Center of Excellence FY23-24 Work Plan

Quarter 1 Report



Center Name: Pacific Northwest Center of Excellence for Clean Energy

Core Expectations	Activity #1: INDUSTRY	
 Economic Development Sector Strategy Ed/Innovation/Efficiency Supply/Demand Equity & Access 	 Strengthen advocacy and community partnerships Continue to build upon and develop a portfolio of clean energy/technology partners. Work closely with stakeholders to listen/learn about emerging technologies. Continue to invite emerging technology experts to meetings; invite to join the center's Advisory Board if needed. Create broader partnerships and alliances with organizations. Increase or continue involvement with Career Connect Washington*, Center for Energy Workforce Development (CEWD), CleanTech Alliance, Lewis County Economic Alliance, Lewis County Renewable Energy Task Force, NW Energy Efficiency Council, PNWH2 Association, WA Dept. of Commerce, and other industry organizations as they emerge. *Created separate activity page for this partner 	
Funding Sources %	Purpose Projected Outcomes and Products	
CoE Allocation 90% (Workforce summit includes CCW partnership – 10%)	To meet Washington's climate and DEI initiatives, industry and its workforce need to adapt to and work alongside of new and emerging technologies. The center needs to provide nimble support within industry to report the best workforce gaps and needs to our education system.	 ~Workforce Summit – host/co-host one event that focuses on clean energy/technology workforce trends/gaps/needs. ** ~Attend at least two events to build industry knowledge and outreach. Q1 and Q4 ✓ ~Attend CleanTech Alliance (CTA) Board of Director meetings and events. Q1 – Q4 * ~Continue work with the PNWH2 (hydrogen hub association), create a new activity page if funded. Q2+ ✓ ~Attend CEWD's West Coast Regional Consortium meetings to work on collaborative career awareness promotions. Q1+ ✓ ~Serve on PSE's Generation Apprenticeship document review committee. ✓
Report and Analysis on Act	Report and Analysis on Actual Outcomes and Products/Activity #1 CoE_CleanEnergy	
Q1	 We had an amazing first quarter as we continued to build contacts and partnerships. In every large, public, in-person event, I ask workforce questions that involve CTC training. Asking questions is a way of introducing our work. Responses, which are always positive, lead to more connections and network building. Highlights of Activity #1: Continued to participate in updating the U.S. Department of Energy's Hydropower Roadmap and invited Washington's hydropower GM's to contribute to surveys and join discussions (national/virtual). Hosted an in-person community fusion forum at CC for Zap Energy. Introduced Zap's VP to Bonneville Power, Centralia City Light, and Lewis County PUD representatives. Attended AFV-TAG Green Transportation Expo, in Tacoma, and Renewable Hydrogen Expo, In Portland. Found EV training and future equipment donations for colleges (we hope). (both regional outreach) 	

 Attended WSU/PNNL Advanced Grid Institute in Tri Cities. Avista was awarded a grant that includes several states and universities. I inquired publicly about where 2-year colleges and union training fit in – which led to a great discussion. Last year, this event didn't include any workforce discussions. Workforce topics are now included. (regional outreach).
 Inter with WSO's vice chancellor Kate MicAteer twice to discuss workforce collaboration opportunities. Kate agreed to join CoE's Advisory Board.
Attended monthly CEWD West Coast Consortium meetings and invited industry, deans and faculty to attend. (virtual/regional)
PSE had one meeting to review dam operator apprenticeship duties.
 NEW: Met with sei, NW Energy Efficiency Council (NEEC) and community members to discuss supporting a Climate Corp/Energy Fellow program in Lewis County. The discussion led to sei securing funds for two fellows who will work on promoting solutions to address Washington's Clean Building Act, HB 1257. We will add this to our report as a new activity in Q2.
 Aligned two Dept of Energy national laboratory contacts (NREL and ANL), involved with the Net Zero World initiative, to develop a sister city between Tocopilla, Chili, and Centralia. Both cities, which are similar in size and demographics, will experience the shuttering of a coal generation power plant.
• CC campus VIP Tour: Adam Day, First Mode, to review training areas and discuss site tours for students and equipment needs for labs.
*Note about CTA Board of Director's meetings. Quarterly meetings conflict with Career Connect Washington meetings. CCW invited us, as sector co-leaders, to present industry networking information. Mel suggested that I represent our role at the CCW meeting vs attend the CTA Board of Director's meeting this quarter.
**Note about developing a workforce summit: We are involved with planning events for future quarters. CTA, who we partner with in gathering workforce gaps analysis, is in the process of replacing their workforce development manager, who resigned in July. CTA also contracted with Eileen Quigley at Clean Energy Transition Institute to assist with analysis and reporting.

Core Expectations	Activity #2: EDUCATION CoE_CleanEnergy	
 □ Economic Development ⊠ Sector Strategy ⊠ Ed/Innovation/Efficiency ⊠ Supply/Demand ⊠ Equity & Access 	 Strengthen education partnerships Continue to build the Energy Educators' Association (EEA) statewide. Send targeted emails that deliver news, trends, opportunities, and labor market data. Develop workshops/forums for faculty and deans to include subject matter experts and networking. Support educators to enhance programs (provide trends/labor market materials/connections to industry). Create broader partnerships and alliances with those we serve. Attend WEC, CTC energy program advisory board meetings; serve on CTC boards and committees. Collaborate with WA Dept of Commerce Workforce Development. Collaborate and support the NW Indian College. Continue to build and develop partners with STEM and K-12 ESDs to reach grades 8-12 and parents. Serve on committees for Capital STEM Alliance (Advisory Board) and Foundation for Water & Energy Education (FWEE); and in involvement with Bonneville Environmental Foundation. Distribute/share materials and opportunities for faculty and students. Identify a list of industry needs and potential funding for workforce development and prepare a crosswalk between them. Assist CTC system with program needs including program reviews, funding needs, sharing information, news and labor data. Track college program CIP codes as they relate to the center's work; and follow SBCTC's dashboard data that will showcase student demographics, enrollment and graduation rates.	ıcrease

Funding Sources %	Purpose	Projected Outcomes and Products
CoE Allocation 90% CCW 10%	As industry evolves and adopts new technologies it will need an adaptive workforce. It's imperative to keep our education partners abreast of news, trends and changes to support the educational needs of the workforce.	 ~Present industry news/trends in STEM & FWEE quarterly meetings. ~Send monthly emails to Energy Educators' Association. ~Update Energy Program Guide. (ongoing) ~Host workshops for EV and Energy faculty Q2 thru Q4. ~Co-chair Global Hydrogen Academia Work Group (meets every 6 weeks). ~Build a workforce partnership with WSU's Energy Workforce Team. (ongoing) ~Serve on advisory boards for Shoreline and Big Bend (Tech Hub Grant). ~Arrange a CTE lab tour of Bellingham Tech and other technical colleges. ongoing
Report and Analysis on Act	ual Outcomes and Products/Activity #2	CoE_CleanEnergy
Q1	 Although many Energy Educators' Association support industry events and job opening example, Yakima Valley CC inquired abox Invited deans to attend CEWD's meeting Supported Big Bend's Tech Hub application Submitted a letter of support and agree Planned EV training for CTC faculty - at 0 with Clark's new dean, Theo Koupelis, a Met with Lake Washington and Shoreling opportunities. (virtual) Continued co-chairing a global hydrogere beginning to develop H2 training (globa Connected Brent Lundstrom, director, C manager for utilities; Eli King, WA Dept Bob Guenther, IBEW-Local 77 CyberOT a Cybersecurity in Operation Technologie Toured labs at San Juan College's Schoor demonstrate industry partnerships. San of lab equipment. (CCW funding). Began planning a clean energy summit a businesses. Introducing businesses to N NEW: 2023 Clean Energy Technology W Board and HB 1176. The Center was inv Other meetings: attended CoE director's meeting representatives; met with WSU Tri Cities to deve 	ciation members were on leave over the summer, we sent a number of targeted emails to gs. Responses were mostly from deans asking for Chmura information and program support. For put re-vamping their energy program due to a one-year waiting list at Perry Technical College. gregarding the launch of Energy Fundamentals 2.0 (free, interactive, online energy education). inon/project, called BATT (Battery Anode and allied Technology Transformation) Tech Hub. d to serve on advisory board. Clark College's Toyota T-Ten labs in Q2 (timing depends on lab and faculty availability). Working nd SPSCC's Jason Selwitz, in planning the training. (regional/virtual) te to discuss Good Jobs Challenge grant applications and will align them with future CCW grant n academia workgroup for more workforce development research. Found EPRI, who are I/virtual). StoE_Cybersecurity, to national and regional contacts: Cynthia Hsu, Dept of Energy Cybersecurity of Commerce Cybersecurity manager; Mark Rice, PNNL's cybersecurity expert; Christine Reid and apprenticeship leads; and Dennis Skarr, Cyber faculty at Everett CC. Discussed with Brent to lead s for utilities. I of Energy, in Farmington, NM, and will share results with the CoE's advisory board – to Juan has secured \$19.5M to construct the 64,000 square foot building that holds more than \$5M at Big Bend CC to feature battery technology manufacturers and other new clean energy Norkforce Advisory Committee under the auspices of WA Workforce training and Education ited to join and attended weekly meetings; met with Pac Mt Workforce Development ED and lop workforce strategies – to be continued through the hydrogen hub and advisory board work. ship Night to celebrate a student who won an energy scholarship - paid by Pat McCarty, retired ard Chair.

Core Expectations	Activity #3: PROJECTS - CCW	
 ☑ Economic Development ☑ Sector Strategy ☑ Ed/Innovation/Efficiency ☑ Supply/Demand ☑ Equity & Access 	 Career Connect WA: Clean Technology/Clean Energy Sector Lead Continue to partner with CleanTech Alliance (CTA) as a sector co-lead. Work closely to: 	
Funding Sources %	Purpose	Projected Outcomes and Products
CCW funds extended through Dec. 31, 2023 95% CCW funds 5% CoE funds	Work-based learning projects will enhance knowledge and pathways into energy careers. It will encourage diversity, equity and inclusion participation with encouraged targeted programming.	 ~Attend CCW sector lead meetings and assist CTA with reports. ✓ ~Meet/support current and future CCW program builders. ✓ ~Continue to build/improve CoE's website design and function; add a CCW website page for industry. ✓ ~Promote projects through Energy Clips (newsletter) and social media outlets. ✓ ~Disseminate FWEE Activity Guides and attend Riverfest. Q2
Report and Analysis on Actual Outcomes and Products/Activity #3 CoE_CleanEnergy		CoE_CleanEnergy
Q1	 Career Connect WA funding was successfully extended to the end of 2023, which allows us to continue improving CoE's website, pay for travel to attend CEWD's annual convention (Q2 outside of WA DC), and purchase activities for future events. CCW hired a technical director. We meet with CCW staff three hours or more each month; and complete an online document for tracking successes. We hired the Trio Group to redesign pages and train the CoE's program coordinator, Emily Girt, to manage the website (big win). Emily is tracking/updating the overwhelming large amount of outdated pages and information. The website will have a new look by the end of the year. Through FWEE, we paid for and disseminated 1,000 updated activity guides to Salmon Fest, Riverfest, Mason County Fair, Lewis County Fair, and Libby Dam Visitor Center. Monica had high hopes to attend Riverfest in person, but opted out due to a lot of other travel. We need more material to use at this type of event and will choose to visit every other year. Energy Clips, the CoE's online news piece will begin Q2. 	

 □ Economic Development ⊠ Sector Strategy ⊠ Ed/Innovation/Efficiency ⊠ Supply/Demand ⊠ Equity & Access 	 Renewable Energy Vehicle & Infrastructure Technician Training (REVIT) To increase enrollment in colleges that support a pathway to careers, the center will continue to partner with Twin Transit to support renewable energy training to students, grades 8 – 14. Two grants were secured in 2023 to build the first introduction to renewable energy training for high school students. Once the curriculum is approved and finished by fall of 2024, then the center will help promote and share this K-14 partnership model as well as curriculum to others around the state. The center will: Continue grant application support. Convene between high school and college faculty and staff; host meetings and workshops. Promote successes and curriculum across the state. 	
Funding Sources %	Purpose Projected Outcomes and Products	
CoE Allocation 90% CCW 10%	We need to prepare the future workforce as it approaches a world with evolving technologies. Industry needs technicians and an increasing rate. REVIT was created as a model that will be shared across the state to connect K-12 to college's that offer energy technician programs.	 ~Host meetings and training workshops (as needed). ~Promote successes and program opportunities in Energy Clips, on website and social media. ~Write support letters as needed to gain additional funding.
Report and Analysis on Act	ual Outcomes and Products/Activity #4	CoE_CleanEnergy
Q1	 Met with community stakeholders to partner in Twin Transit's Renewable Energy Vehicle and Infrastructure Technician (REVIT) training program. Coordinated meeting space at Centralia College for the group. Group consists of Twin Transit (lead), superintendents and CTE directors of Centralia and Chehalis School districts, representatives from Centralia College (ERA faculty), Career Connect WA regional representatives, ESD 113, CoE staff and Bonneville Environmental Foundation (BEF) staff. Twin Transit hired a program coordinator and curriculum building team (EduCurious). The first Clean Energy Exploratory program was launched at Centralia High School in September. 25 students enrolled (50% female). Students will earn high school credits in physics and CTE. Emily Girt, CoE Program Coordinator, attended two monthly REVIT meetings on behalf of the CoE. Next step: DACUM and building preparatory classes that offer high school and college dual credit. 	

Core Expectations	Activity #5: PROJECTS – PSU NSF-REI
 ☑ Economic Development ☑ Sector Strategy ☑ Ed/Innovation/Efficiency ☑ Supply/Demand 	The Pacific NW Smart Grid Technology Ecosystem: Creating prosperity through a smart, sustainable, and secure electric grid Portland State University (PSU) was awarded a \$1 million planning grant by the National Science Foundation (NSF) for a smart grid project, SEQUINS. The project is part of PSU's Directorate for Technology, Innovation and Partnerships, which is aspiring to change the way grant money is allocated so that it actually reaches and serves local communities. SEQUINS, which stands for Smart, EQUitable, INteroperable, and Secure, will coordinate major players in the Pacific Northwest to make a truly "smart" electrical grid a reality. Led by Portland State University. Partners

⊠ Equity & Access	include PNNL, Technology Association of Oregon, Portland General Electric, NW Energy Efficiency Alliance, LinkOregon, Oregon Titan Fusion Center, and State of Oregon Chief Information Security Officer.		
	This two-year Regional Innovation Engine (RIE) planning grant will facilitate coordination between research, entrepreneurship, industry, capital, and government to scope a roadmap for an equitable smart grid across the Pacific Northwest. The project will identify obstacles to smart grid growth and develop plans to overcome them. Throughout the work, the focus will be on energy equity, so that everyone in the region, regardless of location and income, benefits from the investments and the job opportunities SEQUINS will create. If successful, the SEQUINS planning phase can result in up to \$160 million in NSF implementation funding for regional businesses, entrepreneurs, academic institutions, and others, with the ultimate goal of transforming the Pacific Northwest into a global smart grid leader.		
	CoE's role is to serve on the project's advisory board and be a strategic partner. The following includes the activities for the advisory board:		
	 Partner with PSU, Worksystems Inc, Heritage University, and NCAE-C to survey existing workforce development programs for best practices Build partnerships and convene key constituencies, including labor unions and tribal communities, to ensure impacted parties are represented. Develop a framework with culturally-specific organizations, industry, education, and other workforce partners for communicating the value 		
	of cybersecurity and smart grid jobs.		
Funding Sources %	Purpose Projected Outcomes and Products		
CoE Allocation 100%	Build collaboration of partners within the region, survey existing smart grid and cybersecurity workforce programs, and assist region in workforce development planning.	 ~Attend advisory board meetings (TBD) and support the region's smart grid/cybersecurity partnership. ✓ ~Update this activity as this collaboration evolves (we have not met yet). 	
Report and Analysis on Actual Outcomes and Products/Activity #5 CoE_CleanEnergy			
Q1	 Attended Portland State University's NSF-EIN advising council meeting (Sept. 12) to meet fellow advisors and discuss the project's next steps. Shared previous work that the CoE_Clean Energy had done in Smart Grid technology – including Train the Trainer modules. Participated in surveys Most likely will move into workforce advising team. 		

Core Expectations	Activity #6: EnLighten Symposium 2024 and EmPower Conference 2025 Planning
 Economic Development Sector Strategy Ed/Innovation/Efficiency Supply/Demand Equity & Access 	 First biennial EnLighten Symposium (EmPower Conference biennial offset) focused on career planning and certifications for the construction industry. Plan and deliver an in-person conference that supports women in the trades and builds future leadership in a diversity of trades including manufacturing, construction, and maritime. Conference topics may include: Jobsite safety; Wellness and nutrition; Education pathways, certification & credentialing; Technology, new career pathways, and career planning; Diversity, equity & inclusion.

	 The EMPOWER Women's Leadership Conference provides a platform for the Centers of Excellence for Aerospace and Advanced Manufacturing, Construction, Clean Energy, and Marine Manufacturing & Technology to continue supporting women from diverse communities as they consider careers and advancement in the trades. EnLighten Forum is tentatively scheduled for: March 21, 2024, at Renton Technical College EmPower Conference is tentatively scheduled for: March 6, 2025. Location TBD - planning bid process with advisory team. 		
Funding Sources %	Purpose	Projected Outcomes and Products	
COEs allocation = 30% Industry Sponsors = 65% RTC = 5%	 Provide multiple access points for women who are currently in the trades, with high quality, timely and relevant professional development opportunities focused on career advancement and longevity. The symposium and conference will offer a platform for women who are considering a career, promotion, and further education in the trades, providing critical information about pathways, training options, finding a mentor, and more. In response to a desire for more content from previous conference attendees, the Centers will offer post-conference professional development opportunities, which lead to the creation of the EnLighten Symposium. 	 Assist the CoE_Construction with planning and participating in the EnLighten Forum in March 2024. Assist the centers and advisory team in planning the EmPower Conference, scheduled for March of 2025. Share professional development opportunities, recordings, slides, and other relevant resources and materials. 	
Report and Analysis on Actual Outcomes and Products/Activity #6 CoE_Clea		CoE_CleanEnergy	
Q1	 Met several times with Christina Rupp, including a meeting with the marketing firm to approve the event logo. Christina and I met with Daniel Vallao, co-founder of intelligent Partnerships. Daniel came highly recommended by Rachel Ferrell Crowley, Central WA director for Senator Patty Murray (we discussed the Enlighten event at the AGI Summit) Discussed the summit with Christina Reid, IBEW Local 77 and Alice Massara of Tacoma Power – who are both reaching out to their communities for speakers and session leaders. 		

Core Expectations	Activity #7: CHMURA	CoE_CleanEnergy
 Economic Development Sector Strategy Ed/Innovation/Efficiency Supply/Demand Equity & Access 	Chmura Data The Workforce Data Pilot will identify, extract, format and deliver workforce and related data, using the will demonstrate the use and effectiveness of occupational, industry and other data to the workforce e Centers of Excellence are participating in the Phase II Pilot and will fully engage in the continuation of t Jobs Positing tool, develop a community of practice and information dissemination process. Intended c	e Chmura JobsEQ RTI platform. This project education and training system. Eleven the collection of data, work with the RTI completion for pilot: Spring 2024

Funding Sources %	Purpose	Projected Outcomes and Products
CoE Allocation 100%	The Workforce Data Pilot Project will collect, map, and produce industry demand, workforce and economic impact data, professional technical occupations, utilizing the Chmura JobsEQ RTI proprietary workforce and economic management tools to inform and benefit CTC workforce programs. The project will also utilize the RTI Jobs Posting tool.	~Professional development for CoE staff. ~Expansion to include incorporation of Jobs EQ Job Postings tool – engage with Chmura regarding how to publish or use on coewa.com site and possibly all COE sites. ~Join other CoE's in creating Community of Practice. Q2
Report and Analysis on Actual Outcomes and Products/Activity #7		CoE_CleanEnergy
Q1	 Ann Avary, CoE_Marine, is leading this activity. We continue to use Chmura to share information with colleges – regarding clean energy jobs as well as demographics. This tool is amazing and extremely helpful. 	

Core Expectations	Activity #8 – AWARENESS	CoE_CleanEnergy
 Economic Development Sector Strategy Ed/Innovation/Efficiency Supply/Demand Equity & Access 	 Increase Awareness of Clean Energy/Clean Technology Careers and Career Pathways A blend of activities: strengthening advocacy, community partnerships and education along with efforts to increase and build awareness. This new activity showcases work that increases awareness in emerging technologies and workforce needs, to include. Workforce training inclusion in hydrogen, fusion and other emerging fields 	
Funding Sources %	Purpose	Projected Outcomes and Products
CoE Allocation 90% CCW 10%	Building awareness of the center and as well as industry news and trends is vital to building new connections and supporting the energy industry. As new technologies begin to emerge, it's important to be a voice for workforce and the CTC system.	 ~Present CoE information to two organizations unaware of CoE. ~Attend at least two events that are not industry focused that offer opportunities to increase networking contacts. ~Promote Public Power Week and Careers in Energy Week to increase career awareness Q2. ~Build CoE CleanEnergy News Clips awareness/readership through social media posts. ~Print energy career fliers for event dissemination.
Report and Analysis on Ac	tual Outcomes and Products/Activity #8	CoE_CleanEnergy
Q1	 Presented CTC information and supported IBEW-Local 77's efforts in creating a CyberOT apprenticeship program at WPUDA (Washington PUD Association) in the Tri Cities. Disseminated skill gaps analysis, CoE FAQ sheet and new FWEE activity guide. Presented WA state's climate/clean energy initiatives and workforce development issues to Centralia's Sertoma Club (local). Attended Green Transportation Expo and Renewable Hydrogen Summit to increase networking contacts. 	

BOARDS & COMMITTEES:

Big Bend CC – Tech Hub Grant advisory board member (if funded – no word yet) Capital STEM Alliance – Advisory Board member Career Connect Washington Clean Energy/Clean Technology – Sector co-leader with CleanTech Alliance as partner Center for Energy Workforce Development (CEWD) – member Center of Excellence for Clean Energy //Energy Educators' Association – Coordinator Center for Hydrogen Safety – member CleanTech Alliance – Board of Directors U.S. Dept of Energy Hydropower Vision Roadmap - contributor Foundation for Water and Energy Education (FWEE) – committee member Global Hydrogen Academic Work Group (international, led by Center for Hydrogen Safety) – Co-chair with San Juan College School of Energy Lewis County Renewable Task Force – committee member Pacific Northwest Hydrogen Association (PNWH2) - advising committee; representative for Centralia College as a hub partner Portland State University NSF-RIE grant – Advisory Board member (one meeting in September) Puget Sound Energy (PSE) – Generation apprenticeship document review committee (one meeting) Shoreline CC Energy Program – advisory board member

Events

- Oct 12: Fusion Week Workforce Panel Moderator
- Oct 19: Shoreline Advisory Board kick-off
- Oct 26: BioEconomy Conference at Centralia College
- Nov 3: CoE_Clean Energy Advisory Board, hybrid at Centralia College
- Nov 13 16: CEWD Annual Conference, National Harbor, MD
- Nov 17: EV Training for CTC Faculty at Clark College
- Dec 6: Catalyst H2 (asked to participate on a workforce panel) in Long Beach, CA
- Winter date TBD: EV Training for CTC faculty (virtual)
- Date TBD: Twin Transit Hydrogen fueling station ground breaking ceremony
- Date TBD: PNWH2 Hub grant award celebration (positive vibes 😊)
- March 21: Enlighten Women's Forum at Renton Technical College
- April 11: Clean Energy Summit at Big Bend CC

