

Scope of Institutional, Instructional, and Industrial Reach

| <p><b>Institutional Reach</b><br/>                     # colleges with programs that supply a skilled workforce to your sector(s).</p>  | <p><b>Instructional Reach</b><br/>                     # of CTC instructional programs that supply a skilled workforce to your sector(s). This can include programs that are core to your sector(s) and those that are associated or have a nexus in some meaningful way. Example: Cybersecurity: Core example – AAS IT Forensics &amp; Security. Associated: AAS Networking.</p>  | <p><b>Industrial Reach</b><br/>                     Quantitative indicator(s) of the size, scale, or scope of your sector(s). Examples: Total employment, total number of businesses, list of major sector and subsectors with employment numbers.</p>  |
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| <p>Most colleges (32) offer programs related to this sector. <a href="https://www.cleanenergyexcellence.org/programs/">https://www.cleanenergyexcellence.org/programs/</a></p> <p>168 college programs that are included on our website are organized by areas of study: Apprenticeship, Electrical, Energy Efficiency/Studies, Engineering (advanced), Engineering Technician, Engineering Transfer, EV/Automotive, Industrial, Mechatronics, Nuclear, and Trades.</p> <p><b>**Acronyms are defined on the last page of this report.</b></p> | <p><u>117 CTC programs that support this sector include:</u></p> <p>Apprenticeship programs: 13<br/>                     Electrical: 13<br/>                     Energy Efficiency: 6<br/>                     Engineering related programs: 43<br/>                     EV/Auto: 13; 21 traditional auto/diesel (not included in total)<br/>                     Industrial: 6<br/>                     Mechatronics: 11<br/>                     Nuclear: 3<br/>                     Trades: 9 – includes HVAC<br/>                     Related bachelor’s degrees: 4</p> <p>Including CTC and outside of CTC, there are 168 programs that we include on our website and program guide; 46 programs are offered at universities and Perry Technical.</p> <p>Overlapping programs with other CoEs include biofuels, CDL, construction, data analysts, electrician/apprenticeships, fisheries/wildlife, industrial cybersecurity, manufacturing, parks/recreation, and welding; as well as programs addressing business needs (accountants, human resource, customer service, park caretakers and more).</p> | <p>We need to help attract <a href="#">32 million people</a> to clean energy careers, nationally, during this decade.</p> <p>According to the <a href="#">2024 US Energy Employment Report (USEER)</a>: Jobs in this sector, in 2023, reached 8.4 million, representing more than 5% of all U.S. jobs. The sector experienced a 3% growth between 2022 and 2023.</p> <p>Employment increased across five of the following energy categories: electric power generation, transmission, distribution, and storage. As well as fuels, energy efficiency and motor vehicles.</p> <p><a href="#">Washington employed 148,022 energy workers statewide in 2023</a> (page 335 in the link). Jobs grew in the state by 3,524 between 2022 and 2023; and are expected to grow by 44,000 within the decade.</p> <p>The energy sector represents 4.2% of total state employment within the five categories mentioned above. Solar led the type of energy generation. The numbers do not include manufacturing, R&amp;D, or construction.</p> <p><a href="#">Washington’s energy industry includes</a> 28 non-profit, community owned utilities (PUD) – in which 23 provide electric service - 16 cooperative/mutual utilities, 19 municipal utilities, three investor-owned utilities and one federal agency that operates 79% of the state’s transmission system. PUD contacts recently</p> |

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|  |  | <p>reported that they will experience attrition rates that average 40% across the state during the next two years.</p> <p><a href="#">By capacity, the Grand Coulee Dam</a> on Washington's Columbia River is the largest power plant in the U.S. and one of the largest hydroelectric power plants in the world. In 2024, it supplied about 15.4 million MW hours of electricity to eight western states and Canada.</p> <p>Washington generated more electricity from hydropower than any other state and the generation source accounted for 25% of the nation's total utility-scale hydroelectric generation in 2024. Hydropower supplies nearly 60% of Washington's electricity needs.</p> <p><a href="#">Washington's clean energy initiatives</a> are still affecting energy generation and we will experience a 30% increase in demand during this decade, while relying on an aging infrastructure. We will lose 25% of generation due to shuttering fossil fueled resources.</p> <p>A list of electric utilities and websites can be found <a href="#">here</a>. <a href="#">Subsectors</a>, emerging technologies and career opportunities that affect this industry include advanced nuclear, biofuels, building science/energy efficiencies, EV/ZEV transportation, fusion, hydrogen, renewables (wind/solar) and storage.</p> |
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**Status of the industry:** More uncertainty and tight labor supply with accelerating retirements. Last year brought substantial funding that expanded pilots and early-stage projects across generation and grid technologies. Since January 2025, energy and education have been a focus of restructure, realignment and decreases in funding and staffing. Washington's new governor continues to support clean initiatives that are driving deadlines for cleaner electricity generation to replace fossil fueled generation and increases demand for skilled workers. Our utilities, which are the focus of this industry, report growing attrition from retirements, insufficient near-term hiring to offset exits, limited availability of experienced applicants, and low career awareness in K-14. These conditions make workforce planning the immediate priority, and they heighten the need for earlier outreach, faster training pathways, and stronger retention.

**Q1 Summary.** Successes included forward movement in hydrogen workforce development within the PNWH2 Hub, H2Skills and RHA's work groups. The CoE was approved to lead workforce efforts as a sub awardee of WSU and submitted a new Phase 1 workplan and budget. Hydrogen tours with educators occurred. H2Skills shared a preview of curriculum and VR technologies with several labor partners (and they agreed to accept training modules into their training programs). Even though budgets were tight, partnerships in hydrogen paid for travel to conferences and tours. We were able to share 10 admission tickets for CTC faculty and deans to attend Green Transportation Summit & Expo (GTSE). We started hosting virtual meetings for deans and faculty. We were also involved with Hydropower for Educators and hired SEI Fellows to continue supporting CoE work by promoting careers in energy and college programs. Q1 includes summer months, so outreach to faculty was lower than other months – as indicated

by instant out of office replies. Loss of CoE funding kept us out of national conferences, such as the national conference for the Center of Energy Workforce Development. Industry partners have also inquired about how to help support the CoE's work should the Center be closed. The review of the Centers added additional stress to the list of uncertainty.

**Q2 Summary.** This was a tough quarter for us. It started with news of federal cuts affecting the PNWH2 and ARCHES hydrogen hubs. The cut meant the Center and CTC system lost \$4 million that would have gone towards new lab equipment, training, curriculum building, collaborating and career pathways. The cut caused a loss of emerging technology and additional workforce partners; and it slowed the progress of hydrogen emerging as a clean fuel resource in our state. We continued to partner with PNNL and launched a pre-pilot in-person hydrogen instrumentation and controls class at Centralia College. The course will continue to be redefined as an e-learning course for educators and trainers nationally.

We also received news that all of Washington state's Centers of Excellence could be cut and redesigned into multisector leads at the SBCTC. Our industry partners are more than concerned. They are frustrated that the gray tsunami of retiring workers is now upon them. They need help with growing the workforce at a time that our state and country are cutting solutions that include college programs, training, grants, and innovation.

**According to industry:** This region is dangerously close to experiencing significant energy supply disruptions. Challenges for this industry include permitting processes, supply chain issues, data center power requirements, transmission expansion needs, increased wildfires and extreme weather events; and according to Dale Smith of McKinstry, "Energy isn't a problem. Workforce is primarily the challenge."

North American Electric Reliability Corp (NERC)'s [2025-26 Winter Reliability Assessment](#) stated electricity demand for our area is forecast to be 2.9GW higher (9.3%) compared to last year. Over 3GW of new energy generation resources have been in development, but those resources - battery storage, solar PV and wind - are less effective and will cause utilities to import electricity from other regions to meet peak demand. Total demand has increased 9.3% due to data centers, residential and transportation electrification, and semiconductor manufacturing. A cold regional arctic pattern lasting several days will challenge the system's ability to keep the lights and heat on.

[NERC's Long Term Reliability Assessment](#) includes 10-year predictions. Our WECC Northwest region is marked as high risk as planned resources fall short over the next five years. The assessment shows that our industry partners will not be able to keep up with ascending electricity demand from new data centers and larger loads. NERC recommends that we streamline system growth, manage generator deactivations (shuttering of coal and hydro projects), undergo robust adequacy assessments and coordinate electric-natural gas system planning and operations – while meeting the state's initiatives of reducing fossil fuel use.

The National Science Foundation shared that global competition in science and technologies is fierce. The U.S. Bureau of Labor Statistics projects a 10.4% increase in STEM occupations through 2032, compared to only 3.6% growth in non-STEM jobs. This growth is driven by the demand for STEM professionals in increasingly critical technology fields like advanced communications, biotechnology, data science, quantum information science, nuclear technologies (and clean energy).

**Moving forward:** The Centers' directors are working on system solutions and will submit a counter proposal to keep the centers and partnerships operating smoothly without the interruptions of an overhaul/redesign of the Centers. The directors are focusing on streamlining operations, sharing staff, increasing collaboration across sectors and colleges, increasing training opportunities, and securing funding to continue supporting industries and college programs.

Our partners need our collaborative efforts, and we will focus on strengthening connections between our energy sector and the CTC system. We will create opportunities and tools that will bring deans, faculty and industry representatives together as well as help future partnerships should the center dissolve.

## Gaps in Availability of Instructional Programs, Emerging Skills, and Technological Disruptors:

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| <p><b>Needs/Gaps:</b> <i>Is the CTC system meeting your sector(s) needs for a skilled workforce? Are there skills gaps that the colleges could help close? Are there un- or underserved occupations or fields in the industry that the CTC system could be preparing students for?</i></p>  | <p><b>Emerging Skills/Technological Disruptors:</b> <i>Are there emerging skills that you recommend the colleges prepare for but are not quite ready for workforce training? Are there technological advances that are or will disrupt your sector(s) and require new curriculum or programs?</i></p>   |
| <p>Partnering with SBCTC, we conducted a survey of CTC faculty and deans to address needs of our system. What's emerging in order of needs: equipment, trained instructors and training for instructors. Equipment is expensive; pay for instructors transferring from industry is too low; and technology within this industry changes rapidly.</p> <p>Our industry struggles with career awareness and job readiness. In many instances, applicant pools are small - especially in rural areas. Utilities also find that their roles in training are changing. They need to build self-confidence in new employees, add training to close gaps between generations. Other specifics from industry include:</p> <ul style="list-style-type: none"> <li>• Business Communication (emails, calendaring, meeting protocol, how to edit your own work and others, how to save work etc.)</li> <li>• Professionalism and what it's like to work in a job</li> <li>• Punctuality</li> <li>• EQ – social emotional learning</li> <li>• Adding job shadowing into curriculum as a requirement and credit earned</li> </ul> <p>Industry needs to increase retention efforts to keep strategic populations. Note that most jobs in this sector require an understanding of the English language.</p> | <p>It's important to understand and meet the workforce needs of emerging technologies that will supplement energy generation and the electrification of everything. Skills are evolving. Colleges need to be nimble and develop short-term, dual-credit, stackable credentials to address:</p> <ul style="list-style-type: none"> <li>• Biofuels, fusion, hydrogen, and small modular reactors (SMR – fission)</li> <li>• Clean Buildings Laws (energy auditors)</li> <li>• Clean Transportation (technicians)</li> <li>• Industrial Cybersecurity (aka CyberOT)</li> <li>• Microgrid power managers, designers, and technicians (new)</li> <li>• Sustainable Aviation Fuels (SAF)</li> <li>• Battery manufacturing and storage (technicians and designers)</li> <li>• <b>TECHNICIANS – trained to fit a wide variety of technologies and fields.</b></li> <li>• Transmission – improve infrastructure to accommodate the increase demand for electricity and new technologies to support energy generation.</li> </ul> <p>The industry competes for all types of engineers, electricians and technicians. Technicians, if trained to work in a variety of businesses (utilities, factories, manufacturers), could use short-term specialized training to add additional skills to fill niche jobs.</p> |

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| <p><b>Core expectations</b></p>   | <p><b>Goal 1: Be the Go-to Resource for Industry Workforce Needs, Gaps &amp; Trends</b></p>  |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic Development</li> <li><input checked="" type="checkbox"/> Sector Strategy</li> <li><input checked="" type="checkbox"/> Ed/Innovation/Efficiency</li> <li><input checked="" type="checkbox"/> Supply/Demand</li> <li><input checked="" type="checkbox"/> Equity &amp; Access</li> </ul> | <p><b>Continue monitoring emerging technologies, industry trends, and state-driven initiatives to share with educators and CoE stakeholders.</b> This industry continues to be affected by federal decisions, Washington's zero carbon initiatives, shrinking funding resources, workforce imbalances, and supply chain delays. It continues to be nimble in the perpetual motion of tremendous change. The growth of this sector depends on a well-qualified workforce to design, build, operate and maintain emerging technologies, energy grids, systems and equipment.</p> <p><u>Utility workforce issues:</u></p> <ul style="list-style-type: none"> <li>• Attrition rates continue to grow as the number of qualified candidates declines.</li> <li>• Competition for workers will increase as new technology becomes commercial. Emerging technologies need a similar workforce.</li> <li>• IT/Cyber salaries are difficult to match in the utility vs. private sector.</li> <li>• Budgets: Utilities with smaller budgets use funds to meet clean energy initiatives vs. training and hiring. Even larger utilities experience funding cuts – which typically starts in training departments. We are seeing a trend of larger utilities building training facilities – to train existing workers in a safer environment as well as training first responders.</li> <li>• Consumer-owned utilities are hesitant in trying emerging technologies.</li> </ul> |

|                   | <ul style="list-style-type: none"> <li>• Increased workload capacity with limited hiring, due to financial constraints, leads to a higher rate of employee burn-out.</li> <li>• Increases in automation affects workforce and training trends. Power operators are still needed, but due to automation, the number of operators that are needed aren't sufficient to sustain training programs.</li> </ul>  |   |
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| Funding Sources % | Purpose   | Planned Outputs with Target Completion Dates  |
| CoE 100%          | <p>Technology within this industry is constantly changing, which makes it imperative to continue monitoring industry's needs and gaps to build a fit-for-purpose workforce. Also, those building new technologies rarely think of workforce needs of the future. As emerging technologies focus on hiring engineers and scientists, we prod them with "who are you going to hire to fix the widgets that you're building?" These questions lead to deeper conversations which are welcomed; and the continued conversations lead to workforce development team start-ups.</p> <p>Sharing industry news and trends will prepare and support CTC program needs. And sharing CTC system needs with industry is just as important. We connect regional employers to the closest CTC training facility and help build college-industry partnerships. For example, we've connected emerging hydrogen businesses with colleges within their area; and we are ready to implement workforce plans as soon as the Dept of Energy approves funding.</p> <p>For our labor partners, projects need to be built to grow apprenticeship programs. No projects in the hopper equates to no jobs for apprenticeships. These programs work one on one: One apprentice per one journey level worker. CTCs can help through pre-apprenticeship partnerships with labor. For example, BTC college graduates enter a higher level in their electrical apprenticeship program (eliminating the first year and a half of training).</p> | <ul style="list-style-type: none"> <li>• Host two virtual CoE Advisory Board meetings that include time for in-depth workforce discussions. Allow time for industry to share successes and challenges. Record and share the highest trends and concerns with CTCs. Do these trends warrant future trainings? (Q2 &amp; Q4)</li> <li>✓ Board selects new Advisory Board Chair (Q1). Advisory Board <a href="#">Charter</a> was approved May, 2024.</li> <li>✓ Attend NWPPA <i>Electric Utility Operations</i> class to gain a deeper understanding of industry skills needed. Share recap of discoveries/learnings with Energy Educators Association. Consider crosswalks from other industries. (Q1)</li> <li>✓ Attend the first day of the <i>Pacific NW Economic Region</i> (PNWER) Annual Summit to gain knowledge of WA's economy and energy future. How can these learnings be incorporated into communications and trainings? (Q1)</li> <li>✓ Attend NWPPA <i>Women in Public Power Conference</i> to expand networking resources and make connections. Could connections help diversify the CoE advisory board? (Q1)</li> <li>✓ Attend WSU/PNNL <i>Advanced Grid Institute Summit</i> for transmission and grid updates to learn/share. What's happening in transmission work and who offers training to support the grid? (Q1)</li> </ul> |
|                   | Activities  |   |
|                   | <ul style="list-style-type: none"> <li>• Utilize and share data/research from Dept of Energy, WA State Dept of Commerce (COM), and CETI/Net-Zero NW.</li> <li>• Attend industry conferences, workshops, and meetings to make workforce connections and glean information to share - such as FWEE that involves many WA PUD connections.</li> <li>• Host/co-host webinars that address energy workforce discussions.</li> <li>• Serve on the WTC Clean Energy Technology Workforce Advisory Council (CETWAC – HB 1176) to make connections with labor.</li> </ul>  | <ul style="list-style-type: none"> <li>• Assist/plan/attend CEWD West Coast Consortium virtual meetings. Focus on industry workforce needs &amp; invite CTC deans and faculty to listen to top concerns. (Q2-Q4)</li> <li>• Update advisory board, utilities, CTC Energy Educators, and stakeholders of CoE activities and findings through targeted emails, meetings, newsletters and website blogs. (Q1-Q4)</li> <li>• Plan 2026 summer STEM/Energy academies with industry. Serve as advisor to create new academies in Jefferson, Clark and King counties. (Q2-Q4)</li> </ul>   |

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|  | <ul style="list-style-type: none"> <li>• Serve as co-chair of CEWD West Coast Coalition to increase CoE awareness and invite more utilities and educators to participate in virtual meetings.</li> <li>• Serve on the Board of Directors of CleanTech Alliance to build additional outreach and partnerships.</li> <li>• Serve as co-chair of a global hydrogen workforce taskforce; and attend Center for Hydrogen Safety meetings to grow industry and education connections.</li> <li>• Attend the Dept of Energy’s national laboratory webinars and meetings to learn industry forecasts and opportunities.</li> <li>• Share energy workforce development information with COM, Washington Trades Council, CleanTech Alliance, and Center for Energy Workforce Development (CEWD). Monthly/quarterly</li> <li>• Attend NSF-Engines workforce meetings led by Portland State University, called Powerize, and AVISTA, called INTENT. Both are collaborative efforts to build regional partnerships in energy. PSU focuses on battery and smart grid technologies; Avista focuses on a regional energy workforce training co-op.</li> </ul> | <ul style="list-style-type: none"> <li>✓ Encourage industry participation in <i>Careers in Energy Week</i> and support events through organization and promotions. (Q1-Q2)</li> <li>• Other industry opportunities and networking events to share and learn from (and build SME contacts): Green Transportation Summit &amp; EXPO, Fusion week, Green Hydrogen Summit USA, Center for Hydrogen Safety North America Summit, WA Solar Summit, RE+CHARGE; NREL Hydropower conference; Powerize and INTENT (Q2-Q4)</li> <li>• <b>NEW</b>: Gather more information about training and skills needed for the various types of technicians for this industry (highlighted on page 3 of this report). These could include instrumentation and controls technicians, mechanical technicians, EV technicians, hydropower technicians, meter technicians and more. What are the commonalities and differences in these positions? Are there crosswalks between industries? Hold discussions with industry and faculty. Does this topic warrant a virtual roundtable discussion between industries and faculty (this would be a great in-person discussion)? Share findings with CTC with related programs.</li> </ul> |
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**Report Progress Toward Output and Work Products**

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| <p><b>Q1</b></p> | <p><b>New CoE Advisory Board Chair:</b> PSE Erik McCoy was nominated and unanimously voted to be our FY26 advisory board chair.</p> <p><b>NWPPA – Electric Utility Systems Operations class</b> Monica gained an understanding of the utilities’ technical heartbeat.</p> <ul style="list-style-type: none"> <li>• Learning objectives: demand and load curves, system frequency, load shedding and outages, power and demand factors, system equipment and protection, safety. Megawatt translation to number of people served: Add three zeros to the generation facility’s MW output (a dam that produces 250 MW of electricity serves 250K people).</li> </ul> <p><b>NWPPA’s Women in Public Power</b> Monica met a variety of women who fill a host of roles within utilities of the Pacific Northwest.</p> <ul style="list-style-type: none"> <li>• Takeaway: gained contacts for possible advisory board members; and learned about new roles such as developers, land acquisitions, governmental affairs and remote team managers.</li> </ul> <p>Monica is honored to be chosen as the <b>2025 SEI Champion Award recipient</b> – which recognizes outstanding individuals who have been instrumental in SEI’s mission of building leaders to accelerate climate solutions for more equitable and resilient world. They recognized the work we’ve done in leading statewide support for Washington’s Building Performance Standards, and for growing awareness of careers in energy within K-12.</p> <p><b>PNWER</b> - The <a href="#">34th Annual Pacific Northwest Economic Region</a> (PNWER) Summit brought more than 600 leaders across private industry, government, associations and academia to share best practices and drive meaningful progress for our region’s economy. Over 40 sessions and sidebar discussions offered platforms that sparked productive conversations and actionable ideas that will move the Pacific Northwest forward.</p> |
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|                  | <ul style="list-style-type: none"> <li>• <b>Takeaway:</b> PNWER completed a multi-jurisdictional first-of-its-kind study that explores cross-border collaboration opportunities that drive economic growth, infrastructure development and hydrogen accessibility. The study provides a comprehensive view of supply, demand, and trade flow potential for low-carbon hydrogen across the Pacific Northwest. <a href="#">PNW Hydrogen Study - PNWER</a>.</li> </ul> <p><a href="#">Advanced Grid Institute (AGI)</a> – Strained systems, rising stakes – what regional utilities see ahead. The takeaway from first AGI conference that Monica attended was that the grid can handle closure of one generation plant, such as TransAlta’s coal-fired plant, but not more than one. Today’s outlook has changed because AI and data centers require more electricity than an entire town. Monica, concerned about TransAlta’s 2025 closure, asked how the grid will be in 2026, and there weren’t any answers – only concerns – because of new rising AI demands and winter’s colder-than-usual weather forecast (we will see an increased demand for more electricity to heat homes). Even though this conference focused on how infrastructure will be built to accommodate increased demand, the process will take years. Bonneville Power Administration (BPA)’s transmission system contains approximately 15,000 miles of high voltage lines which makes up 75% of the Northwest grid. BPA identifies transmission upgrades in response to customer needs in three general areas: 1) Generator Interconnection, 2) New Transmission Service and 3) Line/Load Interconnection. BPA’s overall FY25 capital program includes \$800 million budget for 23 projects.</p> <ul style="list-style-type: none"> <li>• <b>Takeaway:</b> Although projects are underway, expanding the grid takes time. Utilities are concerned about weather extremes. We need to watch TransAlta’s closure and future plans (if they choose to retrofit to natural gas, for example, the generation plant will still be closed in 2026). Also, BPA’s hiring freeze that we noticed during Q1 lifted at the end of the quarter. <a href="#">They are hiring NOW</a>.</li> </ul> <p><b>Accessibility:</b> Please see the last page of this report resources, such as complete URL addresses. Links above include PPT and video presentations, reports, and job announcements.</p>  |
| <p><b>Q2</b></p> | <p><b>PSE Operational Training Center Grand Opening/Tour</b> – Monica joined King and Pierce counties officials, first responders and PSE directors in celebrating PSE’s new training center in Puyallup. The center, which sits on more than 6 acres, includes state-of-the-art classrooms, labs and outdoor training areas, and features a simulated residential neighborhood that provides workers and first responders real-life training experience, such as how to safely repair broken gas lines, approach downed power lines and replace equipment. More than 1,000 people can train at the facility annually, which will deliver upwards of 108,000 hours of classroom instruction outside of the 4,000 apprenticeship hours that PSE provides. We are working with PSE to create an opportunity for deans, faculty and CoE partners to meet and tour the center in Q3.</p> <ul style="list-style-type: none"> <li>• <b>Takeaway:</b> Training centers such as these are critical to train employees and first responders safely vs. training in the field during a storm. Avista, Snohomish PUD, and PSE support these facilities; and we learned that Seattle City Light will build one too. This facility could be utilized by CTC programs as well – and we’re working with our utility partners to plan a pathway to share these spaces with CTC programs to enhance workforce training.</li> </ul> <p><b>BioEnergy/Economy Summit</b> – Lewis County rated #1 in BDOZ ratings. Thousands of communities, including many in Washington, have tremendous surplus of sustainable biomass that can be leveraged to attract new clean fuels, renewable chemical and biogas projects, drive new biobased economic development, and create jobs. How do we identify those communities? Through a rating process called BDO Zone (BDOZ). These ratings have been developed to quantify the amount of fuel that’s available, enabling high potential “biomass-rich” communities to be noticed by developers and investors around the world. BDOZ ratings enable communities to unlock their biomass and infrastructure resource assets and leverage them as engines for economic development in the energy transition. This holds true for Lewis County, which was recently ranked number 1 in the country with an AA BDOZ rating. This summit, supported by our Center, introduced new thoughts and potential developers who are working in this space. These businesses are interested in creating internship pathways for college students. Monica re-connected with CEOs of Regenerative Industries and met newcomer Ways2H, a “RefHynery” that converts mixed organic waste and plastics into clean hydrogen and permanently sequestered carbon commodities — enabling local waste management solutions and decarbonized energy without needing renewable electricity. They are</p> |

looking to partner with Lewis County Transit and the Port of Chehalis. It was noted that Amazon is building a distribution center in Lewis County which will create jobs).

**Green H2hydrogen USA** – Monica participated as a panelist of a nation-wide hydrogen workforce discussion. She shared how we are incorporating hydrogen in K-12 outreach, activity guides, high school science classes, summer camps and CTC program development within our state. We also supported H2Skills by sharing news and networking with new potential partners.

- **Takeaway:** We are leading the rest of the nation in K-14 outreach and were encouraged to continue blazing that path. We need to stay connected to producers and users (learned later that some have discontinued due to loss of funding).

**CHS North America Conference**, Houston. “Safety isn’t expensive. It’s priceless,” stated Keynote Sunita Satyapal, former Director for the U.S. Department of Energy’s Hydrogen and Fuel Cell Technologies Office. Monica attended this conference to learn about new developments, safety measures, and to support H2Skills project. PNNL tested the VR technology with conference attendees. This conference had half in attendance compared to last year.

- **Takeaways:** Key Perceptions & Findings: Safety is top concern due to frequent leaks and potential explosions. Familiarity breeds comfort: H2 fueling stations should resemble ICE fueling stations. Demographics have an impact. Emergency response is key. **Education shifts attitudes and is the most important tool when building a hydrogen economy.** We need to continue the education pathway and expand by training the trainers. Also met Canada’s HTEC educator, who was hired as a basic tech Class A fitter and later became a trainer because there weren’t any other options for training. HTEC tends to hire from trades with HVAC, instrumentation and power engineering experience. Operators are required to pass initial and reoccurring safety checks, enroll in ongoing learning and attend manufacturer training for tanks, transfer systems and valves. Crosswalks careers = those who work safely and understand working with pressure - including aircraft maintenance, instrumentation, industrial mechanics and power engineers. Training must align with codes and standards, such as CSA, NFPA2, CGA H3.

**Fall Advisory Board Meeting** – we met two days after the SBCTC/CoE review committee shared their recommendation. We approached this meeting with the news and how can we be most effective the rest of FY26? How do we future-proof our legacy and 20 years of partnerships and projects? How can we set up the system and our partners to succeed? Also, industry is concerned about AI training. How do staff use AI effectively in their jobs and remain competitive with those who can navigate AI?

- **Takeaways:** Set-up clean energy pipelines between education and industry. Create a tool kit for industry that includes how to work with CTCs and who to contact. Gather and share course outlines and demonstrate how they align with career paths and differ between colleges. Host meet and greet opportunities for educators and industry.

**Centralia City Light.** Monica met with interim GM Willie Wright, who has been encouraged to serve on our Advisory Board in ML Norton’s place.

**AWB Energy Solutions Summit.** Keynote Governor Ferguson confirmed that he supports Washington’s Clean Energy acts and laws. He stated that it takes too much time to build housing and energy projects and that our processes need to be streamlined; and during his first week, he signed permitting efficiencies to speed processes.

The theme of the event was clear: We are dangerously close to not having enough energy to meet our needs; and this region is dangerously close to experiencing significant energy supply disruptions. Challenges for this industry include permitting processes, supply chain issues, data center power requirements, transmission expansion needs, increased wildfires and extreme weather events; and according to Dale Smith of McKinstry, “Energy isn’t a problem. Workforce is primarily the challenge.”

Monica’s question to the panel and audience: “Dale mentioned workforce being the biggest issue. Can he dive into that issue more? Is his comment related to numbers of people or training? How can our state’s 34 community and technical colleges help?”

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|   | <p>Dale’s answer: It’s skills and people. Skilled labor with technical skills, who have craft/design skill sets to run manufacturing. McKinstry is beginning to identify training at local school districts and colleges in Spokane.</p> <p><b>The Summit’s Cross-Cutting Themes</b></p> <ul style="list-style-type: none"> <li>• Washington must pursue all solutions.</li> <li>• Public–private partnerships are critical.</li> <li>• Higher Ed is a major workforce engine for the future of energy.</li> <li>• The state needs: <ul style="list-style-type: none"> <li>○ Coordination</li> <li>○ Innovation</li> <li>○ Workforce development</li> <li>○ Transmission expansion</li> <li>○ Permitting modernization</li> </ul> </li> <li>• <b>Takeaway:</b> We need to build workforce development to help our utilities and this industry. We have deans who are excited about clean energy programs. We need pipelines of workers. The gray tsunami is here, and the Center is facing closure. I spoke with AWB representatives who want to focus on energy workforce solutions as another event. Monica asked to be included in planning sessions.</li> </ul> <p><b>CETWAC Report to WA Legislators included the importance of this Center <a href="#">2024-CETWAC-legislative-update-.pdf</a></b></p>  |
| <p><b>Core expectations</b></p>   | <p><b>Goal 2: Be Recognized by CTC Deans/VPIs with energy-related programs</b></p>  |
| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic Development</li> <li><input checked="" type="checkbox"/> Sector Strategy</li> <li><input checked="" type="checkbox"/> Ed/Innovation/Efficiency</li> <li><input checked="" type="checkbox"/> Supply/Demand</li> <li><input checked="" type="checkbox"/> Equity &amp; Access</li> </ul> | <p>During a May 2025 clean energy program survey, many deans and faculty acknowledged that they work with this CoE; and yet some whom we’ve worked with did not. We want to improve that. Industry needs help in training fit-for-purpose workers. Through short-term stackable credentials, certificates, degrees and transferable pathways that lead to more education and apprenticeship programs, we need to be sure the CTCs feel supported. This goal includes:</p> <ul style="list-style-type: none"> <li>• Strengthen partnerships within the CTC system – continue building trust and connections of who to call when industry needs workforce and outreach support.</li> <li>• Meet new faculty and deans and continue building the Energy Educators Association. Every college with energy-related programs should be aware of this CoE.</li> <li>• Offer support for energy-related programs.</li> <li>• Continue building relationships and trust between apprenticeship organizers, labor, and the college system.</li> <li>• Continue building relationships and pathways from CTCs to universities – to grow engineers and research associates.</li> <li>• Continue developing relationships and partners with STEM and K-14 ESD’s to reach students, grades 8-14, and their parents - to increase energy career awareness and training opportunities in CTC programs and apprenticeships.</li> </ul> |

| Funding Sources % | Purpose   | Planned Outputs with Target Completion Dates   |
|-------------------|---|--|
| CoE 100%          | <p>In order to grow a strong workforce that supports the clean energy industry and Washington’s economy, we need to work together. Collaboration is needed with all educators and trainers. Awareness is needed to fill the education pipelines and career opportunities to support this sector. Good training resources attracts new businesses – which is one of the reasons why fusion has appeared in areas closest to aerospace and machine shops.</p>   | <ul style="list-style-type: none"> <li>• Attend all WEC events in person. Seek out, meet, and follow-up with at least three deans each meeting, so that colleges continually understand and use the CoE as a resource. (Q2 – Q4)</li> <li>✓ Follow-up with Clean Energy Survey focus groups who expressed interest in continuing meetings. How can the CoE help during these times? (Q1-Q2)</li> <li>• Attend WCERTE meetings to build partnerships with engineering, science and related technology faculty. Share CoE resources/add contacts to Energy Educators’ meetings to grow attendance/outreach into CTC. (Q2-Q4)</li> <li>• Host bi-monthly/quarterly virtual meetings for deans and faculty with energy-related programs. Invite SMEs to present. Make it a learning activity for all. (all)</li> <li>• Share all training opportunities, such as hydropower workshops for educators, and Green Transportation webinars. (all)</li> <li>✓ Encourage 10 CTC faculty to attend Green Transportation Summit &amp; Expo – follow up and ask what they had learned and how attending added value (CoE purchased tickets in FY25). (Q1)</li> <li>✓ Encourage faculty to attend <i>Hydropower for Educators</i> at Rocky Reach Dam and present during event. How can we increase number of participants, and do we need a virtual training session? (Q1)</li> <li>• Continue updating resources – such as guides, website and publications to keep educators abreast with changes. (all)</li> <li>• Work with BEF and FWEE to promote Fellowships and other training opportunities with K-14 faculty and staff. (all)</li> <li>• Use VR energy career technologies through K-14 Fellow outreach opportunities including high school trade show events to grow industry and CTC program awareness. (Q2 – Q4)</li> <li>• Share updates with the CTC system using Energy Educators’ Association targeted emails, newsletters and the CoE website. (all)</li> <li>• Create an industry SME resource list for collaborating and training opportunities. (Q3)</li> </ul> |
|                   | <p style="text-align: center;"><b>Activities</b></p>  |  |
|                   | <ul style="list-style-type: none"> <li>• Prioritize travel to attend WEC and WCERTE meetings to increase collaboration and outreach opportunities.</li> <li>• Create virtual learning opportunities for Energy Educators’ Association and CEWD West Coast Consortium meetings.</li> <li>• Find/support programs that could use CoE connections for training, such as IBEW solar training for Grant PUD at Big Bend College.</li> <li>• Support CTC grant writers with reports and resources. Offer letters of support when projects meet workplan goals.</li> <li>• Partner with CoE directors when cross-sector opportunities arise, such as EV/hydrogen technology in Marine, Ag, and Global Trade; sector focused Tool Talks with Construction; and Industrial Cyber with Cybersecurity.</li> <li>• Continue developing partnerships with labor such as IBEW and UA290, to build relationships and trust, and pathways for students.</li> <li>• Research and provide examples of short-term energy-related programs that are available outside of the CTC system.</li> <li>• Manage SEI Climate Corps K-14 Education Fellow, to strengthen K-14 outreach.</li> <li>• Connect BEACON Fellows to education and industry partners.</li> <li>• Participate on panels to share energy workforce information.</li> <li>• Connect colleges with industry to support summer energy/STEM academies</li> <li>• Serve as Vice Chair for the CoE directors – take minutes, assist Chair with agendas and communication, assist directors and SBCTC with Center needs.</li> </ul> |  |

- Use/build new awareness infograms and posts. Increase social media presence to drive traffic to website resources. (all)

**Report Progress Toward Output and Work Product(s)**

**Q1**

**Hydropower for Educators** was promoted as: Dive into the world of hydropower alongside passionate educators from across the region. Connect with fellow hydro education leaders, spark fresh ideas, explore hands-on curriculum and dynamic science demos, and uncover powerful new resources to ignite curiosity and bring the magic of hydropower to life in your classrooms and communities. Monica invited EEA educators to attend this event, sponsored by NREL and FWEE; and drove Centralia High School’s science instructor, Rob McKay, to and from Rocky Reach Dam. He was thrilled to meet other educators and learn their best practices; and was inspired to incorporate some of the projects into his science classes.

- **Takeaway:** Monica was inspired as well and appreciated all of the work that our state’s hydropower educators do to enlighten others on how hydropower works, and electricity is generated. She gathered ideas to share with our new SEI Fellow. Since this was a summer activity, it was difficult to convince other educators to attend. Most of the educators, other than Rob McKay, were within industry.

**Green Transportation Summit & Expo (GTSE)** We purchased 10 registrations at a discounted rate and supported 10 faculty, deans and two students, from Bates, Centralia, Green River, Lake Washington, and Tacoma, who were delighted to attend. An email from Dean Priyanka Pant, LWTech, described the event best:

*I want to extend my sincere thanks for the complimentary tickets to the **Green Transportation Summit and Expo** held in Tacoma. We had 4 LWTech members attend this event - Associate Dean Heather Sneed, Faculty - Yoshi Hauge and Tuan Ngyuen and me. It was a truly enriching experience, and I deeply appreciate the opportunity to attend.*

*This event offered a wide range of insightful workshops and discussions, including:*

- **Sustainability in Green Fleet Transportation**
- **Challenges Faced by Multifamily Residential Spaces in Owning EVs**
- **Mobile Charging Options for Fleet Vehicles**
- **EV Pro+ Workshop on Level 5 Electrical and Electronics for Medium and Heavy-Duty Vehicles**
- **Rides on Tesla Semi Truck and opportunity to check out the RNG trucks and vehicles**

*Each session was thoughtfully curated and provided valuable perspectives on the future of sustainable transportation. The EV Pro+ workshop, in particular, was a highlight, offering a deep dive into advanced electrical systems and technologies. This fair gave me an opportunity to connect with peers in Higher Education, and I was fortunate to meet the Diesel faculty team from Bates Technical college and NSF mentor Ken Mays.*

**Clover Park Technical College Lineman program** opening Fall 2025. Monica connected PSE with Clover Park’s Dean Lester Burkes and found a PSE representative to join CPTCs’ program advisory board.

**Deans Energy Program Focus Group.** We held a follow up meeting with 11 deans who oversee energy related programming. They had a lot to share – such as managing class waitlists, modernizing curriculum and refreshing classes, mandatory advising and how to tell a story about programs. They appreciated the focused time together, and some will follow up at WEC. We welcomed new deans and shared fall programming schedules. Then followed up with a save the date for our first Energy Educators Association webinar, set for November 6, that will focus on available curriculum and “what’s happening in the classroom” sharing.

**CTC Clean Energy Survey Results and Recommendations.** We partnered with Irene Shaver, SBCTC, to design and disseminate a survey to deans and faculty who teach/oversee energy related programs. The survey was sent in May, gathered in June and the report and recommendations were approved this quarter. The results were sent to CETWAC to incorporate into a report to the governor and legislators.

Q2



## Energy Educators Virtual Meeting

Nov 6, 2025  
Focus: Energy related curriculum



**EAA Webinar.** Ten participants, including three deans and two members using AI notetaker, attended the EAA webinar that opened with presentations of free curriculum, pathways to colleges and EV lab best practices. The CoE included resources, such as [CEWD Energy Industry Fundamentals](#), [REVIT](#) and H2Skills (what's coming soon). Dannie Nordisen, Clark College shared his experience running an EV lab (he's developed curriculum as well). Other resources that were shared included the [US Dept of Energy's Resource for Educator's page](#); [CREATE National Energy Center](#); and Electric Power Research Institute ([EPRI](#)). Other discussions included open entry process, time spent recruiting K-12 students vs following students registered for general studies, completion rates, diesel vs biofuels and short-term certificates. Our next webinars are scheduled for Feb. 12 and May 21; and in-person May 1 at PSE.

**WEC** Monica presented CoE updates to WEC and BLC. She spoke to deans of Everett, Lake Washington, and Shoreline who expressed high interest in rebuilding their energy programs. Shoreline, restart with a battery technology focus; Everett, Sustainable Aviation Fuels (SAF), BTC has instrumentation controls and is interested in REVIT.

**WCERTE** Monica attended virtually. Representatives from UW, Whatcom CC, Tacoma CC and WWU presented topics and led sessions throughout the day which included an Aerospace Hub NW Roundtable (graphic on last page), MESA, a new one-credit career and transfer development course called ENGR 200, transfer spreadsheets and 2+2 transfer pathways for 100 level engineering.

- **Takeaway:** 1) WA NASA Space Grant Consortium, a NASA-funded workforce development program supports students studying STEM in WA state, has a funding opportunity (closes Feb. 20, 2026). There are two engagement opportunities for high school to college students that lead to \$12K or \$22K funding. We will review the RFP and share information with the CoE for Aerospace. 2) I learned that the SBCTC selects CTCs close to universities to run MESA projects. Do CoE's offer any assistance? How can we help?

**Bellevue CTE Presentation** Monica presented information about the energy sector, energy workforce needs, the Centers of Excellence and CleanTech Alliance to CTE directors in Bellevue. Sarah Patterson, Workforce Development Director of the Associated General Contractors (AGC) Education Foundation, and I followed up to discuss hosting a summer academy type trades event for faculty. Discussions will continue in Q3.

**South Seattle College EV Innovation Showcase** Monica toured South Seattle College's Auto lab featuring Washington's first full-sized, fully operational EV trainer housed in a sleek, black Tesla. LED lights reveal energy pathways, sensors test operations and a touch screen dashboard invites students to learn about an EV system safely. Kudos to lead faculty Teryn Kilgore, Dean Ferdinand Orbino, President Monica Brown and their grant writing team for acquiring funds to build a new space with the newest technologies. This automotive program features state-of-the-art equipment that aims to train industry technicians, college alumni and tech students. The 8 to 10 week program will be offered evening hours to accommodate technician work schedules and will begin next fall. South Seattle also supports a fantastic sustainability and clean buildings program led by our friend Steve Abercrombie. Good stuff!

**Goal outreach:** Communications and newsletters were sent to the Energy Educators group which includes deans and faculty from most colleges. Monica presented CoE updates (and stretching exercises to all deans attending WEC. Virtual meeting included 10 dean/faculty from different colleges. WCERTE includes engineering faculty from all CTCs and universities.

| Core expectations   | Goal 3: Stay Current on New Technologies Affecting Energy   |   |
|---|---|---|
| <ul style="list-style-type: none"> <li>☒ Economic Development</li> <li>☒ Sector Strategy</li> <li>☒ Ed/Innovation/Efficiency</li> <li>☒ Supply/Demand</li> <li>☒ Equity &amp; Access</li> </ul> | <p>We've led workforce development strategies for hydrogen and fusion sub sectors; and have dabbled in biofuels and advanced nuclear technologies. Tactics have led to national and region recognition for the Centers, Centralia College, and other CTCs. New technologies will have an enormous impact on workforce needs once they become commercialized. Hydrogen was thought to be first, but has slowed due to funding, permitting, and federal tax credit policies. There are areas of opportunities – for sharing, funding and expanding. This goal includes:</p> <ul style="list-style-type: none"> <li>• <b>H2Skills</b> – a partnership led by PNNL and funded by Dept of Energy HFTO that includes building and sharing short-term stackable credentials in hydrogen and hydrogen safety within technician and apprenticeship programs. Centralia College will pilot first program. <b>CoE: Be Centralia's project lead, hire faculty to write curriculum, manage stipends and travel budget. Lead distribution efforts of free curriculum for CTCs.</b></li> <li>• <b>Renewable Energy Vehicle &amp; Infrastructure Technician training (REVIT)</b> – a partnership led by Lewis County Transit that includes building and sharing a series of dual credit classes and pathways into apprenticeship. REVIT's project manager works directly with OSPI to approve classes. Exploratory class offers high school students a choice of physics or CTE credit. Preparatory courses offer dual high school – college credit (approved by the college). <b>CoE: Promote and distribute REVIT and its successes</b> – to increase awareness in energy and build enthusiasm in students; <b>and help increase enrollment in related CTC programs.</b></li> <li>• <b>PNWH2</b> – Hydrogen Hub. <b>CoE: Lead regional workforce development and build CTC pathways</b> as a future subrecipient of WSU.</li> <li>• <b>Fusion</b> – Workforce development with fusion cluster partners will continue to grow outside of King County. Possible fusion expansion locations include Wenatchee, Tri-Cities and Centralia. Note: This cluster is pursuing hub-type funding, similar to the \$1-billion hydrogen hub funding, with the Dept of Energy. <b>CoE: Continue building CTC training opportunities within this subsector.</b></li> </ul> |   |
| Funding Sources %   | Purpose   | Planned Outputs with Target Completion Dates  |
| <p>CoE 100%</p> <p>Travel to attend Hydrogen events will be covered by other funding.</p> <p>PNWH2/WSU sub-recipient funding – TBD waiting for federal approval of phase 2</p>                  | <p>It's important to be involved with the emerging technology subsectors to know when commercialization is going to occur. Once commercialized, these subsectors will compete for construction workers, electricians, engineers, operators and technicians. Currently, manufactures handle the bulk of training; but at some point, they will be overwhelmed with demand. We will see an increased need for partnerships and training; and need to be prepared.</p> <p style="text-align: center;"><b>Activities</b></p> <p><b>All</b></p> <ul style="list-style-type: none"> <li>• Connect emerging production and end-users to CTC and CTE faculty.</li> </ul> <p><b>Hydrogen</b></p> <ul style="list-style-type: none"> <li>• Continue partnering with labor, community college faculty, PNNL and COM to develop hydrogen curriculum. Follow up with June's series of DACUM meetings.</li> </ul>   | <ul style="list-style-type: none"> <li>✓ H2 production site tour. Tour Kalama site with a small, select group to see operations of a PEM electrolyzer system. This will help faculty with REVIT and H2Skills curriculum writing. Write a blog about the tour and share what the group learned. (Q1)</li> <li>– Assist/plan tours for World Hydrogen Day, Oct 8 to build hydrogen awareness with state legislators and reps. (Q1-Q2) (event was canceled).</li> <li>✓ Participate on the Chehalis-Centralia Airport Hydrogen Feasibility Advisory Board to learn about community/small business needs in a hydrogen economy. (Q1-Q2)</li> <li>✓ Provide travel arrangements to key faculty to attend CHS Hydrogen Americas Conference. Travel paid for by H2Skills. Training for faculty developing H2Skills curriculum. Attend to obtain more energy workforce contacts. (Q1-Q2)</li> </ul> |

- Find/share training opportunities for faculty.
- Share news of classroom and student successes.
- Promote/distribute finished curriculum and training products to regional and national users. (REVIT and H2Skills)
- Participate on workforce panels and attend hydrogen conferences.
- Lead or co-lead workforce development committees (lead for RHA; co-chair for global hydrogen workforce taskforce)
- Develop taskforce within PNWH2 hydrogen hub. If funded, create a new goal with activities report area.

**Fusion**

- Introduce CoE\_Aerospace and Machinists Institute to fusion partners – and encourage their involvement with Fusion Week and workforce initiatives.
- Participate on panels, attend fusion events, write papers/reports/LOS when requested.

**Advanced Nuclear**

- Support CBC, WSU and INEF in promoting nuclear and advanced nuclear programs.

**Other subsectors/emerging technologies**

- Continue communicating with strategic partners in these areas to keep current with advancements.
- Track progression of clean/renewable natural gas; green ammonia; geothermal; heat exchange systems; carbon capture/sequestration.

- ✓ Attend Renewable Hydrogen Alliance (RHA) NW Hydrogen Conference and meet with H2Skills team, including U.S. Dept of Energy HFTO rep. Make new contacts, meet new labor partners, support H2Skills, and learn more about the status of the Dept of Energy. (Q1)
- ✓ Participate on a workforce panel during Green Hydrogen West Coast Summit. Share/learn H2 workforce development advances in this subsector. Sept 30 – Oct 1. (Q1-Q2)
- ✓ Finalize workplan and budget for hydrogen hub to include lab equipment and stipends for CTCs. (Q1-Q2)
- Work with WSU and Centralia College on signing sub-recipient agreement pending Phase 2 federal funding approval. (Q1-Q2)
- Connect CBC and Clark to local h2 producers/users. (Q2)
- If funded, order hydrogen lab equipment for CTCs. (Q2)
- If funded, start PNWH2 workforce taskforce (Q2) to discuss hub workforce needs. This will include rep’s of producers, off-takers, labor, educators, tribal, and COM. Set virtual meetings. (Q2-Q4)
- If funded, hire/manage hydrogen program manager to absorb all hydrogen related work so that the CoE can spend more time focusing on workplan deliverables and industry needs. (Q3-Q4)
- Develop/implement REVIT strategic distribution plan with REVIT program manager to build energy educational pathways for high schools and colleges throughout the region. (Q2-Q4)
- ✓ Connect CoE\_Aerospace with fusion cluster (Q1) and encourage involvement in Fusion Week so that a skills crosswalk can be created from aerospace into fusion. (Q1, Q2)
- Attend CleanTech Alliance’s Innovation Showcase to learn and build new connections, if the agenda supports this workplan. Is there an emerging technology that needs connections to our system, such as Sharc’s heat exchange program to BTC? (Q2)
- Find resources for clean/renewable natural gas to learn and share. This sub-sector may hold the key to supporting WA Clean

**Report Progress Toward Output and Work Product(s)**

**Q1**

**Air Liquide Kalama plant tour.** Arranged a tour of an updated hydrogen production plant, located an hour’s drive south of CC. Invited CC’s Aman Gill, C-C Airport Exec Dir. Brandon Rakes, Center for Hydrogen Safety/H2Skills partner Leonard Pease, and Lewis County Transit Director of Fleet & Facilities, Tim Palmateer.

- **Takeaway:** Three people operate this facility, which produces hydrogen 24-7 for a nearby steel manufacturer (through a 2-mile pipeline) and for transit. The facility tour was valued by the tour group; Monica discussed internship opportunities.

**Renewable Hydrogen Alliance (RHA)** – A two-day event that included a hydrogen workforce workshop, a membership networking reception, and a day of summit presentations. Monica moderated the workforce workshop that brought 45 labor, education and industry partners, as well as the Dept of Energy HFTO office, together to view and participate in the first demo of H2Skills. Three faculty and PNNL’s VR lab presented their modules and received raving reviews. The second part of the day included a sneak peek into the Center for Hydrogen Safety’s new class (showcasing to educators for feedback). The day was exhilarating and successful. The networking reception introduced the CoE to new industry partners. The full-day summit also brought new connections. Tina from Clark College joined us too.

- **Takeaways:** We saw the first glimpse of possible H2 cuts and were advised not to submit travel expenses to the PNWH2 hub (travel expenses for this trip were funded by the H2Skills project). Two projects not related to the PNWH2 hub are moving forward in hydrogen: Intercity Transit is operating two of five new hydrogen buses; NxtClean Fuels is building a hydrogen plant near Clatskanie, Ore., that will produce more than 315 tons of H2 per day using a first-of-its-kind system that will be carbon negative. H2 will be used to create renewable diesel. Groundbreaking in 2026; first barrel of SAF in 2027-28. Projected employment: 3,500 construction workers; 240 operations personnel.

**EPRI/H2Edge/Southern CA Gas Technology Transfer Tours** California hydrogen education and plant tours included Toyota’s Tri-Gen generation plant, Southern CA Gas H2 labs and demonstration project, Cal State LA (first college in the nation with H2 training), University of CA/Irvine. These were eye-opening and educational tours for the CoE. **Takeaways** included:

- There’s a shortage of electromechanical engineers.
- There will be a high demand for Fuel Cell Electric Vehicle (FCEV) technicians with the ability to work on ICE, FCEV and dual fuel systems.
- The number of workers retiring from the energy labor force is outpacing number of those coming into the system. There’s a lack of talent and increased competition which raises wages to get the best hires.
- We need technical workers who know how to design, operate and maintain H2 infrastructure and vehicles – given the unique properties of H2.
- We need a variety of engineers, trades workers, technologists and technicians, plant operators and truck drivers.
- Port of Long Beach = 100% H2 by 2030. [Tri-Gen/Fuel Cell](#), a large hydrogen generation facility with fuel cells and electrolyzers is fully automated. Technicians watch the automative processes and travel 20 minutes to the site to repair issues.
- Patricia, St Monica College and CA Center for Competitive Workforce Group: Workforce receives \$250 M for workforce development; 40% for regional development; \$5 million for innovation. Blue Economy 101. Developing a statewide demonstration project. Position students for the jobs of tomorrow.

|                  |   |
|------------------|---|
|                  | <ul style="list-style-type: none"> <li>• Engineering Analysis Center includes a living lab, situation city, appliance uses and leak detection. First water heater to use 100% hydrogen.</li> </ul> <p><b>PNWH2/WSU partnership.</b> Earlier this year, the PNWH2 Board submitted a Phase 2 proposal to DoE and waited for approval. We were part of that process which would have included funds to support a workforce taskforce as well as lab equipment for colleges throughout the region. Phase 2 start was postponed; and the DoE offered a no-cost extension for Phase 1. During this quarter, the hub approved the CoE to become the lead of hydrogen workforce development as a sub awardee of WSU under PNWH2. Monica and WSU’s Vice-Chancellor Kate McAteer designed and re-wrote workplans and budgets for the last four months of 2025 and Phase 1. The budget included 8 hours per week of Monica’s time plus travel expenses to support the design of the hub’s workforce plan. Monica was reimbursed for travel to AGI/WSU meetings and the trip to PNWER, which included a PNWH2 Board meeting (where she learned of additional projects being accepted into the hub). The sub awardee agreement, which would have reimbursed Monica’s time, was not signed this quarter. <b>Risks if Phase 2 is not funded:</b> we could lose ground on leading hydrogen workforce development nationally (to date, we are further ahead than other hubs because of REVIT, H2skills, Summer Energy/STEM Academies and updates to FWEE’s activity guide). We will also lose equipment for other colleges, stipends for faculty, additional CoE staff, momentum for developing a hub-specific workforce work group, and funding to continue memberships in hydrogen associations. Currently, Centralia College is the only college in the system to have acquired hydrogen lab equipment.</p> <p><b>C-C Airport H2 Feasibility Committee.</b> Monica attended two meetings of the feasibility committee this quarter and learned about the executive director’s master plan to include zero-emission plane landing and refueling areas.</p> <p><b>CleanTech Alliance’s Fusion Week.</b> Monica participated in event planning throughout the quarter and moderated a Utilities and Transmission panel during the first day of the two-day event. PSE’s Steve Scheunemen and PNNL’s Kevin Schneider served as panelists who explained how to integrate new technologies into our region’s grid. Time and permitting are two factors that are needed to add fusion into the grid.</p> <ul style="list-style-type: none"> <li>• <b>Takeaways</b> from the event: The workforce panel shared that globally this sub-sector will offer 1.4 million jobs by 2040. Currently, 26 percent of jobs focus on R&amp;D and include mechanical, electrical and industrial engineers and plasma physicists. Once fusion becomes commercialized, those jobs will be replaced by operators, mechanics, technicians and electricians.</li> <li>• This sub-sector will increase the need for more instrumentation and controls technicians, robotics technicians, electricians and machinery operators. They are tapping into maritime and aerospace machinists and are looking for a workforce that is coachable, curious, can listen, internalize and troubleshoot. Monica asked about the difference between machinists who work within sawmills and those who work in aerospace; and the answer given was the difference between being able to fix something quickly for production (sawmill) and durable/long lasting (aerospace).</li> <li>• Industry rep’s acknowledge the need to get into the classrooms to increase fusion awareness and knowledge; and are willing to do so.</li> <li>• Jill Thornton was invited to and participated in the event.</li> </ul> <p>The director will address the needs of new innovations in energy with a blog and email to the Energy Educators’ Association.</p> |
| <p><b>Q2</b></p> | <p><b>PNWH2 federal announcement</b> – Just as we were about to sign MOUs/contracts with WSU to lead the hub’s workforce development, the federal administration cut funding to West Coast hubs – PNWH2 and Arches in California. This eliminated \$4 million for workforce development that would have been spread throughout Washington, Oregon and Montana colleges (and eliminated lab equipment and faculty time). The hubs are informally appealing the decision, and we will continue to support this subsector of energy by connecting with projects that will continue building the H2 economy.</p> <ul style="list-style-type: none"> <li>• <b>Takeaway:</b> We are losing ground on leading hydrogen workforce development nationally. The Global H2 Workforce Development taskforce, sponsored by the Center for Hydrogen Safety, was placed on hold due to declining meeting enrollment. We started seeing</li> </ul>  |

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|--|--|---|
|  | <p>projects end - even those who had funding outside of the hub. Hydrogen will rise in transit but will take more time for this small molecule to be developed as an energy solution.</p> <p><b>H2Skills hydrogen curriculum/training project.</b> The team completed the first draft and pilot for hydrogen instrumentation and controls technician and mechanical technician training. Coursework was vetted through the Center for Hydrogen Safety's Hydrogen Safety Panel, who checked technical accuracy of the program. Centralia College piloted the first in-person class. Instructors took notes and updated curriculum. Davis Tech will pilot the first e-learning class next quarter (see Goal 5 for more details).</p>   |   |
| <p><b>Core expectations</b></p>  | <p><b>Goal 4: Incorporate &amp; Report Results connected to SBCTC Strategic Plan</b></p>   |   |
| <p><input type="checkbox"/> Economic Development<br/> <input checked="" type="checkbox"/> Sector Strategy<br/> <input checked="" type="checkbox"/> Ed/Innovation/Efficiency<br/> <input type="checkbox"/> Supply/Demand<br/> <input checked="" type="checkbox"/> Equity &amp; Access</p> | <p>We've identified areas within SBCTC's Strategic Plan that will be incorporated into the Center's work. Much of the following strategies are weaved throughout the Center's workplan and actions will be reported here for quick referral. SBCTC strategies include:</p> <ul style="list-style-type: none"> <li>• Provide flexible career-training options that are responsive to the needs of businesses and industries, that offer Washingtonians access to well-paying jobs and career mobility, and lead to a more resilient and diverse workforce.</li> <li>• Respond quickly to the changing needs of students, businesses, and the economy.</li> <li>• In collaboration with colleges, help expand Washingtonians' access to quick, fast-track credentials with value in the marketplace.</li> <li>• Support colleges in establishing work-based learning opportunities.</li> </ul>   |   |
| <p><b>Funding Sources %</b></p>  | <p><b>Purpose</b></p>  | <p><b>Planned Outputs with Target Completion Dates</b></p>  |
| <p>CoE 100%</p>  | <p>To support SBCTC's strategic plan, this section will include deliverables that align with SBCTC's reporting needs – for quick access.</p> <p style="text-align: center;"><b>Activities</b></p> <ul style="list-style-type: none"> <li>• In partnership with business and industry, provide insight and data to help colleges anticipate workforce needs.</li> <li>• Enable parents, students, K-12 schools, businesses, and employers to more easily identify which programs are offered CTCs</li> <li>• Identify ways to encourage workers who have short-term credentials and credit for prior learning to build up to higher-level certificates and degrees in order to increase skills and earning potential.</li> <li>• With industry partners, help colleges create more flexible, short-term credentials that provide immediate value that also count toward a longer certificate or degree.</li> <li>• Partnering with industry and labor, assist in expanding internships, registered apprenticeships, collaborative learning experiences, and employer-sponsored training.</li> </ul> | <ul style="list-style-type: none"> <li>• Reflect on these strategies – how to incorporate into daily/weekly work. Update Planned Outputs and report here quarterly. (all)</li> <li>• Continue to update college programs, apprenticeship, internship and career pathway webpages. (all)</li> <li>• Promote career pathways and career news using new strategic marketing methods. (all)</li> <li>• Identify and share crosswalks of similar industrial skills. (all)</li> <li>• Promote college-labor success stories and encourage similar opportunities – such as pre apprenticeships at BTC and CPCC. (all)</li> <li>• Rebuild partnership with NW Indian College (vacated by Stephanie Bostwick). (Q2-Q4)</li> <li>• Attend virtual Tribal Engagement Training workshops led by Dr. Zoe Higheagle Strong (Nez Perce Tribe) and Tribal Specialist Cary Rosenbaum (Colville Tribes). (Q3-Q4)</li> </ul> |

|  |   |  |
|--|---|--|
|  | <ul style="list-style-type: none"> <li>• Support colleges and labor who collaborate in providing the instruction element of apprenticeship programs. Share success stories through collaborative opportunities.</li> <li>• Expand knowledge of, and participation in, internships and other workplace-based learning opportunities offered by Washington’s 29 federally recognized Tribes</li> </ul>  |  |
| <b>Report Progress Toward Output and Work Product(s)</b> |   |  |
| <b>Q1</b>  | <ul style="list-style-type: none"> <li>• REVIT and hydrogen training are two areas that are being developed as flexible modular training. Career options are weaved throughout the REVIT curriculum. We are working on a deployment strategy to share curriculum throughout the state.</li> <li>• Labor has accepted H2Skills as a training partner and UA, IBEW and electrician unions have agreed to incorporate H2Skills safety and training elements into regional and national training. We will hold a third DACUM in Q2/Q3 that will include ironworkers and welders.</li> <li>• CoE’s Emily Girt enhanced our website and social media shares with college programs and success stories. In an email from Avista’s Sara Letsche to the rest of the advisory board, she wrote <i>“Thank you for the update! I had not visited the COEs Instagram page prior to reading this e-mail and I’m so impressed! @Emily Girt you are crushing it. The amount of engaging, cohesive, and strategic content shared within such a short time period is amazing. If we as a group can use our networks to help build those followings, the COE has an opportunity to extend its reach in a very low cost way.</i></li> </ul> |  |
| <b>Q2</b>  | <p>There are examples throughout the workplan that meet SBCTC strategies. Examples included:</p> <ul style="list-style-type: none"> <li>• We continue to seek and share internship pathways with our subsector partners to build internship opportunities for students.</li> <li>• We organized a college student electrolytic hydrogen plant tour to complement a hydrogen pilot program (for H2Skills) and shared information about careers in hydrogen.</li> <li>• We convened CTC faculty and deans to share free curriculum for their programs. CBC is using CEWD’s Energy Fundamentals 2.0 and is interested in REVIT.</li> <li>• We partnered with Tacoma Power in sharing energy career pathways to 9<sup>th</sup> grade TRiO program students. (TRiO is a federal outreach student services initiative that assists low-income, first-generation colleges students and students with disabilities).</li> <li>• We’ve launched planning meetings for the SWWA Summer STEM Career Academy by FWEE and will expand the program to include careers in forestry.</li> </ul>   |  |
| <b>Core expectations</b>                                 | <b>Goal 5: Boost Energy Career Awareness</b>  |  |

| <ul style="list-style-type: none"> <li><input checked="" type="checkbox"/> Economic Development</li> <li><input checked="" type="checkbox"/> Sector Strategy</li> <li><input checked="" type="checkbox"/> Ed/Innovation/Efficiency</li> <li><input checked="" type="checkbox"/> Supply/Demand</li> <li><input checked="" type="checkbox"/> Equity &amp; Access</li> </ul>   | <p>Energy careers need awareness campaigns and additional help to spread the word that this is an industry that offers many good paying career paths – but much of what our partners have to offer is still unknown by many generations. We need to support industry, colleges and organizations, such as the Center for Energy Workforce Development (CEWD), by sharing creatives and messaging.</p> <p><a href="#">According to a LinkedIn report published by CEWD</a>: 61% of Gen Z workers say they want to get a green job within the next five years. Fewer than 20% say that they see a clear path to getting those jobs. Fewer than 1 in 5 Gen Z has an awareness of the different clean energy career paths to get into.</p> <p>By 2030—an important milestone on the path to net-zero—only one in ten Gen Z workers will have sufficient green skills. Gen Z is expected to make up a third of the workforce by 2030. 78% of Gen Z believe that if they were offered training, they would be able to learn new or improved green skills that will allow them to perform a green job.</p> <p>And further, a recent study from GED Testing Services found that while 90% of GED learners were interested in “green careers,” fewer than 5% understood available options. 9% of the industry’s workforce comprises of Gen Z workers, yet Get Z is expected to make up 27% of the workforce in 2025.</p>  |  |  |   |
|---|--|--|--|---|
| <p><b>Funding Sources %</b></p>   | <p><b>Purpose</b></p>  | <p><b>Planned Outputs with Target Completion Dates</b></p> |  |   |
| <p>CoE 100%</p> <p>SEI funds 2 Climate Corps Fellows managed by CoE:</p> <ul style="list-style-type: none"> <li>• K-14 Outreach Fellow</li> <li>• Clean Buildings Fellow</li> <li>• Up to 4 Clean Buildings Interns (managed by placement hosts)</li> <li>• 9 additional Clean Buildings Fellows will be placed throughout the state. Our Fellow will become Lead.</li> </ul> <p>Funds to support summer academies are included within SEI Fellow budgets. We may need to do additional fundraising to continue this program beyond 2026.</p> | <p>Our state has a lot of energy workforce committees and taskforces – but who, other than the utilities themselves, support career awareness? We need more energy advocates to encourage workforce growth.</p> <p>2023 – 2025: we made connections through regional STEM and ESD staff who were involved with Career Connect Washington (CCW); and we will work to keep building those relationships to grow advocates.</p> <p>2025: CCW changed sector leader roles to be more aligned with work that we already do. Sector leaders will no longer be able to engage in student outreach, which is why we signed on. Before the governor signed the state’s budget, we opted to partner as an advisor vs. a co-leader.</p> <p>It’s important to reach out and help educate our youth about jobs in this industry. Especially students grade 5-12. These are the students who will solve WA’s future energy needs. As an example, students in the third grade will be fusion’s future workforce; and those in the seventh grade will be needed in hydrogen.</p> <table border="1" data-bbox="422 1177 1251 1456" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="422 1177 1251 1258" style="background-color: #e0e0e0;">Activities</th> </tr> </thead> <tbody> <tr> <td data-bbox="422 1258 1251 1456"> <ul style="list-style-type: none"> <li>• Promote new CoE Energy Program Guide and FWEE’s updated activity guide during events, on website, and in posts.</li> <li>• Support planning teams in creating summer energy/STEM career academies.</li> <li>• Utilize CEWD’s new creative campaigns and share.</li> </ul> </td> </tr> </tbody> </table> | Activities   | <ul style="list-style-type: none"> <li>• Promote new CoE Energy Program Guide and FWEE’s updated activity guide during events, on website, and in posts.</li> <li>• Support planning teams in creating summer energy/STEM career academies.</li> <li>• Utilize CEWD’s new creative campaigns and share.</li> </ul> | <ul style="list-style-type: none"> <li>✓ Implement new communication/social media plan designed in FY2025. Track analytics to build strategic outreach. (all)</li> <li>✓ We’re moving! Announce move and invite campus/CoE stakeholders to visit and learn about what’s new. (Q1)</li> <li>✓ Hire/onboard new K-14 Fellow for a September start. (Q1)</li> <li>• Build/support/promote K-14 Fellow outreach plan including classroom visits. (all)</li> <li>• Support summer academy planning teams in King, Jefferson, Lewis and Clark Counties by hosting virtual preliminary planning meetings and sharing CoE_Ag’s summer playbook so that additional industry contacts experience the value in CoE and CTC partnerships (as well as increasing energy career awareness with students). (Q1 – follow up; Q3 planning)</li> <li>• Host planning meetings with K-14 Fellow for SW Washington Energy/STEM Career Academy. (Q3-Q4)</li> <li>✓ Support <i>Careers in Energy Week</i> to increase statewide awareness. (Q2)</li> <li>✓ Post daily career messages during <i>National Public Power Week</i> and <i>Careers in Energy Week</i>. These posts have historically increased traffic to our resources. (Q2)</li> </ul> |
| Activities  |  |  |  |   |
| <ul style="list-style-type: none"> <li>• Promote new CoE Energy Program Guide and FWEE’s updated activity guide during events, on website, and in posts.</li> <li>• Support planning teams in creating summer energy/STEM career academies.</li> <li>• Utilize CEWD’s new creative campaigns and share.</li> </ul>  |  |  |  |   |

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|  | <ul style="list-style-type: none"> <li>• Support Advanced CTE <a href="#">Career Clusters</a> – Energy &amp; Natural Resources - in publications and website. Share how to use them.</li> <li>• Encourage industry and CTC programs to create events for <i>Public Power Week</i> and <i>Careers in Energy Week</i>.</li> <li>• Assemble promotional materials that promote events, such as <i>Careers in Energy Week</i>, <i>Engineering Day</i>, <i>Lineman Appreciation Day</i>, Meet &amp; Greets, and industry outreach events.</li> <li>• Utilize K-14 Outreach Fellow to promote energy careers in schools, colleges and events that fit our workplan goals.</li> <li>• Encourage CCW leaders, ESD and STEM contacts to use creatives.</li> <li>• Promote new and updated energy programs within the system.</li> <li>• Share student success stories.</li> </ul> | <ul style="list-style-type: none"> <li>✓ Fellow will lead <i>Expand Your Horizons</i> Energy workshop to present energy careers to 9<sup>th</sup> grade girls. Replaced with TRiO’s Inspire program (Q2)</li> <li>• Share/support promotions of industry career events and apprenticeship opportunities to help boost awareness. (all)</li> <li>✓ Assist CC with H2Skills pilot. Share success stories. (Q2)</li> <li>• Create an H2Skills distribution plan to include CTCs (Q1-Q2); and implement plan (Q3-Q4)</li> <li>• Host 24 local students during the third annual SW WA Energy/STEM Career Academy, June 2026, to continue building awareness of industry partners and careers. (Q4)</li> </ul> |
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**Report Progress Toward Output and Work Product(s)**

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| <p><b>Q1</b></p> | <p>We <b>packed and moved</b> our offices from TAC 320 to a brick house on King and Pear; and added a big sign that promotes the CoE. We sorted through items left by a previous program and announced our move by giving away excess supplies. Thank you, Emily, for spearheading a huge organization project. We had more visitors in a few days than we had in the three years in our previous place.</p> <p>Emily Girt is focused on <b>increasing our media presence</b> and is doing a phenomenal job creating new posts that highlight news, facts and college programs. She also produced two Energy News Clips newsletters during this quarter that promoted our successes and future opportunities.</p> <p>Social media metrics include blog posts to <a href="http://cleanenergyexcellence.org">cleanenergyexcellence.org</a>, Facebook and Instagram posts.</p> <ul style="list-style-type: none"> <li>• July outreach: 10 blog posts, 19 social media posts, 633 total views</li> <li>• August outreach: 8 blog posts, 19 social media posts, 816 total views</li> <li>• September outreach: 9 blog posts, 18 social media posts, 1413 total views</li> </ul> <p><b>Lewis Couty Superintendent meeting</b> – Monica presented information about the incoming Fellow and opportunities for energy career visits.</p> <ul style="list-style-type: none"> <li>• <b>Takeaways:</b> Learned that the largest school district is facing substitute shortages. Last year they had 172 substitutes in a work-ready pool. This year, that number dropped to 63.</li> <li>• Lewis County Hi-Cap coordinator presented the Whole School Enrichment Model – quarterly meetings and book studies with available regular (not STEM) clock hours. Current reading: <i>The Genius in All of Us</i>.</li> <li>• Also learned about a white paper “Expulsion for Eminent Danger” that’s under development at ESD 113.</li> </ul> <p>We hired <b>SEI K-12 Energy/Climate Outreach Fellow</b> Ryan King, who didn’t waste any time strategizing an outreach plan. They immediately created contact lists and reached out to K-12 stakeholders to reserve space at career fairs and in science classrooms. We’re excited to report their successes in Q2!</p> <p><b>Expand Your Horizons.</b> We did not participate this year. The event had changed (no longer called EYH) due to funding.</p> |
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|                  | <p><b>SEI BEACONS Buildings Fellow</b> Mike Bowman is working his second year as a statewide Lead Fellow in a project funded by WA Dept of Commerce. He is mentoring 9 Fellows who are benchmarking energy use of Tier 1 and Tier 2 buildings across the state. Fellows are working with colleges such as Centralia, Everett, Pierce, South Seattle, Spokane and Wenatchee Valley; as well as with eight utilities. Mike wrote a \$40K grant for EV charging stations at Centralia College and is managing that project.</p>   |
| <p><b>Q2</b></p> | <p><b>H2Skills/Hydrogen Pilot Class at Centralia College.</b> Monica joined in-person hydrogen classes and arranged a class tour of Air Liquide/Air Gas Kalama electrolytic plant, located one-hour south of Centralia College. The following report was created by Amaninder Singh Gill, PhD, Centralia College Associate Professor of Mechanical Engineering &amp; Robotics, which summarizes student feedback collected throughout the course:</p> <ul style="list-style-type: none"> <li>• <i>The course focused on developing an understanding of hydrogen production systems, with emphasis on three core areas: (a) safety, (b) operations, and (c) instrumentation.</i></li> <li>• <i>Students noted that the safety-related material may be better suited for early- to mid-career engineers who already have foundational knowledge in areas such as safety practices, material selection, and NFPA standards used in facility design. They suggested that the content would be more beneficial if it explicitly highlighted elements from relevant standards that new engineers could apply immediately upon entering an electrolyzer facility.</i></li> <li>• <i>Regarding instrumentation and control systems, students—drawing on their Mechatronics background and prior experience—felt confident with the material presented. Some gaps in their prior knowledge of control systems were identified; however, these will be addressed through upcoming courses in their program as they progress toward completion of their associate degree.</i></li> <li>• <i>For operations and maintenance, students were comfortable with the concepts introduced. Some variability in their understanding stemmed from the inherently diverse nature of hydrogen production systems and the differences between specific facilities.</i></li> <li>• <i>The course concluded with a hydrogen plant tour. Students reported that the visit helped them connect classroom learning to real-world implementation. By the end of the tour, they expressed confidence that they could enter a production environment, work safely, and collaborate effectively with technicians on their first day. Monica took photos and shared the successful day.</i></li> <li>• <b>Takeaway:</b> Monica is working with the hydrogen plant’s general manager to offer an internship program – to create a pathway for hydrogen workforce. Unfortunately, the site’s budget has been cut to offset another facility’s profit loss. Monica will continue to pursue internship and internship funding opportunities.</li> </ul> <p><b>CoE Clean Energy website and social media.</b> Emily, our program coordinator, polished her skills in post and blog development. During Q2, her work received 2,563 views on 21 blog posts and 122 social media posts. Topics included CTC energy program spotlights, industry news, Careers in Energy highlights, and energy facts/tips. Emily does a fabulous job in keeping our college program inventory, news and events up to date while managing social media sites and keeping the office running smoothly.</p> <p><b>SEI K-14 Fellow outreach in Lewis/South Thurston Counties.</b> Ryan contacted 23 schools, visited 7 schools (3 classroom visits and 4 career fairs), and met with 62 educators, 35 parents, and 518 students. They interacted with 615 students through events (28% of attendees) and shared energy career pathway fliers and program information. Ryan used VR technology and FWEE’s interactive energy board to draw students in and learn about college programs and careers. They are an asset to energy outreach as well as the Center!</p> <p><b>TRIO Inspire Workshop.</b> Monica invited Tacoma Power/Cowlitz Hydro Project to partner on presenting careers in energy to 9<sup>th</sup> grade students at Centralia College. Eighteen students registered and due to power outages and bad weather, we hosted five students (a high number compared to other workshops). Manda of Tacoma Power created a career game (which will be used during our summer academy) and Power Operator Rob shared career information and energy generation pathways.</p> |

**BEACONS/SEI Buildings Fellows:** 10 Fellows provided service to 238 Tier 1 and Tier 2 building owners. They provided a portfolio of free services relating to CBPS compliance, including general education, resource connection and benchmarking services, Energy Management Plan and Operations & Management Program support, Clean Buildings Portal assistance, exemption application services, and site visit walkthroughs, all tailored to building owner needs. Since June 2025, fellows have collectively conducted outreach to over 230 unique entities, engaged with 120 building owners, and served 250 buildings in 16 counties across the state. Funded by WA Dept of COM, the Fellows will continue through March 30, 2026. A second round of Fellows will be hired and placed in CTCs and utilities to continue the work. They are helping our colleges as well as other building owners. Here's where they are located and who they are partnering with:

**Whatcom:** PSE and City of Bellingham      **Snohomish:** SnoPUD and Everett CC      **King:** Seattle City Light/PSE and South Seattle College (2)  
**Pierce:** Tacoma Power and Pierce College      **Chelan:** Chelan PUD and Wenatchee Valley College      **Spokane:** Avista and Spokane CC (2 Fellows)  
**Lewis:** Lewis County PUD and Centralia College (LEAD Fellow)

## **BOARDS & COMMITTEES:**

**BEACONS Clean Buildings Fellow**, led by COM and SEI – Advisor and Lead Fellow support

**Center for Energy Workforce Development (CEWD)** – Vice chair of West Coast CEWD Coalition. Workforce Development Workgroup member.

**Center of Excellence for Clean Energy //Energy Educators' Association** – Coordinator

**Center for Hydrogen Safety** – member; **Global Hydrogen Workforce Development Group** – Co-chair with San Juan College School of Energy

**Chehalis-Centralia Airport Hydrogen Feasibility Taskforce** – advisory member

**CleanTech Alliance** – Board of Directors; and member

**CETWAC Clean Energy Technology Workforce Advising Committee (HB1176)** – committee member

**Foundation for Water and Energy Education (FWEE)** – committee member

**Hydropower Uncommon Dialogue Working Group 8**, led by [National Hydropower Association](#) – member

**Kinetic West/COM Transmission Project** – advisor

**Lewis County Renewable Taskforce (biofuels)** – committee member

**Pacific Northwest Hydrogen Association (PNWH2)** – Hydrogen Workforce Lead/CTC regional workforce partner

**POWERIZE; Portland State University NSF-RIE Grant** – Advisory committee member

**Renewable Hydrogen Alliance (RHA)** – Workforce Committee Chair and member

**REVIT** – committee member

**WA State Centers of Excellence Directors** – vice chair

### **Acronyms Key**

CETWAC = Clean Energy Technology Workforce Advising Committee (HB1176)

CEWD = Center for Energy Workforce Development (national organization)

CoE = Center of Excellence

CHS = Center for Hydrogen Safety

COM = WA state Dept of Commerce

CTC = Community and Technical Colleges

PNWH2 = Pacific Northwest Hydrogen Hub

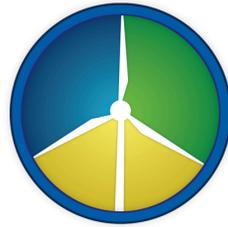
PNNL = Pacific Northwest National Laboratory

RHA = Renewable Hydrogen Alliance

SBCTC = State Board for Community and Technical Colleges



*Ryan, SEI K-14 Energy Outreach Fellow, leads energy career outreach at a school*



Pacific Northwest  
Center of Excellence for  
**Clean Energy**

## Director's Update



Happy retirement, Bob! Thank you for leading hydropower education!

### What an electrifying summer!

We led convenings with deans, sent college faculty to GTSE, hosted hydrogen tours, enrolled in NWPPA classes, supported FWEE, and moved into a cute brick house owned by Centralia College.

We hired a new SEI K-14 Energy/Climate Corps Fellow who is creating new ideas for increasing awareness of careers in energy.

What's next? We hope you participate in Public Power Week, Careers in Energy Week, and World Hydrogen Day - all occurring in October! Happy Fall!

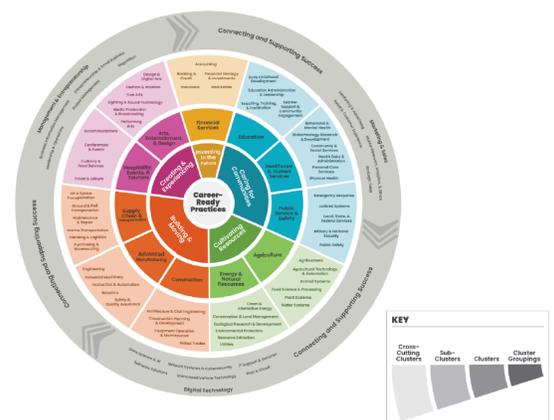
~Monica

## Energy & Natural Resources Career Cluster

### KEY RESOURCES AND TOOLS TO SUPPORT ADOPTION

The Center for Energy Workforce Development (CEWD) has launched resources and tools for educators, industry leaders, and policymakers aimed at preparing the next generation for evolving high-demand energy and natural resources careers. CEWD includes ready-to-use materials, access points, and guidance to address the growing energy workforce. They serve as an implementation action plan to address workforce awareness opportunities across education, industry, and policy; as well as an opportunity for the industry to connect with students in classrooms.

The Framework: Wheel View





# Helion Breaks Ground

## FIRST FUSION PLANT IN WASHINGTON

Helion Energy announced that it has broken ground on the site of its first commercial fusion power plant, beginning initial earthwork and construction. The facility, dubbed Orion, will be located in Chelan County near the Columbia River and the town of Malaga. In 2023, Helion announced the world's first power purchase agreement (PPA) that will provide energy from the plant to Microsoft by 2028, with Constellation Energy serving as power marketer. With site work now underway, Helion remains on track to meet that goal.

## CoE Director Recognized

MONICA WON THE 2025 SEI  
CHAMPION AWARD



**CLIMATE  
CORPS**

A PROGRAM OF SEI

Each year, SEI honors an esteemed individual who has dedicated their time and efforts to further SEI's mission of building leaders to accelerate climate solutions for a more equitable and resilient world.

This year, SEI is recognizing Monica Brummer, Director of the Pacific Northwest Center of Excellence for Clean Energy, as a 2025 SEI Champion Award recipient for her visionary leadership and unwavering commitment to advancing clean energy solutions in Washington state.

## Upcoming Events



- September 29-30 Seattle Fusion Week, Seattle, WA
- Sept. 30-Oct. 1 Green Hydrogen Summit USA, Seattle, WA
- October 14-16 CHS Hydrogen Innovation and Technology Conference, Houston, TX
- October 20-24 Careers in Energy Week
- October 24 Solar Summit, Seattle, WA
- November 4-6 Women in Energy Symposium, El Paso, TX
- November 18-20 CEWD Workforce Development Summit, Washington, D.C.

[cleanenergy@centralia.edu](mailto:cleanenergy@centralia.edu)

<https://www.cleanenergyexcellence.org/>



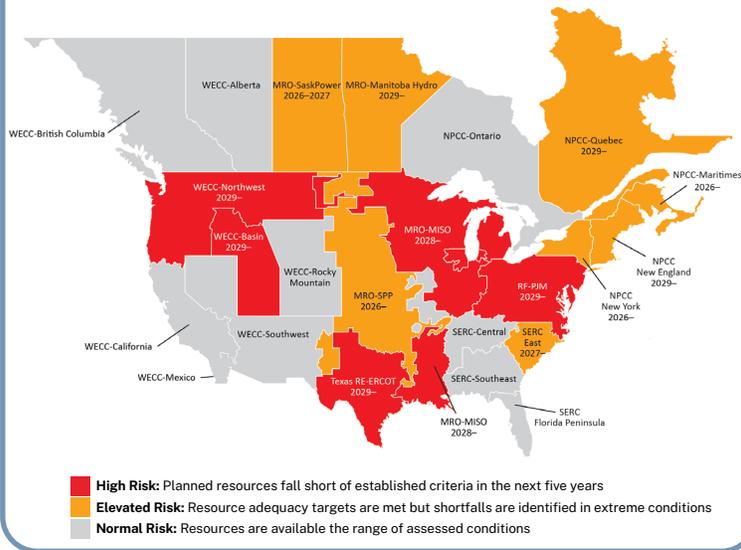
# 2025 Long-Term Reliability Assessment

[LTRA Report](#) | [LTRA Video](#)

NERC's [2025 LTRA](#) spotlights intensifying resource adequacy risks throughout the North American bulk power system over the next ten years. Uncertainty and lag in the pace of new resource additions are driving heightened concerns that the industry will not be able to keep up with ascending electricity demand from new data centers and large loads. To confront the reliability challenges over the next 10 years, NERC recommends streamlining system growth, managing generator deactivations, undertaking robust adequacy assessments, and coordinating electric-natural gas system planning and operations.

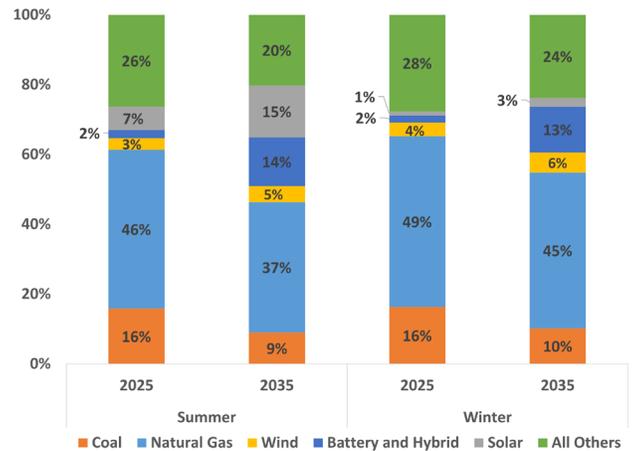
## Risk Area Summary 2026-2030

(Shows highest risk classification occurring in the first 5 years and the initial year of occurrence)



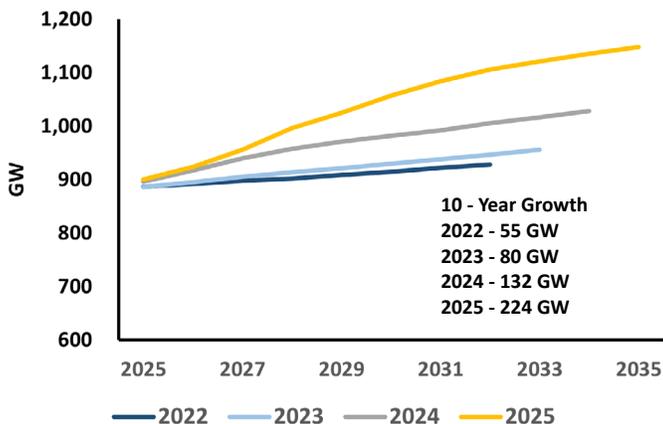
**Resource Mix Changes:** Coal capacity is declining, while solar and batteries increase. Different reliability attributes raise the risk of shortfalls, especially in winter.

## Current and Future Capacity Mix



**Escalating Demand Growth:** Summer peak demand continues its rapid ascent - almost doubling last year's projection - expediting resource needs.

## BPS Summer Peak Demand Growth 2025 to 2035



**Infrastructure Pace:** Development is uncertain as few projects are approved. Growth is threatened by supply chain, interconnection process and approval delays.

## Approved and In-Process Resource Additions

