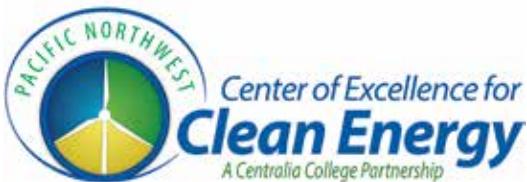




# 11th ANNUAL ENERGY & CONSTRUCTION BEST PRACTICES SUMMIT

## BUILDING AN ENERGIZED FUTURE

May 18-19, 2016



**CONSTRUCTION**  
CENTER OF EXCELLENCE  
RTC RENTON TECHNICAL COLLEGE

# Welcome

The Best Practices Summit, now in its 11th year, features the Pacific Northwest Economic Region (PNWER)'s Matt Morrison as keynote. Mr. Morrison has been a leader in promoting innovation in the Canada-US border region and has been instrumental in several successful pilots of Beyond the Borders and Perimeter Security Action Plan. PNWER has encouraged both Ottawa and Washington DC to consider the region a "cross-border pilot zone" because of the network of trusted relationships that have been built by ongoing working groups that PNWER facilitates. Morrison has also been instrumental in building resilience over the past decade by hosting a critical infrastructure interdependency series focused on the regional economy.



**Barbara Hins-Turner, Executive Director**

Pacific Northwest Center of Excellence for Clean Energy  
"A Centralia College Partnership"



**Shana Peschek, Director**

Construction Center of Excellence  
Renton Technical College

PNWER serves the public/private partnership established in 1991 by statute in the states of Alaska, Washington, Idaho, Montana, and Oregon, and the western Canadian provinces and territories of British Columbia, Alberta, Saskatchewan, the Yukon, and Northwest Territories. The PNWER governing board includes legislative leadership of each state and province, governors and premiers, and private sector leaders. Mr. Morrison reports to the board on the progress of PNWER initiatives. With economic watersheds in the region flowing mainly north/south, PNWER has focused on ensuring that the border 'works' and is open for legitimate business and travel as the region boasts the 11th largest GDP in the world, and any disruption at the border can seriously impact the region's competitiveness in the global marketplace. His duties include coordinating all projects of PNWER, which include PNWER's Center for Regional Disaster Resilience and the Legislative Energy Horizon Institute. As Director of PNWER, he also communicates with the state and provincial legislatures of the member states and provinces, and coordinates the working groups of PNWER, in the following areas: Trade & Economic Development, Environment, Sustainable Development, Energy, Transportation, Agriculture, Forestry, Tourism, Health Care, Workforce, Homeland Security, Innovation, Invasive Species, and Border Issues. Each working group is chaired by one legislator, and one private sector leader in the region.

## Washington PNWER Board Members

### Legislative Board Members

Gov. Jay Inslee  
Sen. Kevin Ranker  
Sen. Maralyn Chase (Alt)  
Sen. Jim Honeyford  
Sen. Barbara Bailey (Alt)  
Rep. Bruce Chandler  
Rep. Gael Tarleton  
Rep. Norm Johnson (Alt)  
Rep. Cindy Ryu (Alt)

### Industry Board Members

William Kidd, BP  
Nancy Atwood, Puget Sound Energy  
DeLee Shoemaker, Microsoft  
Roger Woodworth, Avista



# *Matt Morrison, Keynote Speaker for the Energy and Construction Best Practices Summit on the Future of Clean Energy*

by Lisa Brunette



In Matt Morrison's eyes, the Pacific Northwest isn't like Vegas; what happens here shouldn't stay here, at least in terms of clean energy. He believes the way we solve the energy problem in the Northwest could serve as a powerful model not just for the U.S. and Canada, but for the rest of the world.

As executive director of the Pacific Northwest Economic Region (PNWER), he sees great potential in the future of clean energy, with the Northwest well-poised to lead the way in the areas of hydroelectric power and wind generation in particular.

"We can't always use all the wind power we produce," he explains. "This region is the best on the planet to implement energy storage systems. If we can really solve this issue, it will be a tremendous opportunity for the whole world."

*PNWER Executive Director Matt Morrison*

With his keynote speech at this year's Energy & Construction Best Practices Summit, Morrison wants attendees to envision just how big the market is for

renewable energy. The industry is in the middle of an enormous transition, with the need for an even smarter energy grid to handle the two-directional requirements of the future, in which consumers of energy could become producers as well.

This transition is driven in large part by the EPA's recently unveiled Clean Power Plan, the first U.S. policy to set a national limit on carbon pollution from power plants. According to the Environmental Defense Fund, "The states that join the race first, and run it the fastest, will win both more investment in clean technologies and less air pollution for their communities."

The standards set by the Clean Power Plan mean that states will need to work together, which Morrison says can be a challenge due to the different energy mixes of each. He gives the example of Montana providing "coal by wire" to Washington state, which means the carbon emissions in this case are counted against Montana but actually consumed in Washington.

Cross-border collaboration is nothing new to Morrison. PNWER is a statutory public/private non-profit created jointly by five U.S. states (Alaska, Idaho, Oregon, Montana, and Washington) and five Canadian provinces (British Columbia, Alberta, Saskatchewan, and the Yukon and Northwest Territories). "The real world that I see is a collaborative space," he says. "The future will be built on being able to collaborate to get solutions." It's a note of advice that works for anyone in the energy field—whether seasoned veteran or recent graduate just entering the workforce.

Besides the U.S. states working together to fulfill the standards of the Clean Power Plan, Morrison explains that our energy grid is also interconnected with Canada. "We send power back and forth due to the Columbia River Treaty," he explains. "We send electricity to Canada equal to one-half what the dams generate."

The Treaty itself is evergreen; it doesn't end unless both parties decide to end it. A model treaty copied all over the world, it provides for equal shares of the balance of power generated by the Columbia River system.

For his keynote at the Summit this May 18-19, Morrison says, "I'm likely to bring out a number of questions that policymakers have to ask and answer in the future. There's a sea change going on in the way energy is produced and consumed, creating the need for a whole new workforce."

# Day 1 • May 18, 2016: Building an Energized Future



## 8:00 – 9:00 a.m. Registration • Building E, Auditorium

Register, enjoy a continental breakfast and visit vendor displays

## 9:00 – 9:10 a.m. Opening Ceremony •

### Building E, Auditorium

National Anthem, Treonna Lee, Bates Technical College

## 9:10 – 9:30 a.m. Welcome • Building E, Auditorium

Dr. Ron Langrell, President, Bates Technical College  
Trustee's Welcome - Jim Lowery, Board of Trustees, Centralia College  
Legislative Updates and Recognition of Elected Officials

### Event Moderators:

- Barbara Hins-Turner, Executive Director, Center of Excellence for Clean Energy, Centralia College
- Shana Peschek, Director, Construction Center of Excellence, Renton Technical College

## 9:30-10:15 a.m. Opening Keynote •

### Building E, Auditorium

Matt Morrison, Chief Executive Officer of the Pacific Northwest Economic Region (PNWER)

PNWER as an organization is focused on ensuring that the U.S./Canadian border 'works' and is open for legitimate business and travel as the region boasts the 11th largest GDP in the world. Any disruption at the border can seriously impact the region's competitiveness in the global marketplace. The energy industry is a key component of that marketplace and is currently in the middle of an enormous transition, with the need for an even smarter energy grid. Learn how the region is working collectively to handle the two-directional requirements of the future, in which consumers of energy could become producers as well.

## 10:15 – 10:45 a.m. Break • Building E, Atrium

Visit Vendor Booths

## 10:45 – Noon • Building E, Auditorium

Executive Action on Climate and Energy

Many aspects of energy policy fall within the authority of the executive branch of government. Learn about initiatives that are under way in Washington and on the federal level, including the EPA Clean Power plan, the state Clean Air Rule, and state Executive orders.

**Moderator:** Tony Usibelli, Washington Dept. of Commerce

### Panelists:

- Ann Rendahl, WA Utilities and Transportation Commission
- Susan Wickwire, Seattle 2030 District.

## Noon – 1:30 p.m. Lunch and Auction •

### Building E, Auditorium

Scholarship Auction

## 1:30 – 2:30 p.m. Plenary •

### Building E, Auditorium

Local Government Policy and Workforce Development Washington State is being proactive in developing policies that create economic opportunities for underserved and marginal populations while creating a pipeline of skilled workers. Learn about "Best in Class" economic and workforce development projects that are happening within our state.

**Moderator:** Shana Peschek, Director, Construction Center of Excellence, Renton Technical College

### Panelists:

- Jon Bersche, Labor Equity Job and Training Coordinator, Labor Equity Program at City of Seattle
- Peter Guzman, Project Manager of the City of Tacoma's Local Employment and Apprenticeship Training Program (LEAP)
- Sean Murphy, Associate Director of Sector Strategies & Innovation, Pacific Mountain Workforce Development Council
- Colleen McAleer, President, Washington Business Alliance

## 2:30 – 3:00 p.m. Break • Building E, Atrium

Visit Vendor Booths

## 3:00-4:00 p.m. Plenary • Building E, Auditorium

Energy Efficiency Impacts on Workforce and Economic Development

Energy efficiency is a way of managing and restraining the growth in energy consumption. Experts will weigh in on the economic and workforce impacts of energy efficiency. How can we build energy efficient buildings to meet our States goals while developing a skilled workforce to meet the demand in building operations?

**Moderator:** Alan Hardcastle, Ph.D. Senior Research Manager, Washington State University Social and Economic Sciences Research Center

### Panelists:

- Lori Moen, Manager of Conservation Field Operations, Seattle City Light
- Steve Gelb, Seattle Director, Emerald Cities: RENEW Energy Efficiency
- Stan Price, Executive Director, Northwest Energy Efficiency Council

## 4:00 – 5:00 p.m. Energy Educator's Association •

### Building E, Room 116

- Gail Alexander, Tenured Faculty, ETSP Program, Cascadia College
- Alison Pugh, NSF Grant Director, South Seattle College

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. 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. Please join us for this collaborative discussion.

## 4:30 p.m. Networking and Socializing – Atrium

# Day 2 • May 19, 2016: Building an Energized Future



## 8:00-9:00 a.m. Continental Breakfast & Networking • Building E, Room 104

Enjoy a continental breakfast and visit vendor displays

## 9:00-9:15 a.m. Welcome • Building E, Auditorium

Pat McCarty, Power Generation Manager for Tacoma Power and Chair, Center of Excellence for Clean Energy Advisory Board

## 9:15-9:45 a.m. Day 1 Debrief • Building E, Auditorium

- Barbara Hins-Turner, Executive Director, Center of Excellence for Clean Energy, Centralia College
- Shana Peschek, Director, Construction Center of Excellence, Renton Technical College

## 9:45-10:45 a.m. Plenary • Building E, Auditorium

Innovative Workforce Solutions - Community and Technical College Programs

Washington's Community and Technical College System continues to develop and deliver innovative solutions that meet industry's workforce needs. These "Best in Class Programs" have attracted regional and national attention, industry support, and federal and state funding. Hear how they are "making it happen."

**Moderator:** Mary Kaye Bredeson, Executive Director, Center of Excellence for Aerospace and Advanced Manufacturing

### Panelist Projects:

- Tiny House Project - Anna Bennett, WISE Coordinator, Renton Technical College, Melinda Nichols, Consultant
- PowerPathway/Electrical Construction - James (Jim) Graham, Faculty, Bates Technical College
- Mechatronics Project - Dave Peterson, Faculty, Centralia College
- BAS Sustainable Building - Vicky Hardy, BAS Sustainable Building Science Technology Faculty Coordinator, South Seattle College

## 10:45-11:15 a.m. Break • Building E, Atrium

Visit Vendor Booths

## 11:15-11:45 a.m. Kill A Watt® Demo •

### Building E, Auditorium

Rulon Crawford, Assistant Professor, Centralia College Energy Program

Electricity bills are rising. Now you can cut down on costs and find out what appliances are actually worth keeping plugged in. Simply connect these appliances to the Kill A Watt® to assess how efficient they really are. Large LCD display will count consumption by the Kilowatt-hour, same as your local utility. You can calculate your electrical expenses by the day, week, month, even an entire year. Also check the quality of your power by monitoring Voltage, Line Frequency, and Power Factor. Now you'll know if it is time for a new refrigerator or if that old air conditioner is still saving you money.

## 11:45-12:30 p.m. Lunch and Raffle Drawing • Building E, Auditorium

## 12:30-1:15 p.m. • Building E, Auditorium

Carol Lewellen, Librarian, Northwest Energy Efficiency Council: Smart Buildings Center Tool Lending Library

The Smart Building Center hosts a lending "library" of diagnostic tools available to building owners and managers, as well as energy service professionals and educators, for short-term data collection on energy using equipment and systems in commercial and institutional buildings. Often the first step in achieving operational excellence is to gain an understanding of how systems in the building are actually operating. The SBC can help by loaning a range of data loggers, power meters, lighting loggers, infrared cameras, liquid and air flow measurement devices, and much more. This demonstration will allow conference attendees to "try" some tools and learn how to integrate this great resource into their work/programs.

## 1:15-2:00 p.m. • Building E, Auditorium

Festo Didactic, Inc., Gary Daniels and John Smith

The focus of our workshop will be to introduce the attendees to the principle of energy management thru an interactive software bundle from Festo Didactic. The attendees will change various electronic and electrical items inside a house and see how those affect energy consumption and cost. The attendees will also learn how a grid tie setup is connected and how the energy companies participate in this process. In addition, we will introduce the attendees to the principles of PLC's and various applications they are used in daily within the industry.

## 2:00-3:30 p.m. • Building E, Auditorium

Tour of Apprenticeship Programs on Bates South Campus

Enjoy tours of Bates Technical College's Building Trades Programs - Stop by Electrical Construction, Welding, Carpentry, TOOL Center Pre-Apprenticeship, Architectural Woodworking, and Facilities Maintenance Engineering in Building B to learn more about how these programs are working with our local industries to ensure our students receive high quality, in-demand training. These programs also include partnerships with Registered Apprenticeships and many Locals in the area, so be sure to bring questions about how these partnerships have developed and succeeded! Bates Technical College faculty can also discuss new technologies being used to expand skills and opportunity for students as they enter the 21st Century workforce.

## 11:45-3:00 p.m. WISE Consortium Meeting • Building E, Room 116

# Biographies

## Gail Alexander, Sustainability Faculty, Cascadia College

Gail Alexander has been at Cascadia College since 2010. Combining her interest in interdisciplinary thinking and systems design with her passion for social change and sustainability, she 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. Ms. Alexander holds a 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). Gail 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 College, the Sustainable Building Advisor Institute, the University of Southern California, the University of Washington and Whatcom Community College.

## Anna Bennett, WISE Project Coordinator, Renton Technical College

Anna Bennett is the Project Coordinator for the WISE Grant at Renton Technical College. The WISE (Washington Integrated Sector Employment) Grant is a consortium of 8 Community and Technical Colleges in Washington State which brings together the clean

energy, advanced manufacturing, and construction sectors to support innovative educational programs. Anna received her M.A. from the University of Washington and has worked for a number of non-profits in Washington State that provide community-based educational programming.

## Mary Kaye Bredeson, Executive Director, Center of Excellence for Aerospace and Advanced Manufacturing

Ms. Bredeson is the Executive Director for the Center of Excellence for Aerospace and Advanced Manufacturing housed at Everett Community College. For the past ten years she has brought her leadership skills to the Higher-Ed system in promoting and maintaining the Center of Excellence for Washington's economic and workforce development initiatives. As the Executive Director, Ms. Bredeson works to encourage educational programs to share best practices and resources as well as providing a clear point of contact for industry employers to share their workforce needs with all 34 community and technical colleges as well as other education and training providers.

As member of the Board of Directors for the Institute of Flight since 2013, Bredeson is currently serving as secretary for the foundation. She also serves on the Board of Directors for the American Technology Education council. Bredeson and her staff have been awarded several State and Federal grants in the past few years, including a \$20 million DOL Round 1 TAACCCT consortium grant, a \$10 million DOL Round 4 TAACCCT consortium grant, a \$75,000 NIST grant, awarded to a community college for the first time ever to develop curriculum for Metrology as well as several other state funded aerospace grants.

Bredeson is a graduate of the Law Enforcement Academy, Lynnwood WA., in 1979. She is a graduate of the Certified Cisco Academy Instructors in 1993. She received the Exemplary Leadership Award from the Chair Leadership Academy, Mesa Community Colleges in 2013.

## Rulon Crawford, Assistant Professor - Energy Technology - Power Operations, Centralia College

Rulon is a graduate of Eastern Oregon University with a degree in Business Administration and an MBA from Marylhurst University. Rulon has 20 years of experience teaching classes on basic electricity and was the manager of the energy efficiency team with Portland General Electric. He has taught 1st year energy classes at Centralia College for the last 9 years.

## Gary Daniels, Consultant

Gary serves as Amtek Company's sales lead in parts of Virginia and West Virginia. He helps universities, community colleges, technical schools and secondary schools incorporate digital fabrication, engineering and technical training solutions and technologies into their

# Biographies

curriculum and instruction so that they can provide students with the best education and training possible. Gary joined Amtek in 2012 after serving as Industrial Maintenance Product Manager for technical education solutions supplier Festo Didactic. He received a Bachelor's Degree in Education in 1995 and went on to open two modular technology education programs while teaching in Kentucky. While pursuing his master's degree, Gary joined Southern Educational System in 1998 and led their technical support and training division for 10 years. Gary has one son, Matthew, who is an avid video game player. Gary enjoys travel, golf, and anything that keeps him outside.

## **Steve Gelb, Seattle Director, Emerald Cities Collaborative**

With a lifetime interest in the outdoors and the environment, Steve began his career in the outdoor products industry where he held leadership positions in business development and directed product development teams at Eddie Bauer and JanSport. He redirected his career to energy efficiency and equity in our society by helping to found SustainableWorks, a residential energy efficiency program in Washington State. He served as its Executive Director for three years and pioneered a community-based model with a one-stop-shop that completed energy efficiency retrofits of over 500 homes. SustainableWorks pioneered high road workforce standards in the residential energy efficiency sector that provided living wages for employees and access to careers for individuals from underserved communities. He has been the Director of Emerald Cities Seattle since 2012 where he has partnered with the City of Seattle and Seattle City Light on Community Workforce Agreements for commercial contractors that ensure quality jobs and career opportunities. Under his leadership, Emerald Cities Seattle launched its RENEW Affordable Multi-family Housing Program that provides a one-stop shop to support building owners with energy and water efficiency upgrades. Emerald Cities Seattle has also become a leading advocate for energy efficiency policies to support Seattle's Climate Action Plan. Steve holds a BA in Government from Cornell University.

## **Jim Graham, Faculty, Bates Technical College**

As a 2004 AAS graduate of the Bates Electrical construction program and as a direct beneficiary of a technical college education, it is an honor to be able to contribute to the education and success of the next generation of tradespeople in the electrical field. Jim has operated Jim Graham Electric since 2006, a full service electrical contracting company that focuses on high end custom residential and light commercial electrical work based in Olympia, WA. Projects that require a high attention to detail and care along with effective communication and creative collaboration are the projects best suited for Jim Graham Electric.

## **Peter Guzman, Project Manager of the City of Tacoma's Local Employment and Apprenticeship Training Program (LEAP).**

LEAP's Mission is to provide residents of Tacoma, particularly those residing in the Community Empowerment Zone and low-income communities, with training and support services necessary to complete apprenticeship and training requirements which lead to family-wage jobs in building and construction trade occupations. He has more than 20 years of experience in directing job seekers to employment and training opportunities in the construction industry. Additionally, Peter serves as the EPA – Environmental Workforce Development Job Training Project Manager and has successfully managed five Brownfields Job Training projects over the last 15 years. The EPA program has been the recipient of numerous regional and national awards, including the 2007 Washington State Governor's Award for Best Practices in Workforce Development and the 2010 MetLife/ Jobs for the Future Community College Excellence Award for Service to Communities.

Peter is also serves as a member on the following boards/committees: WA State Construction Center of Excellence, Chair, Bates Technical College, General Advisory Committee, Chair, Clover Park Technical College, Workforce Advisory Committee, Pierce College, Workforce Advisory Committee, Youth Building Tacoma, City of Tacoma, Vice Chair, Tacoma Housing Authority, Hillside Terrace Oversight Committee, Vice Chair, Sound Transit, Diversity Oversight Committee, Chair, WA State Labor & Industries, Apprenticeship Council, Compliance, Recruitment & Retention Sub Committee, Member. Peter has a Bachelor of Arts in Political Science from Westmont College.

## **Alan Hardcastle, Ph.D. Senior Research Manager, Washington State University Social and Economic Sciences Research Center**

Alan Hardcastle has more than 20 years of research, policy and consulting experience through state agencies and public and private-sector clients in industry, organized labor, education, workforce, and economic development. His energy-sector research has included energy industry trends and employment, smart grid technology and the energy workforce, energy efficiency/energy management education and training, energy sector skill standards, and workforce development for the clean economy. Hardcastle holds a Ph.D. in higher education from the University of California, Los Angeles. He has served on the advisory board for the Center of Excellence for Clean Energy and is an adjunct faculty member at The Evergreen State College. His energy-sector research is available at: <http://www.energy.wsu.edu/PublicationsandTools.aspx>

# Biographies

## **Victoria Hardy, CFM, ASHRAE Associate, Lead Faculty Coordinator for the BAS in Sustainable Building Science Technology at South Seattle College.**

Her background includes both substantial experience in administration of cultural facilities at Stanford University, in the Meadowlands/NJ and Detroit, and positions as tenured faculty at Ferris State University and Academic Department Head of Design and Facilities at Wentworth Institute of Technology in Boston. She is an active member of the Greater Seattle IFMA Chapter. Her career has spanned both the academic and institutional practice of sustainable facility management. Hardy holds a Master's in Management, a Bachelor of Science and is a graduate of the Stanford Management Development Program.

## **Ron Langrell, Ph.D. President, Bates Technical College**

Ron Langrell was appointed president of Bates Technical College in July 2012. He brings more than 30 years of higher education experience, including postsecondary service in the roles of Chief Academic Officer, Chief Workforce and Economic Development Officer, and Chief Student Affairs Officer, all at two-year institutions in the western United States. In addition to his postdoctoral study with the Institute for Educational Management at Harvard University, Dr. Langrell has been acknowledged nationally as an Exemplary Leader by The Chair Academy and as 9 Biographies a Distinguished College Administrator by the Phi Theta Kappa Honor Society. In Washington State, Dr. Langrell has been elected into leadership roles with the Continuing Education Council, the Workforce Education Council, and the Partnership for Rural Improvement. Dr. Langrell currently serves on the national Board of Trustees for the American Technical Education Association (ATEA).

## **Jim Lowery, Trustee, Centralia College**

Jim Lowery was appointed to the Centralia College Board of Trustees by Governor Christine Gregoire in 2011 and reappointed by Governor Jay Inslee in 2015. Prior to that Lowery served as Project Manager for the U.S. Department of Labor Workforce Innovations in Regional Economic Development (WIRED) grant at the Center of Excellence for Energy Technology to solve workforce training issues for the energy industry.

Jim spent much of his career working in rural economic development as Executive Director of the Washington Rural Development Council and the Pacific County Economic Development Council. Jim's political experience includes serving as a Lewis County Commissioner, Mayor of Shelton, WA, and Manager of Washington's Third Congressional District Office under U.S. Representative Jolene Unoeld.

Lowery worked in the wood products industry as a lumber off bearer, trim saw operator, certified lumber grader and served as business agent for 1600 member woodworkers union. Jim has owned and operated three businesses - a convenience store, an asphalt paving business and currently owns Lowery's Professional Services PLLC. He has an Associate's Degree in computer programming from Olympic College which he received in 1971 when computers were still using data punch cards. Reading, archery hunting, vegetable gardening, and yard work are some of his interests and hobbies.

## **Colleen McAleer, President of the Washington Business Alliance**

Colleen works with businesses, nonprofits, and policymakers advancing bipartisan problem-solving to unlock our state's potential. She's also a Commissioner at the Port of Port Angeles. She previously served as the Port's Director of Business Development. After challenging the status quo, she ran for office, and won to become the first female Commissioner in the Port's 91-year history. At the Port, Colleen has spearheaded the Composite Recycling Technology Center, which has received millions in private and public funding to create jobs in rural Washington. In June 2015, at the request of Senator Maria Cantwell, Colleen testified before the US Senate Committee on Energy & Natural Resources about the composite program and its beneficial economic, educational, and environmental impacts. Prior to her work at the Port, Colleen led a successful commercial real estate practice. She is a decorated combat veteran who served 10 years in the US Army as a helicopter and fixed wing pilot and as a military intelligence officer. Colleen has a BS in Computer Science from the Florida Institute of Technology.

# Biographies

## **Pat McCarty, Power Generation Manager for Tacoma Power and Center of Excellence for Clean Energy Advisory Board Chair**

Pat is responsible for all power generation activities of Tacoma Power including operations, maintenance, licensing and regulatory compliance, and public safety for Tacoma's seven dams and eight powerhouses, along with the associated fish hatcheries, and parks as well as the environmental obligations associated with tens of thousands of acres of lands and reservoirs. Pat joined Tacoma Power in 1979 as a Civil Engineer and was appointed Generation Manager in 1996. He holds a B.S. in Civil Engineering from St. Martin's University and is a licensed professional civil engineer. Pat is currently Chair of the Advisory Board of the Pacific Northwest Center of Excellence for Clean Energy at Centralia College and serves as a Board Member and vice-chair of the Hydraulic Power Committee of the National Hydropower Association.

## **Lori Moen, CEM, CSBA, Manager, Solutions Design and Management for Customer Energy Solutions, Seattle City Light**

Lori has over 25 years of diverse and deep experience in the energy management field; contributing to millions of dollars in energy and resource savings through energy accounting, O&M measures, behavior change, equipment upgrades, sustainable design and distributed generation. Lori was recently appointed to manage Solutions Design and Management for Customer Energy Solutions at Seattle City Light. In this role, she will lead a team of multi-disciplinary energy management professionals responsible for cradle-to-grave development of a portfolio of customer solutions across all sectors and markets. Lori joined City Light in 2012 and served as Manager of Conservation Field Operations through 2015.

Prior to joining City Light, Lori was a Supervising Engineer at Puget Sound Energy where she led their Building Performance Team implementing the Resource Conservation Manager, Building Energy Optimization and Energy Interval Service programs. Her previous experience includes positions as an Energy and Resource Conservation Manager with King County and the Kent School District, as well as serving as a Commercial Energy Analyst at both Tacoma Power and Snohomish County PUD. Lori has a bachelor's in Physics and German from Willamette University. She is a Certified Energy Manager, a Certified Energy Procurement Professional, and Certified Sustainable Building Advisor. Lori has been an active member of the Association of Energy Engineers; chartering and serving on the board of the local chapter, serving as Vice President for AEE Region V in 2013-2014 and currently serves on the CEM exam committee.

## **Melinda Nichols, Consultant**

Melinda Nichols has been involved in the construction industry for over 43 years. She has been a journey level carpenter since 1977. She taught and managed pre apprenticeship and apprenticeship programs for 16 years. She was a management representative on the Washington state apprenticeship and training council for 22 years and manager of apprenticeship for Washington state for 3 years. She has been a member of the board of the low income housing institute for 20 years. She has worked on tiny houses for homeless individuals for the past few years.

## **Sean Murphy, Associated Director of Sector Strategies and Innovation, Pacific Mountain Workforce Development Council**

Sean came to PacMtn in 2013 as the Business and Community Engagement Manager. In 2014, he was promoted to lead Camo2Commerce, which is a \$5.5 million grant program funded by the U.S. Department of Labor. He has since been promoted to be the Associated Director of Sector Strategies & Innovation. Prior to working with PacMtn, Sean worked for Governor Christine Gregoire, U.S. Congressman Brian Baird, and U.S. Senator Patty Murray. In his most recent role before coming to PacMtn, he was the Executive Director for a multi-state trade association. He holds a Bachelor's degree from Eastern Washington University.

## **Lee Newgent, Executive Secretary, Washington State Building Trades**

Washington State Building trades represents 60,000 Union Craft workers in Washington State. Lee is the Co-Chairman of the Washington State Apprenticeship Council and has been recognized as one of the industry leaders in recruiting and retaining women and people of color. He also serves on the King County WDC and the State Workforce Board and is an active lobbyist for many different Apprenticeship and Building Trades issues. Lee served an apprenticeship with The Ironworkers local 86 and progressed as a Foreman, General Foreman and Superintendent. He has worked at his trade in five different countries including the continent of Antarctica. Lee has been active in the Disaster Response Community and is the Labor Co-Chair of the Fire Incident Response Skilled Trades (FIRST) Committee in partnership with the Seattle Fire Department. Lee was also a volunteer for the Ironworkers at the World Trade Center and other disaster sites. Lee works with local Anti-Gang programs and coaches sports in the inner city.

## **Shana Peschek, Director, Construction Center of Excellence**

Shana Peschek, M.B.A. Director, Construction Center of Excellence As director of the Construction Center of Excellence, Shana links industry to the community

# Biographies

college system in Washington State for the purpose of coordinating education and training efforts to build a competitive workforce in a global economy. With four priorities: Economic Development, Industry Sector Strategy, Workforce Supply and Demand, and Education, Innovation and Efficiency, the Center is positioned to sustain Washington's competitive advantage through statewide leadership. The Center supports curriculum development, career pathway development and professional development for faculty. The Center also plays an integral role in supporting the development of stackable credentials and Applied Baccalaureate degree programs in the Community/Technical College programs. Shana is also a National Chair for the United States Green Building Council Community Green Program, as well as member of numerous advisory boards and workforce focused committees. When not working she enjoys hiking, backpacking and mountain biking with her husband and three teenage sons.

## **Stan Price, Executive Director, Northwest Energy Efficiency Council**

Stan has over three decades of experience in the design and management of resource efficiency programs. He has worked with public, private, and not-for-profit organizations helping them achieve their efficiency goals. He serves as the executive director of the Northwest Energy Efficiency Council, a trade association representing businesses that provide energy efficient products and services to the Northwest marketplace. Formerly, Stan was an Assistant Director of the Washington State Energy Office and has held management and teaching positions at both Seattle University and Washington State University. He has

served as the Chair of the Washington State Building Code Council, a founding Board member of the Northwest Energy Efficiency Alliance, and a convening committee member forming the Energy Trust of Oregon. He serves on numerous utility and governmental advisory committees, a Board member of the Seattle 2030 District, and previously served as Co-chair of Seattle City Light's Review Panel. He is a graduate of Indiana University and the University of Colorado.

## **Alison Pugh, Grant Director and Co-Principal Investigator, South Seattle College**

The National Science Foundation grant, Expanding Lifelong STEM Career Pathways in Sustainable Building Science Technology, at South Seattle College, supporting the new and innovative Sustainable Building Science Technology Bachelor of Applied Science Degree.

Prior to that, she served as the Chair of the Energy Management academic department at Edmonds Community College. She 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, she was the Principal Investigator for the NSF grant, Meeting the Challenge of Energy Management in a Carbon-Constrained World, as well as directing three other energy-related grants at the college. Ms. Pugh was also Edmonds Community College's Sustainability Researcher, 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. Recently, Ms. Pugh was accepted as a Fellow for the Sector Skills Academy sponsored by SkillUp Washington and the Aspen Institute.

Ms. Pugh holds a B.A. in Art History from Mount Holyoke College and an M.B.A. in Sustainable Business from the Bainbridge Graduate Institute (now Pinchot University).

## **Ann Rendahl, WA Utilities and Transportation Commission**

Ann Rendahl is a commissioner of the Washington Utilities and Transportation Commission (UTC), appointed in January 2015 for a term ending January 2021.

Previously, Ms. Rendahl served as the UTC's Director of Legislation and Policy, the Director of Administrative Law, and as an administrative law judge. She also served as an assistant attorney general in the Utilities and Transportation Division of the Attorney General's Office.

Ms. Rendahl has a B.A. from Wellesley College, a Masters in Public Policy from U.C. Berkeley, and law degree from Hastings College of the Law, UC San Francisco.

# Biographies

## **John Smith, FESTO Didactic, Inc**

John has been providing Technical Training Systems to public & private education, industry, and military for approximately 14 years. The first 13 years as a Lab-Volt Systems Representative in the Northwest. And, now as a FESTO Didactic, Inc. Representative since FESTO bought Lab-Volt back in June of 2014.

John is based out of the Portland Oregon area and reports to FESTO Didactic, Inc. Headquarters in Eatontown New Jersey. His Territory covers: Oregon, Washington, Alaska, and Hawaii.

Festo Didactic is a world-leading provider of equipment and solutions for technical education. The product and service portfolio offers customers holistic education solutions for all areas of technology in Industrial Maintenance and Factory and Process Automation, such as pneumatics, hydraulics, electrical engineering, production technology, mechanical engineering, mechatronics, CNC, HVAC and telecommunications.

## **Tony Usibelli, Special Assistant to the Director for Energy and Climate Policy at WA State Dept. of Commerce**

Tony Usibelli is a special assistant to the director of the Dept. of Commerce for energy and climate policy. He formerly was the director of the Washington State Energy Office in the Department of Commerce.

Previously, Tony worked at the Washington State University Energy program, managed the energy efficiency-section of Washington State Energy Office, and was a staff scientist at the Lawrence Berkeley National Laboratory. He is an adjunct faculty member at the Evergreen State College.

Tony holds an M.S. in Energy and Resources from UC-Berkeley and B.A.s in Geography and Classical Archaeology. He was born in Usibelli, Alaska, his family's coal mining town.

## **Susan Wickwire, Seattle 2030 District**

Susan Wickwire is the Executive Director of the Seattle 2030 District, a groundbreaking public-private partnership that aims to dramatically reduce environmental impacts of building construction and operations through education and collaboration in downtown Seattle. Previously, Susan spent over 20 years with the U.S. EPA and the State Department in Washington, DC where she directed national climate change programs, managed international climate change projects, and served on U.S. delegations to UN climate change meetings. A Seattle native, she received her BA in Political Science from Whitman College and her Masters in Public Administration from the Maxwell School at Syracuse University.

## **David Peterson, Associate Professor in the Electronics, Robotics and Automation department of Centralia College**

Dave earned his B.S. from WSU – Vancouver in Mechanical Engineering with a specialty in Mechatronics and Nanotechnology. After briefly working as a solid model designer and machinist, he started working part time at Centralia College. For the past 3 years, working full time and leading the department through a change from small scale electronics into a mechatronics program through a partnership with the Center of Excellence in Aerospace and Advanced Manufacturing. In 2015, he completed the requirements for allowing Centralia to offer WA State's first FANUC Certified Education Robot Training (CERT) program, one of the foundations of the new Mechatronics program. He serves on several High School CTE Advisory Committees, establishing pathways to educate recent graduates in addition to current and incoming workforce. David and his wife enjoy any outdoor adventure, especially those involving mountains, and can now include their 2-year-old son and another on the way in October.

## **Jon Bersche, Labor Equity Job and Training Coordinator, Labor Equity Program at City of Seattle**

Jon Bersche is committed to outreach, program development, regional collaboration, and policy that builds and maintains a clear pathway to and through apprenticeship for African Americans, People of Color, Women, and local, underrepresented communities. As the Program Manager of YouthBuild from 2010 - 2015, Mr. Bersche created a uniquely powerful culture of unity, pride, and high expectations for young African American men and women transitioning from the streets to careers in the building trades. This work earned YouthBuild the recognition of the Washington State Apprenticeship and Training Council along with national attention for best practices in creating a community to apprenticeship pipeline. In August of 2015, Jon joined the City of Seattle's Labor Equity Team in support of Priority Hire. In this new role, he has convened and facilitated a Regional Pre-Apprenticeship Collaborative whose purpose is to partner with Sound Transit, The Port of Seattle, and King County to challenge and support recognized apprenticeship preparatory programs in building a regional pre-apprenticeship system of shared best practices and high training standards that provide a direct and sustainable pathway to high-paying, long-lasting careers for local, low-income residents – especially African Americans, women, and people of color.

# Sponsor Recognition

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*Thank you*

### Committee Members:

- Sean Bagsby, IBEW Local 46
- Barbara Hins-Turner, Center of Excellence for Clean Energy
- Shana Peschek, Construction Center of Excellence
- Kristi Grassman, AJAC Training
- Kairie Pierce, Washington State Labor Council (AFL-CIO)
- Caryn Fosnaugh, Dean of Instruction, Bates Technical College
- Peter Lahmann, Pacific Mountain Workforce Development Council
- Lin Carleton, Construction Center of Excellence
- James Hovis, Center of Excellence for Clean Energy

### *And a Special Thanks to:*

- Bates Technical College Facilities, Operations, and Maintenance Department

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# *Summit Raffle and Auction*

*Auction: Wednesday May 18th during lunch*

*Raffle Drawing: Thursday May 19th during lunch*

**Proceeds from the auction and raffle benefit students in need who  
are enrolled in energy and construction programs across  
Washington State.**

*Prizes include:*



DeGoede flower baskets



Single seat kayak



Two tickets to SeaFair



Two-hour airplane tour of Lewis County



Two-night stay at Tacoma Power's Taidnapam Park



Two-night stay at LC-PUD's Cowlitz Falls Park

**And More!**



## *From Shipyard to Heat Pumps: One Woman's Path to Success in the Clean Energy Field*

by Lisa Brunette

Bowles as "Rosie the Riveter," an icon for many women in the trades. Rosie the Riveter was popularized during WWII when women filled trade roles left by men called to the front lines.

It was 2007, and Sara Bowles found herself out of a job. She'd survived the first round of layoffs at Westport Shipyard in Hoquiam, but the second one swiped a position as metal polisher right out from under her.

"I loved that job," she says, recalling with fondness how she often came home covered in metal dust. "It was a killer job for the area, too. Close to town, good benefits, weekends off."



The problem was, the maritime pleasure craft industry wasn't exactly recession proof. She did finish work on metal handrails and other parts that went into multimillion dollar yachts, and when the economy tanked, there wasn't as much call for those.

She'd been good at it, too. Like a lot of women, Bowles had an eye for detail that made her well-suited to finish work, and she'd always been good with her hands, typically drawn to hobbies like furniture staining, or rewiring lamps. Growing up in the woods outside Monroe, Wash., she never shied away from any work due to her gender. "I always had the mindset that I could do anything you can do and probably better," Bowles says.

So when the layoffs hit the shipyards, Bowles knew her next career move had to be recession-proof. As a single mother, she had to position herself to stay employed no matter what happened to the economy. Her daughter depended on her.

"I figured there would always be work in the energy industry because of our society's growing reliance on power," explains Bowles. And fortunately for her, Grays Harbor College and Centralia College had a partnership that allowed her to earn an Applied Associates in Science Degree in Energy Technology. She was able to take classes taught by Centralia professors like Rulon Crawford and John Steidel remotely, learning about power plant operations.

The curriculum covered power generation from all sources, transmission and distribution, basic electricity, and most importantly for Sara, energy efficiency.

"Energy efficiency spoke to me," Bowles says. "I like the idea of leaving the Earth clean for the next generation."

By 2010, she'd earned her AAS. But highly driven, she looked for ways she could get even more out of her education.

Evergreen State College's Upside Down Degree program fit the bill. It allowed Bowles to take the broad-based general courses she hadn't previously taken while honoring the energy-specific education she had, all within her already defined career focus. Evergreen had an articulation agreement with Grays Harbor College that made this possible. "They accepted all my credits and had the curriculum that allowed me to build further on my energy tech degree," says Bowles.

She earned a Gates Foundation scholarship for the first year, with student loans filling in the second. Her schooling included a paid internship with the Lewis Economic Development Council, which gave her the opportunity to run the Lewis County Energy Program focused on a commercial lighting program funded by the WSU energy grant. When that grant ended, she worked for a while at The Center of Excellence for Clean Energy. And then she landed her dream job.

Bowles is now Tacoma Power's Residential Conservation Program Coordinator. "It's a mouthful of a title," she says. She works primarily with the ductless heat pump and duct sealing program. The heat pumps use what she rattles off as a "super simple inverter-driven technology with a variable speed fan indoors and no ductwork for heat to escape."

As part of her work in the field, she conducts inspections, routinely climbing into crawl spaces under her customers' houses. Even if a male customer doesn't initially warm to the idea of a woman inspector, by the time Bowles suits up and ventures into that territory, she's earned his respect. "Wow, I don't even want to go down there, some of them will say."

It's been a long and winding road since Bowles lost that shipyard job, but she loves her work now even more. "If I can spend 30 years at Tacoma Power," she says, "I will."

*Lisa Brunette is a corporate and institutional storyteller tasked with helping the Center of Excellence for Clean Energy tell its story.*



SOUTH 74TH STREET

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