



Center of Excellence for Clean Energy

Strategic Plan 2017–2020



A Letter to our Friends

On behalf of the Pacific Northwest Center of Excellence for Clean Energy (PNCECE), I am pleased to share our 2017-2020 Strategic Plan. Over the past year the PNCECE Advisory Board, comprised of energy industry and labor leaders along with education partners, thoughtfully considered the issues and challenges facing our center, our students, Washington's Community and Technical College system and the energy industry in the Pacific Northwest.

We engaged with focus groups across Washington State for a candid assessment of our organization's strengths, weaknesses, opportunities and challenges. We heard consistently that it is the strength of our partnership with industry, labor and education that has been the pillar of our success. Since our founding in 2004 to today, the Center's impact has grown from five to 20 community college energy sector programs offered throughout the Washington state community college system. These programs support the industry's diverse workforce needs and technological advances in niche areas of energy such as smart grid, solar, energy efficiency, hydro and wind energy technology while continuing to support the core curriculum of power generation, transmission and distribution programs.

The Center serves as a statewide resource representing the needs and interests of the energy industry and our labor partners. We are charged with narrowing the gap between employers' demands for a highly-skilled workforce and the colleges' ability to supply work-ready graduates. Graduating students have been placed into high skills, high wage energy industry jobs across the Pacific Northwest region and are a critical component of the state's strategy of sustaining an innovative and vibrant economy. To that end, PNCECE will continue to link business, industry, labor and the state's educational systems to create a highly skilled and readily available workforce, which is critical to the success of the state's energy industry and our economy.

We proudly share our new strategic plan with you. It represents our vision and the actions that we will take during the next chapter of the PNCECE. The staff and Advisory Board are energized by this plan and through the many conversations that occurred as the plan evolved. We extend a very special THANK YOU to those of you who donated your time, ideas and passion to develop this plan for the future of our industry. This collective effort could not have been done without each of you. With this plan, we will position our organization for the future, through internal and external communications, succession planning, financial planning and continuing our focus on developing a highly skilled workforce that meets the needs of the energy industry. We believe the next four years of work laid out in this plan will raise the PNCECE to new levels of service excellence.

Please review this guiding plan for our organization through 2020 and into the next decade; we welcome your input and participation. We appreciate your ongoing support and confidence in the PNCECE, and we invite you to join us in achieving the goals set forth in our new plan in the months and years ahead.

Barbara Hins-Turner

Executive Director,
Pacific Northwest Center of Excellence for Clean Energy

May 2017

About the Center

The Pacific Northwest Center of Excellence for Clean Energy is a nationally recognized model providing strategic coordination for the energy industry's skilled workforce in the Pacific Northwest. The Center is led by a broad-based consortium comprised of industry and labor leaders who guide the center to:

- Develop and mature industry and labor partnerships to better understand the changing workforce issues facing electric utilities and independent power producers.
- Translate energy industry research into "Best Practices" training and education to ensure programs meet industry's workforce needs.
- Provide clear education and career pathways for students and job seekers for entry into high skills high wage energy jobs.
- Create a competitive workforce pipeline to meet increasing energy demands and support the economic future of the Pacific Northwest.

Vision – Washington State Centers of Excellence

Washington will be viewed as a national model in developing partnerships among business, industry, labor and education for the purpose of enhancing economic and workforce development initiatives to meet the current and future needs of the industries critical to the state's economic vitality.

Mission – Pacific Northwest Center of Excellence for Clean Energy

Our mission is to support the transition to a cleaner energy future through the development of a highly skilled workforce that meets the needs of industry.

Strategic Objectives

The Pacific Northwest Center of Excellence for Clean Energy (PNCECE) worked with industry, education and labor advisors, staff and partners to develop four strategic objectives that will guide the center's work for the next four years:



Effectively communicate the value of PNCECE



Ensure long term funding stability



Create and implement a succession plan



Develop a highly skilled workforce



Objective 1: **Effectively communicate the value of PNCECE**

Develop a communication plan to share the mission and value of the PNCECE with a wider audience. The communication plan will:

- Address communication plans for each year of the strategic plan.
- Include a newsletter and/or blog (quarterly or other schedule) listing progress on goals, grants, stories about graduates and other PNCECE news to share with industry, stakeholders and potential sponsors. Actively seek to expand the audience for the website and the newsletter and/or blog.
- Include multiple methods to communicate the mission of the PNCECE.
- Include a portfolio of strategic initiatives designed to attract resources to the PNCECE.
- Include methods to expand outreach: let college programs know what the PNCECE can offer them.



Objective 2: **Create and implement a succession plan**

Expand and diversify relationships that will ensure the future continuity of the PNCECE and its Advisory Board. Elements of this objective include:

- Work with the College Administration, Advisory Board and partner colleges on a succession plan for PNCECE Leadership.
- Ensure succession of the Advisory Board, including an expectation that each Board member will designate an alternate within their organization.
- Clearly identify roles of PNCECE Leadership, the Advisory Board and Advisory Board Members. Look for opportunities to distribute portions of those roles to others (program participants, industry, labor).
- Expand relationships so they are not as dependent on PNCECE Leadership. Involve Advisory Board members, industry, labor, collaborators, other colleges, and administration.



Objective 3: **Ensure long term funding viability**

Diversify funding to ensure the stability and success of the PNCECE now and into the future. Elements of this objective include:

- Identify a list of industry needs and potential grant or foundation opportunities and prepare a crosswalk between them.
- Develop and document a system that includes scanning, prioritizing and pursuing diversified funding that aligns with our mission.
- Explore opportunities with partners/investors to locate alternative funding sources.



Objective 4: **Develop a highly skilled workforce**

Provide effective industry-recognized products and services to develop candidates for the energy industry. Elements of this objective include:

- Develop methods to identify and communicate available candidates to potential industry end users. Incorporate this information into a newsletter and/or blog and the website (see Obj. 1).
- Expand PNCECE core resources for serving the student and industry base. Recruit the right students; build the student base.
- Bridge the gap between industry, education and labor.
- Develop an industry sector strategy to ensure that the PNCECE meets the constantly changing needs of industry. Develop new programs, revise or retire other programs to meet those needs. Align training methods to match the audience.
- Create a pathway that inspires high potential 2-year workforce education and pre-engineering students to continue on to Electrical Engineering Bachelor's degree programs.

Appendix

From August 2016 through January 2017, the PNCECE held a series of meetings with staff, advisors and partners to gather input for a strategic plan. Attendees discussed vision & mission, customers, stakeholders and collaborators, and strengths, weaknesses, opportunities and threats (S.W.O.T.). The following is a summary of input from those meetings.



Travis, Lewis County PUD, Electrical Engineer, Centralia College and Washington State University, Vancouver ►

Who Are Our Partners?

<i>Customers</i>	<i>Stakeholders</i>	<i>Collaborators</i>
Industry (Employers)	State Board for Community and Technical Colleges	Energy Industry and Labor
Community College Students	Home Campus: Centralia College	Federal Government; Departments of Energy, Labor, Commerce
K–12 Students	Washington State Legislature	Vendors
High Schools	Other Centers of Excellence	Donors
Labor (incl., IBEW, WA Labor Council [AFL-CIO])	College Students, Faculty, Administration	Workforce and Economic Development Organizations
Colleges with Energy Programs	Institutions	Trade Associations
	Communities	State and Local Government
		Political and Private Individuals



FWEE STEM Academy, Chelan County PUD, Rocky Reach Dam, Wenatchee Valley College ▲►



PNCECE Strengths

Strong Relationships

1. Excellent relationships already in place with industry and organized labor.
2. Strong individual relationships; this is both a strength and a weakness. (PNCECE is a people-dependent organization therefore there is a negative impact when someone leaves the Advisory Board.)
3. Advisory Board membership is valued by members in part because of the opportunity to connect face to face with industry peers. Networking among Board Members has proven to be as valuable as the training itself. Members have valuable information exchange, camaraderie, support and learning all while contributing to a worthwhile organization.
4. CoE Leadership - Good communication and partnerships among the group.
5. Strong contacts with a skilled pool of consultants (resource group).
6. Social capital (strong relationships that have productive benefits).
7. Strong and diverse relationships enable PNCECE to collect data and give partners what they need.

Strong and Diverse Partnerships

1. Collaborative resources help make the organization strong.
2. Diverse partnerships create a valuable network and enable economic development.
3. Strong partnership with an experienced, very effective leader in workforce supply and demand research, data collection, reporting.
4. Good outreach and communication within our community of education partners.



▲ PG&E PowerPathway Program for JBLM Transitioning Veterans, Tacoma Power Cushman Dam, Bates Technical College Electrical Construction Program

A strong brand; a strong model with history of success

1. Ability to gather resources, especially funding.
2. Ability to get new programs started.
3. PNCECE is codified in legislation.
4. Name recognition. The ability to partner with a program that has a proven track record; for example, the NSF grants.
5. Highly experienced and well respected PNCECE Leadership. Industry background and strong network/relationships.
6. Excellent faculty. Faculty drive the programs. Strong faculty = strong programs.
7. Recognized look of materials and communications.
8. Collating and keeping tabs on the various programs – website and Education Resource Guide booklet. Figuring out where programs best fit (which college/faculty); e.g., Wind program.
9. Completed comprehensive electric sector labor market studies (2008 and 2013).
10. Very responsive organization.
11. History of success in this role: encouraging energy program development.
12. Creating supplemental energy projects. Growth from 5 to 20 programs!
13. Best Practices Annual Summit.

Centers of Excellence are a source of pride to college presidents: Evidence of relevant education that industry wants; acknowledgment of expertise. CoEs lend credibility to a program and to the college, which ensures the campus will get attention from the CoEs.

PNCECE Weaknesses

Limited Resources

1. Ability to sustain and grow the regional network (the relationships) is constrained by limited resources.
2. Lack of succession plan for PNCECE leadership and Advisory Board membership. When someone in the network leaves, who will be the next contact?
3. PNCECE is dependent on soft dollars/grant funds. Lack of a continuous cash flow requires ongoing search for grants.
4. Lack of marketing skill set to promote the PNCECE.
5. Limited resources restrict staffing and outreach.
6. Insufficient resources for technical programs such as a lab and hands on equipment for teaching.

Soft Money

1. Soft money funds special projects, not ongoing operations.
2. The world of grants is a hard way to do business. A project is funded and staffed, then it ends. There is a gap, then another project is funded. Changes in staff create inconsistent operations. New staff come in, get up to speed, then leave, which causes disconnects.

Dependence on individual relationships

1. Negative impact of turnover in relationships when someone leaves/changes jobs.
2. Dependence on effective faculty who partner with and support the program. Can't do anything without them.
3. Difficult to collect data if industry is not a partner.
4. Turnover in WISE grant consortium, industry partners, colleges.

Industry vs Academia

Industry adapts and moves on quickly. It takes academia 1 or 2 years to deliver a new class; up to four years to get students out the door.

Other

1. Succession Planning – for PNCECE Leadership and Advisory Board positions.
2. Remote location. Centralia is off the beaten track. There is a limited pool of applicants for staff positions.
3. Spread out constituency. Many hours spent traveling to meet face to face.
4. Expectations are not clear. Metrics are not stated.
5. Need more guidance for members leaving the Advisory Board. (Name a replacement and develop a hand-off plan.)
6. Need onboarding for new Advisory Board Members including the history of the PNCECE, future direction, expectations of Board members and what to expect from Board membership.



▲ FWEE Hydro STEM Career Academy, Chelan County PUD, Rocky Reach Dam, Wenatchee Valley College

PNCECE Opportunities

Take a Leadership Role

1. Drive the conversation locally and regionally. Use PNCECE intellectual capital to create a new and exciting future.
2. Become a stronger driver for economic development. Currently viewed as a supportive partner.
3. Expand industry relationships.
4. Become a high-level partner with industry.
5. Communicate more effectively and frequently to keep up with industry.
6. Increase visibility about the PNCECE – its purpose and accomplishments.
7. Bridge the gap between industry - education. Promote common language and understanding.
8. Keep the industry relationships going in order to maintain the ability to collect data.
9. Expand the network. Develop new relationships.
10. Look ahead. Keep thinking about trends, gaps, and what the future looks like.
11. Increase visibility. For example, encourage Deans to point faculty to PNCECE.
12. Provide networking opportunities for the educators in energy and energy related fields, for example, Women in Power.
13. Create a speaker's bureau.
14. Support for colleges in their grant work (executing, writing, implementing, managing).



▲ Students in Shoreline's Clean Energy Tech program complete a mock installation of a battery-based photovoltaic system on the demonstration roof next to the Zero Energy House on Shoreline's campus.

Other suggestions

1. Provide a resource to reach across campuses to the students.
2. Collect data on graduates. Provide a funding source for this. Where do they go? How are they doing? What are their salaries?
3. Promote the full student, not just technical skills.
4. Push new multi-occupational degrees.
5. Support the new BAS (Bachelor of Applied Science) degree programs.
6. Address turnover. PNCECE Leadership will eventually move on.
7. Identify other disciplines that could benefit from a CoE; for example, economics.
8. CoE for Cyber Security: Start a statewide initiative; train people on this sector. An ideal policy initiative for the 2018 legislative session.
9. Focus on private dollars. (State and federal funds are decreasing).
10. Skills standards: identify new occupations, develop new standards, modify or revise existing standards.
11. Continue to update the labor market analysis.
12. Sell advertising space on program guide.
13. Maintain connections with grant partners after grants are finished.
14. Let colleges know what the PNCECE can offer them.
15. Look for ways for program leadership to connect with each other.
16. Colleges need money for equipment, faculty professional development, program-specific recruitment of students, program navigation.
17. Act as a clearing house for equipment for electrical training. Create a process and forms for sharing and tracking.
18. What about geo-thermal energy?
19. Conduct a SWOT analysis on grants.



▲ Chris, Journeyman Hydroelectric Operator, Grant County PUD, Centralia College

◀ Sara, Tacoma Power, Conservation Program Coordinator, Grays Harbor College and Evergreen State

PNCECE Challenges (Threats)

Limited Resources

1. Soft money funds special projects, not ongoing operations. Turnover due to the nature of grant funding.
2. Covering all the industry sectors, for example, biofuels.
3. Getting industry to articulate what they need. Is it a 4-year degree, or is it skills/abilities such as critical thinking, project management, leadership?

Centers of Excellence Model

CoEs live on a home campus within the purview of the college's rules and regulations, but they work and serve statewide. There is oversight from the State Board for Community and Technical Colleges, with funding from the state legislature. CoEs serve community colleges yet they are partially funded by federal funds through grants. This is a complex model which can create potential conflicts of interest.

Data Collection

1. Getting authorization to access all the good data that is available.
2. Updating data and keeping it relevant.
3. System wide data is a large gap at the college level; it is very difficult to get data.
4. Paying for research and data collection. The original workforce study cost \$50,000.

Other challenges

1. Turnover on the Advisory Board. It takes one to two years for a new Advisory Board Member to come up to speed.
2. Research has been on the electric sector. What about gas? In WA State, in 20 programs, none are focused on gas. This is a big challenge. Who has the expertise and time to do it?
3. Unknown political climate. What does it mean for the PNCECE?



Nick, Hydropower Operator, Seattle City Light, Diablo Dam, Centralia College ▲
Wind Energy Technology, Walla Walla Community College ►



Washington State
Centers of Excellence

Core Expectations

Washington state's 10 Centers of Excellence (CoE) link business, industry, labor and the state's educational systems to create a highly skilled and readily available workforce critical to the success of the state's economy. Each industry-focused center is funded through the State Board for Community and Technical Colleges (SBCTC) and is housed at a community or technical college. Core Expectations for the Centers of Excellence include the following.

Economic Development Focus

Serve as partners with various state and local agencies, regional, national, and global organizations to support economic vitality and competitiveness in Washington's driver industries

Industry Sector Strategy Focus

Collaboratively build, expand and leverage industry, labor and community and technical college partnerships to support and promote responsive, rigorous, and relevant workforce education and training.

Education, Innovation and Efficiency Focus

Leverage resources and educational partnerships to create efficiencies and support development of curriculum and innovative delivery of educational strategies to build a diverse and competitive workforce.

Workforce Supply/Demand Focus

Research, analyze and disseminate information related to training capacity, skill gaps, trends, and best practices within each industry sector to support a viable new and incumbent workforce.

Learn more about the Washington Centers of Excellence at coewa.com

Strategic Plan Meeting Attendees

August 19, 2016

- Barbara Hins-Turner, PNCECE
- Alan Hardcastle, Washington State University Social and Economic Sciences
- Troy Nutter, Puget Sound Energy
- Jennifer Taylor, J. Taylor Consulting

November 30, 2016

- Barbara Hins-Turner, PNCECE
- Alan Hardcastle, Washington State University Social and Economic Sciences
- Alison Pugh, South Seattle College
- Gail Alexander, Cascadia College
- Anthony Valterra, PNCECE Staff
- Scott Wagemann, PNCECE Staff
- James Hovis, PNCECE Staff
- Angela Conley, PNCECE Staff
- Jennifer Taylor, J. Taylor Consulting

January 10, 2017

- Barbara Hins-Turner, PNCECE
- Shana Peschek, Construction Center of Excellence
- Ryan Davis, Everett Community College
- Troy Nutter, Puget Sound Energy
- Mary Kay Bredeson, Center of Excellence for Aerospace and Advanced Manufacturing
- Louise Petruzzella, Shoreline Community College
- Jill Davishahl, Bellingham Technical College
- Jennifer Taylor, J. Taylor Consulting

January 18, 2017

- Barbara Hins-Turner, PNCECE
- Glen Pierce, Energy Northwest
- Bob Topping, Regional Education and Training Center
- Dan Kay, Lewis County PUD
- Pat McCarty, Tacoma Power
- Todd Currier, Washington State University Energy Program
- Jennifer Taylor, J. Taylor Consulting

April 7, 2017

PNCECE Advisory Board members:

- Pat McCarty, Chair, Tacoma Power
- Alice Massara, Tacoma Power
- Troy Nutter, Puget Sound Energy
- Jeremy Gall, Avista Utilities
- Kairie Pierce, Washington State Labor Council
- Jim Lowery, Centralia College Trustee
- Glenn M. Pierce, Energy Northwest
- Todd Currier, Washington State University Energy Program
- Bob Topping, Regional Education and Training Center
- Bob Guenther, IBEW Local 77
- PJ LeCompte, Bonneville Power Administration
- Jay Pickett, Northwest Territories Power Company
- Shana Peschek, Construction Center of Excellence
- Micah Goo, Centralia City Light
- Brian Young, Washington Department of Commerce
- Jackie Rae, Snohomish County PUD/IBEW 77
- Travis Kinney, Lewis County PUD

Additional guests:

- Alan Hardcastle, Washington State University Social and Economic Sciences
- Jennifer Taylor, J. Taylor Consulting
- Nick McFarland, Centralia College Engineering Student
- Cecile Bamer, Construction Center of Excellence

Education:

- Barbara Hins-Turner, PNCECE
- Scott Wagemann, PNCECE
- James Hovis, PNCECE
- John Steidel, Centralia College

PNCECE Advisory Board

The PNCECE Advisory Board is a permanent standing board which provides advice and insight to the Center of Excellence from the perspective of industry, education, labor, and the community. The board helps the Center achieve its mission by ensuring that programs and projects advance the needs of the energy sector within the region. The diversity of membership provides an invaluable resource to center staff and program partners to easily access information and contacts throughout the industry. The strength of the advisory board was a key component in the elevation of the center from a state organization to a Department of Energy recognized Regional Center of Excellence. As of April 2017, the advisory board members are:

- Pat McCarty (Chair), Tacoma Power
- Troy Nutter (Chair, June 1, 2017), Puget Sound Energy
- Avista Utilities – Jeremy Gall
- Bonneville Power Administration – P.J. LeCompte
- Centralia City Light – M.L. Norton
- Centralia City Light – Micah Goo
- Energy Northwest – Glenn M. Pierce
- IBEW Local 77 – Bob Guenther
- Lewis County PUD – Daniel Kay, P.E.
- Lewis County PUD – Travis Kinney
- Lewis Economic Development Council – Matt Matayoshi
- Northwest Territories Power Company (Canada) – Jay Pickett
- Pacific Mountain Workforce Development Council – Sean Murphy
- Seattle City Light – Keith Gulley
- Snohomish County PUD/IBEW 77 – Jackie Rae
- Tacoma Power – Alice Massara
- TransAlta Centralia – vacant
- Washington State Department of Commerce – Brian Young
- Washington State Labor Council, AFL-CIO – Kairie Pierce

Education Partners

- Centralia College Trustee – Jim Lowery
- Shoreline Community College Clean Energy Program – Louise Petruzella
- Regional Education and Training Center – Bob Topping
- Washington State University Energy Program – Todd Currier

Ex-Officio

- Center of Excellence for Clean Energy – Barbara Hins-Turner, Executive Director
- WISE Lead Project Manager – Anthony Valterra
- Centralia College – Rulon Crawford and John Steidel

Learn more

For more information about the PNCECE and this plan, contact Barbara Hins-Turner, Executive Director at Barbara.Hins-Turner@centralia.edu.



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