

Center of Excellence FY23 Work Plan and Quarterly Report – Q3



Center Name: Pacific Northwest Center of Excellence for Clean Energy

| Core Expectations | | Activity #1: INDUSTRY | |
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| <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Economic Development <input checked="" type="checkbox"/> Sector Strategy <input checked="" type="checkbox"/> Ed/Innovation/Efficiency <input type="checkbox"/> Supply/Demand <input checked="" type="checkbox"/> Equity & Access | <p>Strengthen advocacy and community partnerships</p> <ul style="list-style-type: none"> • Continue to build upon and develop a wider portfolio of clean energy/technology partners. <ul style="list-style-type: none"> ○ Work closely with stakeholders to listen/learn about emerging technologies. ○ Continue to invite emerging technology experts to meetings as well as joining the Center’s Advisory Board. • Create broader partnerships and alliances with organizations. <ul style="list-style-type: none"> ○ Continue involvement with CleanTech Alliance, Lewis County Energy Innovation Coalition, and CHARGE. ○ Increase involvement with PNWH2 Association, Dept of Commerce’s Energy teams, Center for Energy Workforce Development, Clean Cities and other industry organizations as they emerge. | | |
| 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 one hybrid event that focuses on clean energy/technology workforce trends/gaps/needs. Report results. Q1 (report results from June 30 event) and Q3 (event and report). ~Promote Public Power Week and Careers in Energy Week to increase career awareness Q2. ~Attend at least two events to build industry knowledge. Q1, Q4 ~Publish 3-year Strategic Plan. Q1 ~Host Hydrogen Showcase to promote hydrogen education. Q1 | |
| Report and Analysis on Actual Outcomes and Products/Activity #1 | | | CoE_CleanEnergy |
| <p>Quarter 1 (also continued on next page)</p> | <p>Energy Workforce Convening Summit – Partnered with CleanTech Alliance; held June 30, 2022. Included 130 guests in a hybrid meeting. The Center hosted 12 participants, who represented K-12, higher ed, labor, industry, and an interested private party, at Centralia College. There were presentations by PNNL, WSU, Twin Transit, the Center, PGE, the Dept. of Commerce and CleanTech Alliance. A short breakout session, which had technical issues, developed into great conversations regarding gaps. Unfortunately, our event ended abruptly due to a bomb threat and conversations were cut short at the end. Data was collected and added to a report submitted to Career Connect Washington in September.</p> <p>One-on-One Gaps Analysis Interview – The Center’s director met individually with 12 advisory board members and industry reps to discuss DEI initiatives, work- based learning, workforce and education gaps, trends and predictions. Results were added to interviews conducted by CleanTech Alliance which were included within a report to Career Connect Washington. Results will be summarized for the Center’s Advisory Board to review (and add to). A final report will be submitted with the Q2 report.</p> <p>Career Connect Washington (CCW) – Building partnerships with AWB, STEM and ESD/K-12 contacts. Attended 10 Program/Industry Intermediary meetings to discuss findings and best practices. The director suggested that the intermediaries should work with other Centers of Excellence. Many Industry Intermediary’s work overlaps our Center’s work. It feels as if outreach to businesses may be duplicated when other Centers aren’t included/involved. Intermediaries Career Connect Washington.</p> <p>NREL Energy Executive’s Academy – Created strong connections with PNNL, NREL, Battelle, HyStor, Toyota and other energy executives in Alaska, Idaho, Colorado and WA DC. Each month focused on different renewable research. Some takeaways included:</p> | | |

- A variety of feedstock, such as grass and green algae can be turned into bio jet fuel.
- Building a better wind turbine: Industry prefers boat manufactures over airplane manufacturers to make wind blades. They are less expensive due to cheaper lacquer. Balsa wood and foam used in newly engineered wind turbines can be recycled.
- Raised bi-facial photovoltaics are more efficient and add revenue. Agri-voltaics allows farmers and ranchers to conserve irrigation, grow better crops, and shade animals while generating renewable energy to sell back to the grid.
- Microgrid simulation research will help stop future power outages.
- Researchers are building sensors to detect hydrogen leaks and sky radiation.
- A Solar Furnace, which can concentrate sunlight energy to burn through a brick, is used to quickly age products by 30 years.
- Research continues on all renewables and is vastly improving solar energy and battery storage.
- All engineers (chemical, civil, computer, electrical, mechanical), all scientists (physics and biologists), technicians, mechanics, customer service rep's, computer programmers, and number crunchers are needed in this industry.

Local & new innovations – Visited/met with biofuel manufacturing (local business plus UW reps) who are seeking partners and funding; and a recycling plant looking to transform into a biofuel plant. Also joined PSE/WSU Charging Station Tour and connected with Shell Recharge.

Hydrogen Shot Incubator Prize – Hosted by the DoE, this workshop revealed the government's initiatives which establishes the framework and foundation for clean hydrogen deployment in the American Jobs Plan to lower the cost of hydrogen production 80% to \$1 per 1kg in 1 decade.

Apprenticeship Building America – Met L&I, center directors, and Career Connect Washington to discuss partnerships and possible projects.

Hydrogen in Focus Expo – Co-sponsor with Twin Transit. Planned and secured guest speakers, agenda and invitees. At Centralia College Oct 24

Center for Hydrogen Safety (CHS) – Joined the organization to attend quarterly meetings that showcases hydrogen safety and hydrogen business members. The CEO will be a guest speaker at our hydrogen event in October.

Other meetings – In addition to meeting with most of the Center's advisory board members, the director met with Jamie Holladay, PNNL's hydrogen lead; Larry Mattson, Jacobs; Abraham Mooney, Obsidian project (hydrogen storage); Mary Catherin McAleer, Weyerhaeuser wind project; and new contacts at Fortescue Future Industries. The Center's program coordinator met with CleanTech Alliance, Capital STEM Alliance and FWEE steering committees. She continues to lead changes and updates to the Centers webpages.

**Quarter 2
(also continued
on next page)**

Apprenticeship – CoE attended the National Apprenticeship Week Workshop on Equity, Embedding Equity in Registered Apprenticeships

CoE Advisory Board Meeting – Discussed industry/workforce gaps and asked the board to share top concerns and top successes. Several voiced issues with recruitment and retainment, moral, workloads and burnouts. There's a lot of concern of how to balance the state's initiatives with resources. Presentations: High school programs within industry, new cybersecurity apprenticeship program, and retention strategies. A short discussion regarding skill standard updates – are educators using them? Website analytics shows "no."

Careers in Energy Week – Social media posts supported a broader reach. Made Careers in Energy presentations within Centralia College classrooms.

Center for Energy Workforce Development (CEWD) – Attended presentations and workshops at this national conference in DC. Presentations focused on efforts that are building Justice40, DEI and workforce developments. Networked with regional members. Joined West Coast CEWD Consortium.

CleanTech Alliance – Presented CoE information and industry gaps analysis during CTA's Board of Directors meeting in October. Accepted invitation to serve on CTA's Board of Directors in December.

First Mode – Met key staff. Company is expecting delivery of a mining truck in January to new Centralia location.

Fortescue Future Industries (FFI) – Met with new FFI staff who attended the H2 Expo. Rob Cowin joined the center's advisory board meeting and agreed to serve on our board. FFI's workforce group will have hydrogen job titles, skills and abilities information in Q3.

Fusion Week – Toured four fusion energy facilities (Avalanche, CT Fusion, Helion and Zap); met with Scott Hsu, Fusion lead with Dept of Energy, and discussed creating **10 CTC internships within fusion companies.** (continuing dialog).

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| | <p>Hydrogen In Focus Expo – Partnered with Twin Transit/CoE hosted event. 80 community and transit VIP’s attended. Presented information about CoE/REVIT. Speakers included rep’s from FFI, Enapter, First Mode, Bonneville Environmental Foundation, K&L Gates LLP, Center for Hydrogen Safety, PNNL, Washington Maritime Blue, as well as local officials. Had follow-up discussions with Enapter to showcase its electrolyser at the CoE.</p> <p>NWPUD Association – Connected with Nicolas Garcia who shared CoE information with 27 PUD GMs and asked about/shared workforce needs and gaps.</p> <p>RiverFest – Met AWB President Kristofer Johnson, Rep Matt Boehnke and Congressman Dan Newhouse. Networked with several PUD’s, PNNL, US Army Corps of Engineers, river and fish org’s, tribal community, other community groups, as well as Shaver Tugboats. Disseminated energy career fliers for students and parents. Pasco Chamber organizes this event annually.</p> <p>PNWH2 Hub Association advising committee. Assisted with RFI reviews and project selection for a Dept of Energy concept paper that was submitted Nov. 4.</p> <p>Public Power Week – Acknowledged and promoted careers in our state’s PUDs through social media.</p> <p>Washington Building & Construction Trades Commission – Erin Frasier arranged a meeting with electrician unions at Centralia College regarding the training requirements for an O1 indoor commercial electrician. They are looking for rural training spaces and hoping to partner with Centralia College. In a separate meeting, Erin shared bills that will be presented during Legislation session.</p> <p>Zap Energy at TransAlta – Zap announced that their pilot fusion reactor will be built in Centralia. Talked to VP about internships and workforce needs.</p> |
| Q3 | <p>Bonneville Environmental Foundation: Met in Portland with REVIT K-12 team and BEF staff to review hydrogen activity kits and discussed partnership opportunities.</p> <p>Fortescue Future Industries (FFI) – Met with FFI representatives, including their workforce development team who is working on hydrogen job descriptions, skills and abilities. Worked closely with FFI to begin developing a hydrogen training plan. An MOU will be developed soon.</p> <p>PNWH2 Hub Association advising committee. DoE recommended that the group continue the application process. Participants pitched plans to a selection committee. After the participants were selected, the Center, Centralia College and WSU were included as community benefit/training partners. Due to signing NDAs, I’m not able to disclose details other than the CTC system was represented throughout the process and will be included if awarded. Awarding announcement will commence at the end of 2023. After negotiations and if awarded, then plans will be shared.</p> <p>Washington Building & Construction Trades Association – Met with Mark Riker and had a great discussion about apprenticeships and colleges.</p> <p>Washington Legislation Session: Recruited CBC’s Jesus Mota to support Energy NW’s bill to identify small modular reactors as renewable energy.</p> <p>Meetings attended: Capital STEM Summit, CleanTech Alliance, Center for Hydrogen Safety, Career Connect WA, Center for Energy Workforce Development (CEWD) virtual regional, EmPower Women In Leadership Summit, Lewis County Economic Alliance annual banquet, and Washington State Dept of Commerce’s NSF Technology Innovation & Partnerships roundtable</p> |

| Core Expectations | Activity #2: EDUCATION CoE_CleanEnergy |
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| <input type="checkbox"/> Economic Development <input checked="" type="checkbox"/> Sector Strategy <input checked="" type="checkbox"/> Ed/Innovation/Efficiency <input checked="" type="checkbox"/> Supply/Demand <input checked="" type="checkbox"/> Equity & Access | <p>Strengthen education partnerships</p> <ul style="list-style-type: none"> • Continue to build the Energy Educators’ Association (EEA) statewide. <ul style="list-style-type: none"> ○ 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. <ul style="list-style-type: none"> ○ Increase involvement with Center for Energy Workforce Development and National Council for Workforce Education. |

| | <ul style="list-style-type: none"> ○ Attend WEC, CTC energy program advisory board meetings; serve on CTC boards and committees. ● Continue to build and develop partners with STEM and K-12 ESDs to reach grades 8-12 and parents. ○ Continue to serve on committees for Capital STEM Alliance and Foundation for Water & Energy Education (FWEE); and increase involvement with Bonneville Environmental Foundation. ○ Distribute/share materials and opportunities for faculty and students. | |
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| 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. | <p>~Present industry news/trends in STEM & FWEE quarterly meetings.</p> <p>~Meet CCW program coordinators; share events/news.</p> <p>~Send at least 2 monthly emails to Energy Educators' Association.</p> <p>~Host 2 forums/workshops for EEA with subject matter experts.</p> <p>~Attend Hydrogen Academia Working Group (every 6 weeks)</p> |
| Report and Analysis on Actual Outcomes and Products/Activity #2 | | CoE_CleanEnergy |
| Quarter 1 | <p>Center for Energy Workforce Development (CEWD) – Joined four Think Tank sessions which included industry, tribal, union, and education members across the country. All energy industry rep's reported experiencing the same pain points/issues as our rep's in Washington and decided that a cohesive national campaign is needed to support jobs in this industry. We all agree that career awareness needs to be built; and outreach to middle school aged students and their parents needs to be enhanced. More discussions will be held at the national convention in November.</p> <p>Everett CC BASIC Cybersecurity Apprenticeship Summit – Witnessed a cybersecurity attack in Everett's state-of-the-art cybersecurity lab and learned about efforts to create a new cybersecurity apprenticeship program through WSU's BASIC grant and IBEW Local 77.</p> <p>Shoreline CC – Met with Guy Hamilton for an update on Shoreline's energy program. Sent labor market materials and agreed to join Shoreline's energy advisory board.</p> <p>Energy Educator's Association – Sent emails inviting members to: attend energy workshops and training sessions; apply for grants; share job, apprenticeship and internship opportunities; and read updates of CoE activities.</p> <p>Hydrogen Academia Workgroup – Attended meetings and was asked to chair the global academia group. Decisions need to be made regarding the direction of this work group. If it should be split into two (safety and general hydrogen education) or stay as one group. TBD</p> <p>WSU Energy Program – Met with Matt Booth who is gathering workforce needs and gaps to share with legislatures. He will share his report.</p> <p>PNNL/WSU Advanced Grid Institute – Connected with Jeff Dagle, Kevin Schneider and Melanie Roberts of PNNL; Jason Edwards, Energy lead in Senator Murray's office; Michael Furze, Dept of Commerce; Scott Corwin, NW Public Power Association; Armando Berdiel, Seattle City Light; Larry Bekkedahl, Portland General Electric; and Nick Peretti, Snohomish County PUD. Listened to Washington's Clean Energy Projects and Perspectives; and asked questions about industry workforce gaps and needs. It's interesting how many people are drawn to workforce discussions (the Center's director asked workforce needs questions and attendees approached her wanting to discuss more). Also discussed REVIT with Jason Edwards, who will help support the project. Largest takeaway other than making great connections: Our electric generation partners will be able to support demand when the coal plant closes, but won't be able to keep up with demand when the natural gas plants close. Wind and solar are not the answer because they are not reliable generation sources. Dismantling dams won't help the issue either.</p> <p>PNNL Internship/External Mentorship program Sept 2022 – May 2023 – The director agreed to be an External Mentor for a PNNL intern who is studying the effects shuttering a coal generation plant has on a community. The student, Finn, is a senior at Duke University. The director meets with PNNL, all of the interns and mentors monthly, and with Finn weekly (sharing experiences, setting up interviews, sharing reports).</p> | |

Other meetings – WorkSource Regional Business Solutions Team meetings; BIL40101 Energy Resilience Needs; and SBCTC Irene Shaver, Climate Solutions Summit.

Center for Hydrogen Safety/Global Hydrogen Academia Group Co-chairing group with Alicia Corbell, San Juan College, Dean of the School of Energy/Center of Excellence for Renewable Energy & Sustainability. We are working on developing a plan for identifying skills and curriculum builds.

PNNL – Internship program. Mentoring Duke University Senior, Finn, who is building his presentation on “How do we integrate energy equity metrics into policy.” Finn and I meet weekly. Program runs thru May 18.

K-12: REVIT K-12 – Participated in initial planning meetings and two day-long tours with superintendents from Centralia and Chehalis; Twin Transit, ESD 113 and Bonneville Environmental Foundation. Toured Oregon Manufacturing Innovation Center, Clark College’s Mechatronics labs, Clark PUD Community Solar project, First Mode, and Zap Energy’s engineering lab. Also met with Enapter.

Tribal: Stephanie Botwick – NREL/Tribal connection met during Fusion Week. Held discussions about energy programs at tribal colleges. Invited her to attend our advisory board meeting; however, she wasn’t able to attend due to a storm/power outage.

CTC System

SBCTC/Irene Shaver - Involved with planning a climate summit – April 20/21 at CC. Focus is faculty involved with energy, manufacturing and transportation. Other center directors are involved as well.

CoE FAQ – Dr. Mohrbacher requested a 2-page FAQ about the Center and its work for the CTC Presidents and Governor Inslee. The FAQ was approved by Chris Bailey and shared with the college presidents and the governor.

Combined CoE Summit – Joined CoE’s HSEM and GTSM to plan a combined summit: *Building Pathways for Success: Securing Infrastructure, Supply Chain and Energy Systems* – a combined summit that will be held June 6/7 at Columbia Basin College. Secured PNNL/Advanced Grid Institute to speak and will reach out to WSU.

WEC

Good conversations regarding Career Connect Washington with deans and Erika Borg of AWB. Requested interest to build hydrogen team.

Subcommittee: **Economic Recovery/Future of the Workforce Committee** – talked about the need for curriculum to address renewable clean technologies.

After WEC: Toured AVISTA’s Jack Stewart Training center with Betsy Lazo, Centralia College interim CTE dean; and Carl Douglas, director, CoE_Semiconductors and electronic manufacturing.

Energy Educators Association – Continued sending updates, invitations to training and events, job announcements, CleanEnergy Clips and an invitation to join an emerging technology think tank.

Spokane CC: Met with David Cox and Ashley Purdin toured SCC’s energy tech program/lab

- Dave suggested that I organize a quarterly faculty meeting for auto/diesel faculty to focus on EV Technicians (last half of three quarters Thursday 11am through Friday 11 am with a social during evening hours).

Centralia College

- Asked to serve on CC’s Strategic Planning Committee – meetings began in October.
- John Steidel and Aman Gill, Dr. Mohrbacher and Dr. Hammer attended the hydrogen expo
- Aman Gill is part of the REVIT K-12 team and attends the CoE’s advisory board meetings
- Met with a student, who’s pursuing Chemical Engineering, to discuss internship and career opportunities

Bellingham Tech - Ray Kabista

- Didn’t have time to connect at WEC but followed up with a phone call. I need to tour their facilities and meet their faculty. They sound like they have amazing auto and mechatronics programs.

Shoreline – attended Advisory Board Kick Off Party

**Quarter 2
(also continued
on next page)**

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| | <ul style="list-style-type: none"> Met Lindsey Virdech, who leading the re-design of their energy program, Wanda Waldrop, Adv Manufacturing Career Navigator, and Gary Fantozzi, director of automotive program (Tesla, Toyota and Honda). |
| Q3 | <p>Global Hydrogen Academia Group Co-chairing group with Alicia Corbell, San Juan College, Dean of the School of Energy/Center of Excellence for Renewable Energy & Sustainability. New Q3 members include: Michelle Fox, Dept of Energy/Hydrogen & Fuel Cell Technologies Office, and Kristie Kelley, CEWD’s workforce development director.</p> <p>PNNL – Internship program. Mentoring Duke University Senior, Finn, who is interested in the equity and effects of a coal power plant shutdown. Finn and I meet weekly. Program ends May 18.</p> <p>K-12: REVIT K-12 – Twin Transit, PI of this project, has secured \$375,000 funds from Dept. of Ecology and Career Connect WA. Hired Phil Crocker, Teater-Crocker, Inc, as project manager. Phil met with CC Dean Betsy Lazo to discuss dual credit introduction to renewable energy class. Phil is working with Educurious to create curriculum for grades 6 – 12. Project timeline shows curriculum will be launched Fall 2024. Center’s role = bringing partners into the team, organizing tours, hosting meetings and building connections between team and college.</p> <p>Lewis County Renewable Task Force – Supporting UW Biofuels program with letters of support (for grant applications) and discussions.</p> <p><u>CTC System</u></p> <p>SBCTC/Irene Shaver: Climate Summit – April 20/21 at CC. Continued planning meetings for a Q4 event.</p> <p>CoE Directors – Hosted all directors and Carolyn/SBCTC for the winter quarterly meeting at Centralia College..</p> <p>WSU Green Transportation – planning meetings to co-host a virtual event for CTC automotive, diesel and energy faulty and deans. Webinar will be in Q4 and will include planning for follow-up meetings. Clark College’s head of automotive will present on behalf of EV technology programs in the system.</p> <p>Combined CoE Summit – <i>Building Pathways for Success: Securing Infrastructure, Supply Chain and Energy Systems</i> – a combined summit that will be held June 6/7 at Columbia Basin College. Continued planning meetings for a Q4 event.</p> <p><u>Energy Educators</u> - Emails focused on opportunities for students, faculty and staff, including:</p> <ul style="list-style-type: none"> FWEE Summer Academies for students WSU Green Transportation webinar and Supply Chain Summit Internships and Job opportunities <p>Centralia College</p> <ul style="list-style-type: none"> Asked to serve on CC’s Strategic Planning Committee – meetings began in October. Hosted a learning session between industry and Centralia College. Utilities and businesses that were represented included AVISTA, BPA, Centralia City Light, FFI, First Mode, Lewis County PUD, PSE, Tacoma Power, TransAlta, and IBEW Local 77/labor unions of Lewis, Mason, Thurston counties. |

| Core Expectations | Activity #3: FUNDING CoE_CleanEnergy |
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| <input checked="" type="checkbox"/> Economic Development <input checked="" type="checkbox"/> Sector Strategy <input checked="" type="checkbox"/> Ed/Innovation/Efficiency <input checked="" type="checkbox"/> Supply/Demand <input checked="" type="checkbox"/> Equity & Access | <p>Monitor funding/grants to increase opportunities</p> <ul style="list-style-type: none"> Partner with other organizations and apply for grants when possible <ul style="list-style-type: none"> The Center is waiting for award announcements and has been included within proposals supported by Build Back Better, Apprenticeship Building America, Good Jobs Challenge, and hydrogen education congressional ask. Continue work as CCW Clean Energy/Technology Industry Intermediary and find pathways to connect CCW with opportunities brewing in industry. 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. |

| | <ul style="list-style-type: none"> ○ Use Centralia’s Lovington Award as an example to help other colleges. | |
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| Funding Sources % | Purpose | Projected Outcomes and Products |
| CoE Allocation 100% | Increasing work-based learning and college course offerings requires additional resources. Additional dollars are needed to fund projects to support and promote energy programs and workforce education. | <ul style="list-style-type: none"> ~Submit invoices to CleanTech Alliance for CCW funding – quarterly. ~Collaborate with CoE’s to build cohesive branding. ~Explore collaboration projects with other CoE’s ~Update SBCTC of grant submissions and awards & expand outcomes/products as funding emerges. |
| Report and Analysis on Actual Outcomes and Products/Activity #3 | | CoE_CleanEnergy |
| Quarter 1 | <p>-Renewable Energy Vehicle and Infrastructure Technician (REVIT) training programs – 1) Partnered with Twin Transit staff who submitted a \$685,000 proposal to fund a training program that will include CTC faculty and deans on a curriculum building team. Proposal is on Senator Patty Murray’s list to be funded which will be voted in legislature in November. Visited AGI Institute in Tri Cities and met with two of Senator Murray’s staff who will support the bill, and set a meeting with area senator/congress staffers in Q2 for a hydrogen update. 2) Twin Transit submitted a similar proposal to the Dept. of Ecology for K-12 REVIT training and included the Center to assist with pathway development. DoEcology funded the request at \$245,000 which will go to two local school districts for faculty training and classroom/lab equipment.</p> <p>-NSF Engines: Type 1: The Pacific NW Smart Grid Technology Ecosystem: Creating prosperity through a smart, sustainable, and secure electric grid – Led by Portland State University, the Center was asked to collaborate as a partner within this grant. The Center’s director will serve on the project’s advisory board if funded. Partners include PNNL, Technology Association of Oregon, Portland General Electric, NW Energy Efficiency Alliance, LinkOregon, Oregon Titan Fusion Center, PSU and State of Oregon Chief Information Security Officer. The Center was not included in any monetary ask.</p> <p>-PNWH2 Association – Joined the hydrogen hub association as an advising committee member to be a voice for workforce development and training. The Center submitted an RFI to the association to request continued REVIT funding. Signed a lot of privacy, conflict of interest, and no disclosure statements. The group is charged with writing a concept paper to submit to the Dept of Energy in Q2.</p> | |
| Q2 | <p>REVIT – Partnered with Twin Transit on a K-12 grant to fund REVIT training grades 8 – 12. Twin Transit won \$225,000 from the Dept. of Ecology for this project. The check was announced at <i>Hydrogen in Focus</i>. Twin Transit is working with local media for a follow up story.</p> <p>Congressional Ask – Two days after meeting with Patty Murray’s staff, the center director was advised that we will not receive funding for the CTC REVIT program. We are seeking other funding sources. Updated SBCTC.</p> <p>Wrote Letters of Support for biofuels, transportation and REVIT K-12.</p> <p>CleanTech Alliance/Career Connect Washington – submitted quarterly report, invoices and participated in funding/budget discussions.</p> | |
| Q3 | <p>-Wrote Letters of support for biofuels, green transportation, PNWH2 Hub (hydrogen) and REVIT</p> <p>-Opted out of applying for congressional asks this year due to work with PNWH2 project and do-not-compete clauses. Represented Centralia College in the PNWH2 application to assist with training. Will follow up with grants in 2024 if hub is not funded.</p> <p>-Career Connect WA funding will end June 30, 2023. Working on a plan to extend funding. CCW report due April 30.</p> | |

| Core Expectations | Activity #4: CHMURA CoE_CleanEnergy | |
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| <input checked="" type="checkbox"/> Economic Development <input checked="" type="checkbox"/> Sector Strategy <input checked="" type="checkbox"/> Ed/Innovation/Efficiency <input checked="" type="checkbox"/> Supply/Demand <input checked="" type="checkbox"/> Equity & Access | Chmura Data Pilot, Phase 2 The Workforce Data Pilot will identify, extract, format and deliver workforce and related data, using the Chmura JobsEQ RTI platform. This project will demonstrate the use and effectiveness of occupational, industry and other data to the workforce education and training system. Eleven Centers of Excellence are participating in the Phase II Pilot and will fully engage in the continuation of the collection of data, work with the RTI Jobs Positioning tool, develop a community of practice and information dissemination process. Intended completion for pilot: Spring 2023 | |
| 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. ~Create Community of Practice. |
| Report and Analysis on Actual Outcomes and Products/Activity #4 CoE_CleanEnergy | | |
| Quarter 1 | Provided labor market materials to Bellingham Tech, Centralia, Shoreline and South Seattle colleges. Joined Centers in agreeing to add a new job board feature by Chmura which will be housed on the combined CoE website with a link from our website to https://www.coewa.com/ . | |
| Quarter 2 & Q3 | Continued to provide labor market reports as requested by colleges and industry partners to support college programs and CoE work. | |

| Core Expectations | Activity #5 – AWARENESS CoE_CleanEnergy | |
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| <input checked="" type="checkbox"/> Economic Development <input checked="" type="checkbox"/> Sector Strategy <input checked="" type="checkbox"/> Ed/Innovation/Efficiency <input checked="" type="checkbox"/> Supply/Demand <input checked="" type="checkbox"/> 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. <ul style="list-style-type: none"> • Career Connect Washington Industry Intermediary highlights • 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. ~Participate in the region's hydrogen hub efforts (PNWH2.org) |

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| | | ~Create/send a newsletter to EEA, Advisory Board and new stakeholders |
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| Report and Analysis on Actual Outcomes and Products/Activity #5 | CoE_CleanEnergy |
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| <p>Quarter 2 (also continued on next page)</p> | <p>Apprenticeship Video – partnered with CoE’s Aerospace, Allied Health, Construction and Marine to produce an apprenticeship video that was aired during apprenticeship week (Nov 14 -18). Funded by L&I Peter Guzman. CoE Energy Advisory Board member Christine Reid, IBEW Local 77, represented our center and industry.</p> <p>Career Connect WA – submitted clean energy activities and programs that fit into Career Explore, Career Prep and Career Launch programs. Encouraged CCW to update their website interactive map to include Avista’s Energy Pathways’ Program (Avista had 16 students enroll in their summer program from 11 Spokane schools; and launched their first 9-month program this fall with 3 students).</p> <p>Centralia College Foundation Gala – Dr. Mohrbacher acknowledged and thanked the CoE and the work that’s being done to bring hydrogen training to CC.</p> <p>CleanEnergy Clips – published the center’s first newsletter that features regular columns for “Building a Work-Ready Clean Energy Workforce,” Career Connect WA updates, Industry News, “It’s Electrifying Work” (see attached). Sent in December to the Energy Educators’ Association and CoE Advisory Board. We will add a sign-up feature for additional interests and link it to the website.</p> <p>Fortescue Future Industries (FFI) – FFI requested to work with the CoE and Centralia College in building a hydrogen training program. They asked for a “wish list” which was delivered in the form of a spreadsheet with monetary ask. The CoE director requested help from SBCTC in projecting statewide training costs.</p> <p>PNWH2 – Signed NDA’s to participate on advising and selection committees, so details cannot be shared. Continued to be a voice for workforce training development within hub meetings and presentations. Sent a COE FAQ to encourage hub participants to partner with the CoE and CTC colleges. Director is continuing to serve on advising committee on behalf of workforce training. May need to organize a future community event.</p> <p>Senator Patty Murray – in partnership with Twin Transit, a congressional ask to support a CTC REVIT program of \$685,000 was submitted in Q1. The ask was included on Patty Murray’s list. The director met with Murray’s staff to thank them for the inclusion and to inform them of all of the work being done by the center – including hydrogen hub, K-12 REVIT and global academia work.</p> <p>Presentations: CoE, industry and career information during Capital STEM Alliance, Careers in Energy Week (classes at CC), <i>Hydrogen in Focus</i>, and Thurston/Mason/Lewis Economic Alliance Expo.</p> <p>Fliers – Utilized CEWD resources to print energy career fliers for students and parents. Added a QR code for the CoE and contact information. Sent fliers to events and included them within CC’s mobile training lab</p> <p>Website – updated the job board page; added EV, automotive, pre-engineering and other CTC programs to build program resource from 92 to 186 offerings; published new pages for apprenticeships and K-12 resources; and built Career Pathway information to rebuild career pages in Q3.</p> |
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| <p>Q3 (also continued on next page)</p> | <p>Advisory Board Member meetings: Met with Bob Guenther to discuss cybersecurity apprenticeship program and a new telecommunications apprenticeship opportunity. Bob also met with PNNL Intern to tell the TransAlta story.</p> <p>Career Connect WA: Met with Kareen Borders, West Sound STEM and CleanTech Alliance to discuss potential K-12 projects. I suggested that we support Bonneville Environmental Foundation’s fellowship program and H2 vehicle competition for faculty and staff.</p> <p>Congresswoman Marie Gluesenkamp Perez: The Congresswoman met several Centralia College VIPs and toured several classrooms and campus facilities. We had time to share the great work of the Centers of Excellence and how we are broadening our outreach to include new technologies – such as hydrogen, biofuels, EV, and fusion.</p> <p>Foundation for Water & Energy Education (FWEE): Using Career Connect Washington funds to support updating FWEE’s energy activity book to include new industry information and add hydrogen generation page. Will purchase and disseminate first run copies in Q4.</p> |
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Industry Connections/new contacts: Met with other representatives to discuss CoE work and possible partnerships with Snohomish PUD, Douglas County PUD, Energy NW, PSE; Green River College, and K-12 Insight

Presentations: CoE, industry and career information during Twin City Rotary meetings

Website: Hired a web designer who rebuilt and updated the center's 35 Career Pathway pages. [Clean Energy Careers | Center of Excellence for Clean Energy \(cleanenergyexcellence.org\)](#). We will improve the website's navigation and format responses.

Newsletters: Purchased a Constant Contact membership and will build a consistent communication plan for news distribution in Q4.

SUMMARY OF ACTIVE PROGRAMS AND GRANTS

BOARDS & COMMITTEES:

Capital STEM Alliance – executive committee 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 - director

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/PNNL) – Co-chair

Lewis County Renewable Task Force – committee member

Pacific Northwest Hydrogen Association (PNWH2) - advising and selection committees; representative for Centralia College as a hub partner

Pacific NW National Labs (PNNL) – external mentor

Puget Sound Energy (PSE) – Generation apprenticeship review committee

Shoreline CC Energy Program – advisory board member



CALENDAR: UPCOMING Q4 EVENTS

April 12: CleanTech Alliance workforce luncheon at Perkins Coie

April 13: WSU Workforce Development and Training for Electric Transportation

April 17-18: West Coast CEWD Conference, Las Vegas

April 20-21: Climate Solutions summit at CC (SBCTC energy/transportation/manufacturing sectors)

April 26-27: WEC at Clover Park

May 5: CoE_Clean Energy Advisory Board Meeting

May 15: Spring quarterly CoE Director's meeting – Yakima

June 6-7: *Building Pathways for Success: Securing Infrastructure, Supply Chain & Energy Systems @ CBC*

June 13-15: NW Tribal Clean Energy Summit at Tulalip

June 20: FWEE at Douglas County PUD

June 21-23: CleanTech Alliance Board of Directors Meetings

June 22: CleanTech Alliance *Innovation Showcase* (8-5)