence

9:30 – 10:15 a.m. *Keynote: Karen Elzey*, Director for Skills for America's Future, The Aspen Institute
In an increasingly competitive global economy, America's economic strength depends on the education and skills of its workers. Skills for America's Future, an employer-led initiative of The Aspen Institute, was created to foster partnerships between employers and community colleges to address America's pressing jobs issue

10:15 – 10:45 a.m. Networking/coffee break – please visit our vendors upstairs

10:45 a.m. – noon

Regional/National Workforce Panel

The world of workforce development is changing. Innovations in new technologies, a new world view about a cleaner environment and shifting demographics are reshaping the workforce. As a result, organizations across the region and nation are responding by developing and implementing strategic energy and construction best practices models. Learn from the experts within regional and national organizations how they are approaching these challenges.

Facilitator: Jim Crabbe, Workforce Director, Washington State Board for Community and Technical Colleges

- Barbara Byrd, Secretary-Treasurer, Oregon AFL-CIO
- Leise Rosman, Vice President, Research & Development, Corporation for a Skilled Workforce
- Steve Gelb, Director, Emerald Cities/Seattle
- Pat McCarty, Power Generation Manager, Tacoma Power; National Hydro Association; Chair, PNCECE Advisory Board

Noon – 1:30 p.m. Lunch and Sponsor Recognition

1:30 – 2:45 p.m.

U.S. Department of Energy Smart Grid Grant Project Debrief

A panel consisting of all committee and taskforce board chairs will present a wrap-up of the three-year, \$5-million grant.

Facilitator: Diane Quincy, Director of Leadership and Organization, Avista

- Troy Nutter, Smart Grid Governance Board Chair; Manager, Operation Training, PSE
- Ryan Fedie, Smart Grid Education Taskforce Chair; Engineering Service Manager, Energy Efficiency, BPA
- David Sorensen, Smart Grid Manufacturing Taskforce Chair; Executive Director, WestCAMP, Inc
- Jay Pickett, Curriculum Development Subcommittee Co-Chair; Senior Power Plant Operator, U.S. Army Corps of Engineers
- Dr. Bob Topping, Curriculum Development Subcommittee Co-Chair; Director for Strategic Partnerships, RETC

2:45 – 3:15 p.m. Networking/Coffee Break

3:15 – 4:30 p.m. Breakout sessions

Workforce Challenges of Electric Sector Employers in the Pacific Northwest 2013

Retirements, skills gaps and new technology: these are all issues that Washington and Oregon employers cited as workforce challenges in the initial Labor Market Study in 2008. A 2013 update of this Labor Market Study is now underway and it includes data from utility employers in five states across the region. A presentation of some of the early findings from the 2013 study will kick-off this lively discussion among energy employers.

Facilitator: Alan Hardcastle, PhD, Senior Research Associate, Washington State University Energy Program

Panelists: Heather Burns, NorthWestern Energy; Maureen Fallt, Portland General Electric; Angelique Keavney, Idaho Power; and Heather Rosentrater, Avista

Construction Workforce Innovations: Best practices and workforce models in entrepreneurship, collective impact, and veteran initiatives.

Facilitator: Shana Peschek, Director, Construction Center of Excellence

Panelists: Aaron Adelstein, Build Green; Nancy Mason, SustainableWorks; Amy Moorash, Joint Base Lewis-McChord; Janet Stephenson, Innovate Washington

4:30 – 5:00 p.m. Conference Adjourned

5:00 – 5:30 p.m. Networking

5:30 – 6:00 p.m. Student Success Stories & Industry Scholarship Support

6:00 p.m. – 8:00 p.m. *Signature Crab Feed and Scholarship Auction* – live and silent auction supports community and technical college students throughout Washington. Auctioneer: Larry Kite, BPA



This material is based upon work supported by the Department of Energy under Award Number(s) DE-OE-0000398.

Energizing futures (continued)...



Oregon City High School Advanced Construction students build LightSticks in a simple factory.

Not only did these students figure out how to build one LightStick, they learned how to build 15 of them in an hour. By doing so, they have discovered how to build a simple factory to assemble the LightSticks. Now they are creating start-up tools such as videos and instruction booklets to give to the third world communities.

The students have recruited the OCHS girl's golf team to step in as factory workers. The girls will be videoed as they are taught how to make the product and the factory. The clip will be used to encourage women in Cameroon to create a factory.

"The students are developing entrepreneurship for women in countries that didn't have it before," Dr. Topping noted. "They are also empowering women to have economic capacity who have little opportunity to make or create a livelihood."

The small group of seven OCHS students is learning more than building a product and a factory. They are learning how to run and manage a business too. Austin Winters along with Aldrich are the managers who are charged with keeping inventory.

"This project has taught me how difficult it is to keep inventory," Albrich, who wants to be a pilot, said. "You don't realize how much you need and use."

The students need to experience struggle so that they can hone in soft skills. They trouble-shoot, practice critical thinking and they fail – but they figure out how to find solutions.

"You have to get out of the way and allow them to fail so that they can succeed," Tucker said. "Failure in the education system is penalizing."

Next year, the students will create a light cycle which will complement the LightStick project. The cycle will give the villagers a means of re-charging batteries – which will power the laptops and cell phones that they already have. Four batteries can be re-charged after 20 minutes of cycling.

"I am proud of these kids," Tucker said. "They are so invested and deeply involved – they have complete ownership of this project."

And the graduates return to mentor those still in school.

"I am proud of these kids," Britt Tucker, OCHS Construction and Infrastructure teacher, said. "They are so invested and deeply involved – they have complete ownership of this project."



Community Solutions Initiatives used LightSticks as a teaching tool to demonstrate how to re-charge batteries in Araku Valley, India.

This project has steps though. The LightStick design needs to be refined, such as using bamboo to replace PVC piping, and will need to make its first appearance at an international conference as a showpiece. The students need to find funding to continue redefining their product.

A significant partner supporting the project is Community Solutions Initiative (CSI), a non-profit group of the Institute of Electrical and Electronics Engineers Power & Energy Society (IEEE PES). CSI is committed to the open-source design and eventual delivery of energy solutions to the world's poorest and most energy-deprived populations. Engineers and dedicated professionals from around the world volunteer to help others. They've been tasked with lighting up one million homes. CSI will help the OCHS students distribute materials in Africa. The LightSticks have been used in India, as a teaching tool for kids to learn more about re-charging batteries.

The next step

Dr. Topping and Parish would like to introduce the OCHS student program to other schools that are facing high drop-out rates. They are convinced that the Lean/Six Sigma, competency based program will help struggling kids stay in school and become successful community members.

What is Competency Based Learning?

It includes putting situations into context (for what you're doing), agreeing to a set of conditions and learning how to apply the conditions to a culture. For example, say a student wants to work for Les Schwab. What does Les Schwab do most often? They change tires alongside a busy road (more than in the shop). You not only teach the student how to change a tire; you teach the student how to change a tire in bad conditions – such as a cold dark stormy night on a highly traveled road – and how to do that safely. This student will be much more employable – learning how to troubleshoot and solve problems – than a student who learned how to change a tire by reading a driver's manual.

Are Employer Expectations Too High?

by Beth Goodbaum, *Industry Market Trends Career Journal*/thomasnet.com, March 5, 2013



Karen Elzey, M.S., Director, Skills for America's Future, The Aspen Institute

Companies need more qualified candidates to fill open positions, but why are so many people across the U.S. jobless? A recent industry roundtable highlighted how companies can share responsibility and give back to employees through training and education at a time when employer expectations are at a peak.

At a February [The] **Aspen Institute** roundtable event sponsored by Grainger, a supplier of maintenance repair and operating products, industry professionals spoke

about the underlying issues behind the skills gap and the steps necessary to fill jobs at a faster pace. Karen Elzey, the director of **Skills for America's Future**, an initiative to boost industry partnerships with community colleges, described the problem: There are 3.7 million open jobs in the U.S., including 276,000 unfilled jobs in manufacturing.

Grainger president and CEO Jim Ryan explained that finding employable workers is an issue that halts company productivity and growth. The workforce shortage is also an issue that impacts suppliers and customers. "Without solving this (worker shortage) problem, eventually it's going to be difficult to have a sustainable economy," he said.

Who's to blame for the workforce issue? Employer expectations have risen to new levels, according to Peter Cappelli, author of **Why Good People Can't Get Jobs**, and professor of management and director of the Center for Human Resources at the Wharton School. During the discussion, he noted that in previous decades, employers would train employees and hold on to them. Now, companies are asking more from their employees while giving less.

"The big change is that employers want different things. In the 80s, they used to say, 'We want people who are trainable and if they have great attitudes we will train them.' Now they are not saying that. They are saying, 'We want someone, not only with an academic background that completely fits our needs, we also want somebody with five years' experience,'" he noted.

Cappelli also emphasized that there is a policy problem. With millions unemployed, not enough employers are willing to give workers initial experience and training. Furthermore, wages are

declining. "The rate of pay for machinists has declined. If there's really a shortage, wages should rise," he said.

Yet even with low wages, employers' standards are on the rise—a workforce issue that has trickled into a broad range of industries. The **New York Times** recently highlighted "degree inflation," in which employers raise the bar by hiring workers with bachelor's degrees for low-skilled positions such as couriers and file clerks—jobs that did not require a degree in the past.

Hiring managers with long wish lists are partially to blame, according to Cappelli. He urges companies to take a step back, evaluate wages, and properly train workers for the skills that they need.

Ryan added that employers, faced with aging workers and unfilled positions, need to partner with schools to better prepare their workforce.

"I think the economic environment that we are operating in is forcing companies and educators to find a way to get together to solve this problem jointly," he said. "Companies cannot be on the sidelines and they need to invest in education."

Yonnie Leung, senior manager for workforce development at Pacific Gas and Electric Company, offered an employer perspective, stating that companies need to pay close attention to the skills that they require and coordinate better with schools for specific needs. "There's less of a focus on technical education, both at the high school and the community college level, and it's our job as employers to get involved with that." She cited PG&E's initiative to help the gap with **PowerPathway**, a nationally-recognized workforce development model, which has trained hundreds of individuals.

Grainger's **Tools for Tomorrow** scholarship program is intended to bridge the gap by helping trade students prepare for jobs. Many community colleges across the U.S. are participating in the program. Grainger partners with the American Association of Community Colleges (AACC) to "identify schools that meet the criteria to participate."

Panelist Bryan Albrecht, president of Gateway Technical College, which has major campuses in Kenosha, Racine and Elkhorn in Wisconsin, agreed that companies have to identify the skills they need and partner with schools to prepare employees. "The continuum of training is something that needs to be thought of as a lifelong process and not just [about] gearing up community colleges and putting [people] back to work," he said, noting that he will strive to partner with companies, such as Grainger, to help prepare students for jobs.

What do you think? Are employer expectations too high?

KEYNOTE SPEAKER

Karen Elzey, M.S.

Director, Skills for America's Future, The Aspen Institute

Skills for America's Future (SAF) is an employer-led policy initiative of the Economic Opportunities Program at The Aspen Institute. The aim of SAF is to foster a national network of partnerships among employers, labor unions, and community colleges, with a commitment to scaling meaningful and measurable solutions. SAF also provides a national voice on the effectiveness of public-private partnerships in a variety of areas: improving workforce skills, assessing industry-recognized credentials, and gauging employment outcomes of American workers and students.

Prior to joining The Aspen Institute, Karen Elzey served as Vice President of the U.S. Chamber of Commerce's Institute for a Competitive Workforce, where she focused on K-12 education reform and job training policies.

Karen's previous experience also includes coordinating public-private partnerships between K-12 school districts and employers for a local economic development agency in Indiana, and teaching English as a Second Language in Poland.

Karen holds a B.A. and M.S. from Miami University (OH). She has also completed the Executive Leadership Program at Georgetown University's McDonough School of Business.

GUEST SPEAKERS AND PANELISTS

Aaron Adelstein, M.S.

Executive Director, Built Green program of King and Snohomish Counties

Build Green is one of the most successful green building certification programs in the U.S. with more than 500 member companies and 15,000 projects certified.

Aaron Adelstein has 10 years of experience in green building both academically and in implementation.

He recently received the 2013 King County Green Globe Award for Leadership in Sustainable Development. He served on the City of Seattle's Green Building Task Force from 2008-2010 for Mayor Greg Nickels, and on a technical working group to Governor Gregoire's Climate Action Team in 2007-2008. Aaron is currently on the board of Building Green in Boulder Colorado, GreenTools Sustainable Cities Committee and the State Building Code Council's Green Building TAG.

Aaron holds an M.S. in environmental policy from the University of Montana where he specialized in environmental advocacy strategies focusing on green building programs.

Gail Alexander, M.A., M.S., CSBA

Full-Time Faculty and Program Lead, Environmental Technologies and Sustainable Practices Program, Cascadia Community College; Energy Educators Association board member

Gail Alexander has more than 25 years of experience in education, program management, and scientific research, having worked at institutions that include Antioch University, Fred Hutchinson Cancer Research Center, Oregon State University, Seattle Central Community College, the Sustainable Building Advisor Institute, the University of Southern California, the University of Washington, and Whatcom Community College.

She has been at Cascadia Community College since 2010. Combining her interest in interdisciplinary thinking and systems design with her passion for social change and sustainability, Gail instructs with the intention of helping students critically analyze the benefits and drawbacks of innovation and technology within the larger framework of creating healthy livable communities.

Gail holds an M.A. in Whole Systems Design from Antioch University, an interdisciplinary M.S. in Environmental Science, History of Science, and Oceanography from Oregon State University, and a B.Sc. in Zoology (with a minor in Science, Technology, and Society) from the University of Calgary. She is also nationally certified as a Sustainable Building Advisor (CSBA).

Tom Barr, M.A., LEED-AP

Energy Management Instructor, Edmonds Community College Chair, Energy Educators Association

In the 1970s, at the University of New Mexico, Tom Barr worked on design projects involving human-powered agricultural machines, wind energy, and solar-heated buildings. As a Peace Corps volunteer in Ecuador, he worked on solar crop dryers, solar water heaters, biogas digesters, wind-powered water pumps and hydraulic ram pumps. During his graduate studies at the University of New Mexico, he assisted teaching architectural design. Thereafter for 20 years, Tom worked for architectural firms specializing in health care design. He coordinated construction drawings for most aspects of institutional buildings, including building envelope, interior build-out, finishes, mechanical/electrical and construction administration. Concurrently, he collaborated in the design of Songaia Cohousing Community in Bothell, WA: small homes and common amenities in a village-like setting, supporting a low-impact, sustainable lifestyle. In 2009, Tom taught in the Clean Energy Technology program at Shoreline Community College, and since then has taught in the Energy Management program at Edmonds Community College.

Tom holds a bachelor's degree and Master of Architecture from University of New Mexico.

Biographies

Heather Burns, M.S.

Director of Human Resources, NorthWestern Energy

NorthWestern Energy serves the states of Montana, South Dakota and Nebraska with natural gas and electric transmission and distribution services. Heather Burns has worked for NorthWestern Energy for 15 years. She is responsible for all aspects of the employee lifecycle, and oversees the Human Resources Generalist team. Heather organizes development activities such as leadership development, employee engagement and workforce planning.

Heather holds an M.S. in Industrial/ Organizational Psychology from the University of Nebraska at Omaha.

Barbara Byrd, Ph.D.

Secretary-Treasurer, Oregon AFL-CIO

A union member and labor educator for more than 25 years, Barbara Byrd has worked across the country with a wide variety of unions – public and private, white- and blue-collar, manufacturing, construction and service. Barbara came to the Oregon AFL-CIO six years ago with significant relationships with many Oregon unions and knowledge about their histories, challenges and the resources they bring to the larger union movement.

Barbara oversees workforce and economic development policy issues for the Oregon AFL-CIO. She represents the organization in state level discussions about climate and energy policy. She also staffs the Oregon BlueGreen Apollo Alliance, a coalition of labor, business, environmental and social justice organizations.

Barbara teaches at the Labor Education and Research Center of the University of Oregon. She also helps deliver leadership and organizational development training as part of the national AFL-CIO's Central Labor Council/State Federation program.

Barbara holds a Ph.D. in Adult Education from the University of Texas, and an M.S. in Labor Studies from the University of Massachusetts. She is a member of the United Academics of the University of Oregon/AFT-AAUP.

Jim Crabbe, M.E.A.

Director of Workforce Education, State Board for Community and Technical Colleges

Jim Crabbe is responsible for the oversight and operations of Workforce Education and Economic Development activities for the 34 colleges in the Washington State Community and Technical College system. Programs included are: Worker Retraining, WorkFirst, Carl Perkins, Apprenticeship, Job Skills, Customized Training, Centers of Excellence, and a number of competitive grant programs approaching \$90M annually.

Prior to working at the State Board, Jim was Vice President for Instruction at Clover Park Technical College in Lakewood, WA. While there, he was responsible for more than 60 professional technical programs, and 100+ instructional staff and faculty of the college.

Jim is also a retired Army Colonel with more than 27 years of service worldwide. He joined the college system upon retirement from the active military in 1995. Jim's experience in training and competency based education spans more than 45 years. He holds a B.A. in Economics and Business Administration from Westmont College, Santa Barbara, CA, and an M.S. in Educational Administration from Canisius College, Buffalo, NY. He is also a graduate of the Army's Organizational Effectiveness School, the Command and General Staff College, and the Army War College.

Maureen Fallt, M.S.

Organizational Development Consultant, Portland General Electric

Maureen Fallt leads workforce planning efforts for Portland General Electric (PGE) and chairs the Oregon / SW Washington Energy Consortium. She administers management development and diversity programs for the company. During her 24-year tenure at PGE, Maureen has served as an HR Business Partner and supervised talent acquisition.

Maureen holds an M.S. in Post-Secondary, Adult & Continuing Education from Portland State University and B.S. in Psychology from SOU.

Maureen currently serves on the Board of Planned Parenthood of the Columbia Willamette. She also serves as "Big Sister" in Portland's Big Brothers / Big Sisters youth mentoring Program.

Biographies

Ryan Fedie, M.M.E.

Engineering Service Manager, Energy Efficiency, Bonneville Power Administration

Chair, PNCECE Smart Grid Education Taskforce

Ryan Fedie oversees the technical direction of an energy-efficiency program that has saved more than 660 million kWh each of the last two years. This helped residential, industrial, commercial and agricultural customers save millions of dollars in energy each year. He also manages more than \$2 million in energy efficiency research and development projects for the agency's office of technology innovation. To bridge the gap between R&D and programmatic activity, he's helped develop an emerging technologies framework to "fill the pipeline" with commercially available energy efficiency strategies and technologies for the future.

Prior to his work at BPA, Ryan worked to advance building commissioning, including providing engineering support to programs, and performed energy savings calculations. He holds a bachelor's degree in Mechanical Engineering from the Milwaukee School of Engineering, and a master's degree in Mechanical Engineering from Portland State University. He is pursuing a second master's degree in engineering and technology management, also from Portland State University.

Steve Gelb

Local Director, Emerald Cities Seattle

Emerald Cities has partnered with the City of Seattle on a High Road Agreement for residential contractors and a Community Workforce Agreement for commercial contractors that insures quality jobs and opportunities for apprentices and those under-represented in the construction workforce.

Steve Gelb has held leadership positions in product and new business development in the outdoor products industry where he leveraged his creative and business planning skills into industry leading success at Eddie Bauer and JanSport. He helped found SustainableWorks, a statewide residential energy efficiency program, and served as its Executive Director for three years. While there, he helped pioneer a community based model with a one-stop-shop that retrofitted more than 500 homes. SustainableWorks pioneered High Road Workforce Standards in the residential energy efficiency sector. With Emerald Cities Seattle he works in program development and implementation to promote the triple bottom line for the new economy.

Jeff Hammarlund, M.A., M.S.

Adjunct Associate Professor and Senior Research Fellow, Portland State University; and President of NW Energy and Environmental Strategies

Jeff Hammarlund, a former guest scholar at the Brookings Institution, is co-author of *The Political Economy of Energy Policy*. He has written numerous academic and professional publications on energy and environmental policy and planning. Jeff teaches graduate courses on energy, environmental and natural resource policy. During the past two years, his courses include a widely-heralded team-taught interdisciplinary course for graduate students and mid-career professionals called *Designing the Smart Grid for Sustainable Communities*.

Jeff has held a number of senior positions as an energy policy advisor, analyst, and manager and as a land use and transportation planner. He has served in senior staff positions with the U.S. Senate Energy and Natural Resources Committee and the Department of Energy, and as an advisor to presidents, presidential candidates, and governors. He has also been a senior manager for conservation services at Southern California Edison, a senior policy analyst for a regional utility trade association, and a consultant to utilities, governmental agencies, environmental organizations, and Indian tribes.

He serves on the executive committee and chairs the Oregon Caucus of the NW Energy Coalition and is a board member of the Smart grid Oregon, Oregon Heat, and Oregon Interfaith Power and Light. Two years ago, Jeff chaired the Smart Grid Work Group for Oregon Governor John Kitzhaber's Ten Year Energy Plan. He currently serves as a member of the Western Interstate Energy Board and State-Provincial Steering Committee Demand Response Task Force.

Jeff holds an M.A. in Political Science and an M.S. in Urban and Regional Planning at the University of Wisconsin-Madison. He is pursuing a Ph.D. in Political Science and Policy Analysis.

Alan Hardcastle, Ph.D.

Senior Researcher, Washington State University Energy Program

Alan Hardcastle has more than 20 years of research, policy and consulting experience through public and private-sector clients in industry, organized labor, education, workforce, and economic development.

He serves on the five-state governance board of the Pacific Northwest Center of Excellence for Clean Energy-DOE-Smart Grid Workforce project and PNCECE's advisory board. He is a member of the state's Evergreen Jobs Leadership Team, which is advising the Governor and Legislature on federal and state investments in energy-related workforce education, economic development, training and labor markets.

Alan's current research addresses energy industry trends and employment, the impact of smart grid technology on the energy workforce, energy efficiency/energy management education and training, energy sector skill standards, and workforce development for the clean economy.

Biographies

Barbara Hins-Turner, M.B.A.

Executive Director, Pacific Northwest Center of Excellence for Clean Energy/"A Centralia College Partnership"

Barbara Hins-Turner was appointed to the Washington State Community and Technical College system in 2005. Previously, she was employed by Portland General Electric for 10 years as Corporate University Director and Apprenticeship Coordinator.

Barbara's energy workforce development committee work includes: the Washington HB2227 Evergreen Jobs Team advising the Governor and Legislature on federal ARRA investments in energy efficiency and renewable energy, Chair of the Institute of Electrical and Electronics Engineers (IEEE) Power & Energy Society's Community College Recruitment Committee, and past Chair of the Washington State Centers of Excellence Board of Directors. Her previous committee work includes 2008-2012 national Center for Energy Workforce Development Education Committee, 2010 U.S. Department of Education delegation to Germany's Global Sustainable Education Training Forum and U.S. Canada Clean Energy Forum; 2009 National Commission on Energy Policy's Task Force on America's Future Energy Jobs and U.S. Senate Democratic Policy Commission Green Jobs Roundtable.

Barbara serves as Principal Investigator (PI) for the U.S. Department of Energy Workforce Training for the Electric Power Sector grant (\$5-million leveraged to \$12-million); PI for the U.S. Department of Commerce grant to create the Academy of Energy Entrepreneurs and is Co-PI for the Edmonds Community College National Science Foundation Energy Management grant.

Barbara holds a bachelor's and master's degree in Business Administration, Marylhurst University, Portland, OR; graduate level certifications as Master Facilitator, Oregon State University; Professional Development, Eastern Oregon University; and International Management, Concordia University, Portland, OR.

Angelique Keavney

Human Resources Leader, Idaho Power Company

Angelique Keavney joined Idaho Power Company in 2006 as a Human Resources Leader. Angelique's primary responsibilities include talent acquisition, diversity and K-12 outreach, workforce planning, and on-boarding. Prior to joining the Idaho Power team, Angelique spent six years in the Staffing industry with a focus on recruiting and workforce planning. Angelique sits on several education advisory boards including the Governor's Science and Technology Roundtable, Meridian School District's Technology Advisory Committee and i-Stem.

Rand Lymangrover

Terminal Operations Manager, Totem Ocean Trailer Express, Inc (TOTE) Treasurer, Washington State Maritime Cooperative

Since setting sail as a one-ship company in 1975, TOTE has become the premier provider of ocean transportation service between the ports of Anchorage, AK, and Tacoma, WA. TOTE, a privately-owned Alaska corporation, operates a fleet of (RO/RO) cargo ships in addition to providing overland highway and intermodal connections throughout greater Alaska, Canada and the lower 48.

Rand Lymangrover has had numerous and varied responsibilities at TOTE including assisting with the design and construction of the Orca Class Ships built in 2003. He began working for TOTE in 1979.

Rand holds a B.S. in Ocean Engineering from the U.S. Coast Guard Academy. He spent 9 years on various Coast Guard Ships including two tours on Coast Guard Ice Breakers. He retired as a Commander in the U.S. C.G. Reserves.

Nancy Mason

Workforce Development Manager, SustainableWorks, Seattle

Nancy Mason has been involved in education and training. The last 30 years Nancy has been a classroom educator, apprenticeship instructor, apprenticeship director, apprenticeship program manager, and JATC member.

Pat McCarty

*Generation Manager, Tacoma Power
Chair, PNCECE Advisory Board*

Pat McCarty joined Tacoma Power in 1979 as a Civil Engineer and was appointed Generation Manager in 1996. He serves on national and regional hydropower committees, is the Advisory Board Chair of the Pacific Northwest Center of Excellence for Clean Energy at Centralia College and Vice-Chair of the Hydraulic Power Committee for the National Hydropower Association.

Pat holds a B.S. in Civil Engineering from St. Martin's University and is a licensed professional civil engineer.

Biographies

Troy Nutter

*Manager, Operation Training, Puget Sound Energy
Chair, PNCECE Smart Grid Grant Governance Board*

Troy Nutter is responsible for corporate training covering gas, electric and generation operations; customer access center; transmission and distribution operations and other shared services.

Troy has also served as chair of the Governance Board for the U.S. DoE Smart Grid Workforce Training Grant; Chair of the Executive Leadership team for the U.S. DoL WIRED grant; as a member of the Evergreen Jobs Council which advises the governor and legislature with respect to green economy jobs; as Team Lead for U.S. DoL Apprenticeship Task Group. Troy also serves on advisory panels for Bellingham Technical College, Walla Walla Community College; Centralia College and the Pacific Northwest Center of Excellence for Clean Energy.

Troy has published articles and been a frequent speaker on energy workforce issues around the nation.

Shana Peschek, M.B.A.

Director, Construction Center of Excellence, Renton Technical College

Shana Peschek has been the Director of the Construction Center of Excellence, Renton Technical College since 2010. Shana began her career in government, working for the Department of Social and Health Services from 1992 to 1999. She started her own business painting murals, faux finishes and signs for both residential and commercial clientele. She was a speech therapy assistant for the Rochester School District and in 2008 became an Administrative Assistant for the Construction Center of Excellence.

Shana holds a bachelor's degree in English from Washington State University, and a master's degree in Business Administration from City University.

Jay Pickett, M.B.A.

*Senior Power Plant Operator, U.S. Army Corps of Engineers
Co-chair, PNCECE Smart Grid Curriculum Subcommittee (Industry)*

Jay Pickett has more than 20 years of experience in the utility environment with a solid understanding of the western United States bulk power system, power distribution, power generation and training that includes 10 years of supervision and management. His formal education started in the Naval Nuclear power program with eight years of military service and includes a degree in education, and a graduate degree in business. Past volunteer efforts include: service as a Reserve Deputy Sheriff, Volunteer Firefighter and SCUBA Team member that round out 20 some years of public service and volunteer work.

Alison Pugh, M.B.A.

*Chair, Energy Management Academic Department,
Edmonds, Community College*

Board member, Energy Educators Association

Alison Pugh led the development of the energy management program, including convening the industry-led advisory committee, developing course sequencing within the degree and certificates to modularize "stackable" certificates leading to the degree, and developing curriculum and online content. In addition to serving as department chair, Alison serves as the Principal Investigator for a National Science Foundation grant, Meeting the Challenge of Energy Management in a Carbon-Constrained World, as well as directs three other energy-related grants at the college. Alison also serves as the college's Sustainability Researcher and is one of the resident experts on sustainability at the college, developing green curriculum as well as providing support operationally for the college to meet its greenhouse gas reduction goals and reduce the campus' overall impact on its ecosystem.

Alison holds a B.A. in Art History from Mount Holyoke College and an M.B.A. in Sustainable Business from the Bainbridge Graduate Institute.

Diane Quincy, M.B.A.

Director, Leadership and Organization Development/Human Resources, Avista Corporation

Avista Corporation is an energy company serving customers in eastern Washington, northern Idaho and parts of southern and eastern Oregon.

Diane Quincy has more than 30 years of Human Resources experience. Her current responsibility areas include Leadership and Organization Development, Succession Planning and Workforce Development. Diane has been actively involved in regional energy industry workforce development partnerships for more than a decade. Current projects include the PNCECE/DOL Smart Grid Workforce Training grant; a "Get Into Energy Careers Pathway" pilot with the Center for Energy Workforce Development and the Spokane Area Workforce Development Council; and development of strategies to further build a diverse workforce pipeline for skilled trades, STEM and technical energy jobs.

Diane holds a B.A. in Business Administration and an M.B.A from Eastern Washington University. Diane is also a former adjunct faculty member at Gonzaga University in the leadership studies area.

Biographies

Heather Rosentrater

Director of Engineering and System Operations, Avista

Heather Rosentrater has 17 years of experience in the utility industry. She started at Avista, Washington Water Power at that time, while attending Gonzaga University. Since graduating with her Electrical Engineering degree, she has held several technical and managerial positions at Avista including Network Engineer, Distribution Engineering Manager, and her current role as Director of Engineering and System Operations. Heather is a registered Professional Engineer in the state of Washington and is an adjunct professor in Gonzaga's Transmission and Distribution Master's Program.

Leise Rosman, M.M., M.B.A.

Vice President, Research & Development, Corporation for a Skilled Workforce

Leise Rosman develops and leads CSW's research and organizational learning to advance knowledge development across CSW's areas of intended impact. She also integrates research and learning into CSW's overall business development strategy, cultivates large scale strategic initiatives, and manages day-to-day business development.

Leise has extensive knowledge of educational attainment infrastructures and strategies. She has worked significantly with the National Fund for Workforce Solutions, including work with local collaboratives in Detroit and Chicago, and designed and executed the evaluation of the Pennsylvania Fund for Workforce Solutions. Leise has worked closely with United Way for Southeastern Michigan in supporting the Detroit Regional Workforce Fund during its formation and development of strategies, including its successful proposal to join the National Fund for Workforce Solutions. She was also involved in the development of the United Way Worldwide Promising Practices Report regarding local United Way involvement in building local funder collaboratives. Leise assisted with the design and implementation of Michigan's workforce transformation efforts, including planning and implementation for the statewide regionalization of adult learning activities. Prior to joining CSW in 2008, she worked in southwest Michigan and Chicago providing support to a range of nonprofit organizations and special initiatives in the areas of development, communication, administration, project management, and financial management.

Leise has an M.M. in nonprofit administration and an M.B.A. from North Park University, and a BA in management and organizational development from Spring Arbor University.

Kevin Schneider, Ph.D., P.E.

Sr. Research Engineer, Energy & Environment Directorate, Pacific Northwest National Laboratory

Dr. Kevin Schneider's main areas of research are distribution system analysis and power system operations. He is currently a research engineer at the Pacific Northwest National Laboratory, working at the Battelle Seattle Research Center in Seattle, WA. Kevin is an adjunct faculty member at Washington State University, an Affiliate Assistant Professor at University of Washington, and is a licensed Professional Engineer in Washington state. He currently serves as the Vice-Chair for the Seattle Power Engineering Society section and as Vice-Chair for the IEEE Distribution System Analysis Sub-Committee.

Kevin holds a bachelor's degree in Physics and a master's and Ph.D. degrees in Electrical Engineering from the University of Washington.

Randy Sibley, M.A.

Construction Industry Training Instructor and Dept. Head, Energy Management and Construction Management Instructor, Edmonds, Community College

Board member of the Energy Educators Association

Randy Sibley is an instructor and department head Construction Industry Training program; he also teaches in the Energy Management and Construction Management departments at Edmonds Community College. Offsite, he teaches at NAVTEC at Tulalip and works with the YouthBuild Snohomish County program in Monroe. He also participates in Solar 4R Schools, Campus Green Fund (Materials Management Center and Solar Rainwater Catchment) and NSF's 'Meeting the Challenge of Energy Management in a Carbon-Constrained World'. His overarching focus is green building - turning salvaged construction materials into high performance and aesthetically pleasing buildings.

Randy holds a B.A. in Philosophy and Art, Cornell College; an M.A. Contemporary Analytic Philosophy, University of Wyoming; and a Certificate in Career and Technical Teaching from Central Washington State University.

Biographies

David Sorensen, P.E.

Executive Director, WestCAMP, Inc; Director of Utah Manufacturing Extension Partnership (MEP)

Chair, PNCECE Smart Grid Manufacturing Taskforce

The Utah Manufacturing Extension Partnership (MEP-Utah), serving primarily the 3,800 manufacturers in the state of Utah, was selected to initiate and manage the NIST Information Technology Network for all 60 MEP centers nationwide. With a staff of 18, in one year MEP-Utah helped create or save 2,719 jobs in Utah, increased manufacturing sales by more than \$121 million and increased employee payroll by more than \$84 million.

David Sorensen has more than 45 years of experience in a wide variety of technical and managerial assignments requiring comprehensive knowledge in several disciplines relating to engineering, manufacturing, information technology and business systems. He has been directly responsible for major contracts with industry and government agencies and has a proven record of technical competence, customer relations, and business planning in rapidly expanding technical companies. David has held increasingly responsible positions in product and service organizations. He is innovative, resourceful, and aggressive in accomplishing assigned responsibilities with major strengths in strategic planning, marketing and management.

David is also a BYU adjunct faculty member and the past Associate Dean of Technology, Trades and Industry at Utah Valley State College. He's been the Chairman & CEO for ECHO Solutions, a software products and services company; Executive VP of Eyring Research Institute; General Manager of EG&G Services; Director of Engineering at the Idaho National Lab with a staff of more than 500 engineers and technicians; Manager of Architect Engineering and Construction at Aerojet Nuclear Company, and Manager of Power Generation Equipment at Bunker Ramo. He also has experience with GE's Nuclear Instrumentation as a Senior Applications Engineer with patents in his field, and has held engineering positions at Kennecott Copper, Intermountain Industries, and F.C. Torkelson Engineers.

David holds a Bachelor of Engineering Science and a Masters in Manufacturing Engineering Technology from Brigham Young University.

Janet Stephenson

Project Manager, Innovate Washington

Janet Stephenson has dedicated 14 years to advancing a sustainability agenda in the build environment. She offers a depth of experience in public/private and non-profit partnerships, professional education programs, and marketing and business development services. Prior to joining Innovate Washington, Janet worked with a number of organizations at the forefront of energy efficiency, building design and innovation. Janet brings a comprehensive understanding of the needs of NBETH's clients and partners from working at global and regional scales across all aspects of the building industry.

With a focus on strategy, collaboration, creativity and practical delivery, Janet has brokered successful partnerships to create and deliver groundbreaking programs including: the Annual Municipal Green Building Conference & Expo in Los Angeles (in its 11th year), the AIA+2030 Professional Series (reproduced in more than 22 AIA Chapters nationwide), and numerous sustainability symposiums for design and government professionals. A LEED AP since 2001, Janet has served on the USGBC's Greenbuild Program Working Group, and is currently Co-Chair of the Seattle 2030 District Education Committee.

Dr. Robert "Bob" Topping, Ed.D.

Director for Strategic Partnerships, Regional Education and Training Center (RETC)

Co-chair, PNCECE Smart Grid Curriculum Subcommittee (education)

Bob Topping is charged with identifying and qualifying key workforce core-competencies that drive regional economic and talent development. His focus at RETC aligns with his doctoral dissertation which addressed state-of-the-art designs for workplace learning, career education, and workforce talent development. Bob has worked to develop, organize, and implement multiple broad-based Industry-based initiatives to drive creativity and innovation in local industry for regional economic development, two of which were awarded a "Center of Excellence" recognition. Beyond his 20 years of experience at the collegiate level, he also brings 21 years of hands-on-experience in the construction industry - holding a variety of positions ranging from apprentice to project manager.

Bob has served higher education as an Executive Director, Campus Administrator and Department Chair. Through effective collaboration and strategic partnerships, Bob has been instrumental in connecting Career and Technical Education (CTE) to industry, advancing student enrollment and developing innovative training models all of which have received national attention.

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Northwest Washington Electrical Industry (JATC)



PSE Joint Apprenticeship Training Committee

Summit Committee Members

Thank you

Signature Crab Feed:

Bob Guenther, coordinator

Scholarship Auction:

Judy Guenther, coordinator; Larry Kite, auctioneer; and Centralia College Board of Trustees

Summit Planning Committee:

Ann Avary
Sean Bagsby
Monica Brummer
Ryan Davis
Mark Fischer
Caryn Fosnaugh
Judy Guenther
Barbara Hins-Turner
Melanie Kincaid
Candy Lunke
Shana Peschek
Kairie Pierce
Alison Pugh



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Careers in Energy Week, Oct. 14–19, 2013

Please contact mbrummer@centralia.edu if your business would like to participate.



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