



# PATHWAY TO TRADES SUMMIT

May 14, 2026

## ..... Key Takeaways and Opportunities .....

The Tennessee nuclear industry is expanding rapidly, and the expertise and collaboration of all stakeholders is necessary to ensure our workforce pipeline can meet the growing demand. The Pathway to Trades Summit provided an opportunity for industry leaders, trade union representatives, educators, lawmakers and others to be part of a high-impact group of stakeholders dedicated to crafting solutions and driving meaningful change.

### KEYNOTE ADDRESS I: National Perspective

Michelle Scott, Acting Deputy Assistant Secretary for Strategic Crosscuts, Department of Energy, Office of Nuclear Energy



#### KEY TAKEAWAYS AND OPPORTUNITIES

- The U.S. is pursuing an aggressive nuclear expansion strategy
- The administration's target to expand nuclear capacity from 100 GW to 400 GW by 2050 sets the scale for the effort. Reaching this target is supported by administration efforts that include reactor life extensions, power upgrades at existing plants, restarting dormant facilities, small modular reactors (SMRs), advanced reactor demonstrations, nuclear fuel supply chain investments, and fuel recycling and HALEU production.
- Workforce development is now viewed as a national strategic priority.
- Workforce shortages could become the limiting factor for nuclear growth. The industry is facing a skilled trades shortage while the need for technicians and craft labor is increasing.
- Solutions include multi-entry workforce pathways and coordination across education, labor and industry.
- Community colleges and unions are critical partners. Community colleges, technical schools, registered apprenticeships and union training programs are foundational infrastructure for successful nuclear energy buildout.
- This reflects a broader shift toward valuing trades and applied workforce pathways alongside traditional four-year degrees.
- Federal agencies are coordinating more closely than before. Agencies historically operated in silos but executive orders are driving coordinated workforce





planning among the Department of Energy, Department of Labor, Department of Education, the National Science Foundation and others.

- The nuclear fuel supply chain is being treated as a strategic vulnerability, and the U.S. needs to rebuild domestic fuel capabilities including uranium mining, conversion, enrichment, HALEU fuel production and recycling spent fuel.
- Reactor deployment depends on secure domestic fuel infrastructure.
- Advanced reactors are moving from concept to commercialization and Tennessee is positioned as a major hub. Multiple advanced reactor demonstrations are underway. SMR deployment programs are active. Federal financial support is accelerating commercialization.
- Nuclear is both an energy and economic development strategy. Nuclear energy expansion has many benefits, including high-wage jobs, regional economic development, manufacturing growth, long-term employment stability, and energy independence.
- The “nuclear renaissance” is not just as an energy transition; it is a workforce and industrial revitalization effort.

## KEYNOTE ADDRESS 2: **State Perspective**

**Brooks Young**, *Executive Director, TNWorks, State of Tennessee*

### KEY TAKEAWAYS AND OPPORTUNITIES

- Tennessee has positioned workforce development as a strategic economic driver. Workforce development and economic development are not separate tracks, but two sides of the same coin.
- Tennessee’s long-term competitiveness depends on building a coordinated pipeline of skilled workers aligned with employer demand.
- TN Works is designed to simplify a fragmented workforce system by reducing bureaucracy and creating a single access point for businesses navigating workforce programs, training, education, and support services.
- TN Works is a “concierge service” that coordinates multiple agencies and partners behind the scenes so employers can focus on growth instead of navigating government systems.
- Workforce is the critical missing piece in the energy and nuclear boom
- Tennessee has the infrastructure, investment, and momentum — but workforce capacity will determine success.
- Nuclear growth will create ripple effects far beyond the energy sector. 2,000 workers are needed to meet current investment in nuclear energy. TN Works data demonstrates a seven-times multiplier effect on those 2,000 jobs. Energy-sector growth creates demand across healthcare, hospitality, restaurants, housing, transportation, and other supporting industries.
- Collaboration across agencies and institutions is essential
- Coordination among state agencies, community colleges, TCATs, universities, workforce agencies, and industry partners will be critical.
- TN Works creates a new era of workforce development in Tennessee focused on alignment instead of siloed operations.



## SPOTLIGHT: Local Perspective: The Nuclear Surge

Bill Tindal, *Director of the Tennessee Nuclear Network (TNN)*

### KEY TAKEAWAYS AND OPPORTUNITIES

- Tennessee is becoming a national nuclear energy hub. This is not theoretical or future-focused — projects are already underway across the state.
- Tennessee’s ecosystem is unique because it combines national laboratories, utilities, advanced reactor developers, fuel companies, manufacturing, workforce infrastructure, and research institutions
- In Tennessee, 12 nuclear companies have announced projects or expansion totaling more than \$10 billion in investment and requiring more than 3,000 direct jobs.
- Workforce — not technology — is the biggest challenge
- Companies are not worried primarily about land, policy, or technology. Their biggest concern is whether enough skilled workers will exist to build and operate facilities.
- Skilled trades are essential to national energy security, U.S. economic competitiveness, domestic nuclear capability and workforce readiness.
- America cannot achieve energy independence or long-term energy security without a strong skilled trades workforce.
- Workforce systems must be coordinated, not fragmented, and require alignment among industry, trade unions, community colleges and TCATs, universities, government, and workforce organizations.
- The Tennessee Nuclear Network (TN<sup>2</sup>) sees itself as the “connective tissue” between these groups to result in faster training pipelines, stackable credentials, better employer alignment, clearer career pathways, and stronger labor partnerships.
- Trade unions are being reframed as workforce providers. Unions are stewards of craftsmanship, providers of workforce capacity, and critical partners in scaling workforce pipelines.
- This reflects a broader shift toward industry-labor collaboration in advanced energy sectors.



## SPOTLIGHT: Local Perspective: The Local Trades

Charlie Woody, *President of the Knoxville Builders and Construction Trade Council and Business Manager, Insulators #46*

### KEY TAKEAWAYS AND OPPORTUNITIES

- East Tennessee is preparing for major workforce demand. Tennessee is entering a period of substantial industrial, nuclear, and infrastructure growth, with “millions of dollars’ worth of jobs” expected over the next decade.
- Apprenticeships are central to workforce development. Registered apprenticeships and pre-apprenticeship programs were presented as critical pipelines into high-paying skilled trades careers. The unions are actively investing in training and workforce readiness.





- Union trades offer careers as pathways to stability and dignity, and offer workers good wages, benefits and pensions, long-term career security and retirement with dignity.
- Labor organizations are deeply invested in quality training. Union members themselves fund apprenticeship programs, creating accountability and shared investment.
- Regional collaboration is viewed as essential to solving the region's workforce challenges. Partnership must exist among unions, contractors, schools, community leaders, and policymakers.
- Skilled trades need stronger recruitment pipelines to encourage more young people to enter the trades, to meet the needs of the broader workforce shortages in construction, energy, and infrastructure sectors.

## PANEL: Shared Outcomes

**Moderator:** Ashley Stowe, Ph.D., Chief Research and University Partnerships Officer, ORAU

### Panelists:

**Amanda Hurley**, Talent Acquisition and Workforce Strategy Director, Y-12 National Security Complex

**Jamie Choate**, Director, Workforce Strategy and Enablement, Tennessee Valley Authority

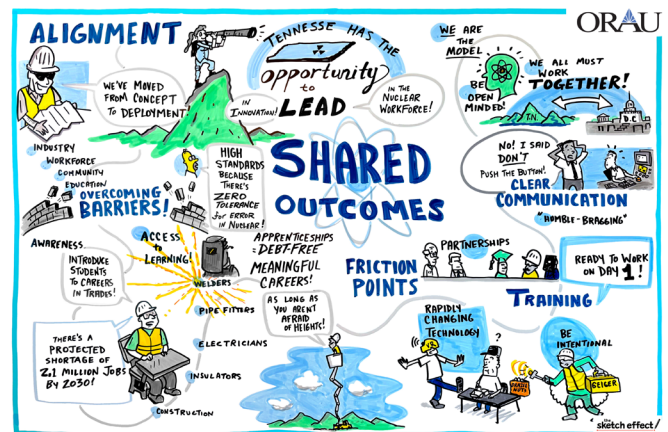
**Daniel Smith**, Business Manager, IBEW #270

**Chris O'Keefe**, Business Manager, Iron Workers Local 384



### KEY TAKEAWAYS AND OPPORTUNITIES

- Tennessee, especially East Tennessee and Oak Ridge, is positioned to lead the next era of nuclear energy, but the workforce pipeline must scale quickly enough to meet demand.
- The biggest challenge is not interest alone — it is speed, capacity and coordination. Apprenticeships take years, retirements are accelerating, and major construction, nuclear, utility, manufacturing and data center projects are competing for the same workers.
- Panelists emphasized that industry, unions, education providers and government must stop operating in silos. Shared forecasting, earlier communication and joint planning are essential.
- The strongest workforce needs include electricians, welders, boilermakers, pipefitters, operators, construction managers, project managers and project controls specialists.
- Awareness remains a major barrier. Students, parents and teachers still need to understand that skilled trades offer debt-free training, strong wages, benefits and long-term careers.
- The panel repeatedly stressed that quality and safety cannot be compromised to meet demand. Nuclear work requires high standards, and cutting corners is not an option.
- A major opportunity is treating the region as one shared labor ecosystem rather than a collection of competing job sites. Better data and coordination could keep workers local and help employers move labor where it is needed most.





- The workshop's success depends on follow-through. Panelists called for intentional, ongoing collaboration, more public storytelling and stronger communication about the opportunities already available in the region.

## SPOTLIGHT: Tennessee Board of Regents

*Teresa Duncan, Lead Nuclear Strategist, Tennessee Board of Regents and Vice President of Workforce and Community Development, Roane State Community College*

### KEY TAKEAWAYS AND OPPORTUNITIES

- Workforce development is being framed as a national mission. Nuclear workforce development is bigger than individual organizations or regions. Workforce development is critical to national competitiveness, energy security, long-term economic growth, purpose-driven careers for students and workers.
- Tennessee's strength is its statewide partnership ecosystem. Tennessee already has a strong educational infrastructure, industry collaboration, union participation, workforce training systems and geographic reach through TBR, community colleges and TCATs.
- Education and training pathways must be flexible and customized to include non-credit workforce training, customized industry training, short-term credentials, specialized skill module, and workforce "on-ramps" and "off-ramps."
- Pathways must be rapid-response workforce preparation aligned with employer demand, like the 15-hour introductory nuclear course for TCAT students in welding, HVAC, industrial maintenance, machining and electrical work.
- Industry and unions are co-designing solutions to address math/reading readiness barriers, prepare candidates for entrance exams, create pathways back into training, and support apprenticeship pipelines.
- Early exposure is critical to the pipeline. K-12 outreach and awareness-building is vital, including middle school STEM engagement, high school machining/CNC exposure, hands-on demonstrations, nuclear awareness activities, and campus visits and lab experiences
- Many students simply don't know these career opportunities exist until they experience them firsthand.
- Awareness and storytelling matter as much as training. The industry must tell its story better. Students need to see opportunity. Educators need awareness. Recruitment is everyone's responsibility.



## CASE STUDY: C.A.L.M. East Tennessee Apprenticeship Readiness Program – Apprenticeships for Graduates!

PRESENTED BY: *Jason Andrews, Director, Cooperative Agreement Labor and Management, and Cindy Lockett, Career and Technical Education Director, Roane County Schools*

### KEY TAKEAWAYS AND OPPORTUNITIES

- East Tennessee is building a workforce pipeline for the nuclear renaissance, with schools, unions, industry partners, and workforce organizations aligning around future labor demand.
- The region is preparing now for a massive wave of nuclear and construction-related jobs.





- Apprenticeships are being elevated alongside college pathways
- Senior signing days now celebrate university commitments, union apprenticeships and workforce pathways.
- Apprenticeships and employment through trades offer high wages, benefits, pensions and long-term career mobility.
- “University and apprenticeships are now on the same playing field.”
- Pre-apprenticeship programs are producing measurable results
- Roane County’s numbers demonstrated rapid growth from 3 students entering apprenticeships in 2022 to more than 40 expected to enter apprenticeships in 2026.
- This growth provides ample evidence that awareness of skilled trades in nuclear energy works, exposure to those careers matters, and partnerships drive participation.
- Industry-school partnerships are the central success factor. No single organization can solve workforce shortages alone.
- Early exposure is critical. The workforce effort is intentionally moving younger: 5th graders are learning nuclear history, 8th graders are exploring career pathways, summer construction camps are offered for middle school students, and career fairs and roadshows introducing options before graduation
- Career awareness must begin before students make postsecondary decisions.
- Students respond to authentic career pathways and buy into real-world careers, clear wage potential, fast entry to work, hands-on opportunities, and structured advancement.
- Workforce development and meeting the workforce need is tied directly to regional economic strategy



## PANEL: **Supply-Side Capacity – Assets and Gaps**

**Moderator:** Ashley Stowe, Ph.D., Chief Research and University Partnerships Officer, ORAU

**Panelists:**

**Teresa Duncan**, Lead Nuclear Strategist, Tennessee Board of Regents and Vice President of Workforce and Community Development, Roane State Community College

**Patty Weaver**, Vice President for External Affairs, Pellissippi State Community College

**Lyn Potter, Ph.D.**, Department Head of Engineering Systems Technology, Chattanooga State Community College

**Chris Ayers**, President, TCAT Harriman

**Christian Fuller**, Business Manager, Sheetmetal Local #5 and Financial Secretary-Treasurer, KBCTC

**Holly Cross**, Director, Career & Technical Education (CTE), Oak Ridge Schools



### KEY TAKEAWAYS AND OPPORTUNITIES

- The nuclear and skilled trades shortage is immediate. East Tennessee — and the broader energy/nuclear sector — faces a massive workforce demand that current systems are not prepared to meet.



- Industry must be directly embedded in education. Employers cannot sit on the sidelines.
- Industry partners are urged to help design curriculum, visit classrooms, offer apprenticeships and job shadowing, provide real-time labor forecasts, hire graduates consistently, and explain workplace expectations honestly.
- Education systems cannot build effective workforce pipelines without continuous employer involvement.
- Apprenticeships and hands-on learning need to start earlier. Apprenticeships should begin at 16 and pre-apprenticeship programs should be expanded. Students need more field trips and job site exposure, both during and outside school hours. There is a need to offer real-world project-based learning.
- The biggest barrier may be cultural, not technical. There is a stigma surrounding the skilled trades, and parents tend to steer students exclusively toward four-year degrees because trades are commonly views as being “less than” college pathways. Communities undervalue technical careers. Students lack exposure to hands-on skills at home.
- Messaging to parents is critical that trades are high-skill careers offering strong wages and long-term stability.
- Student retention depends on relevance and belonging. Students will disconnect if coursework feels disconnected from career goals, they only take general education courses early on, they don’t understand why subjects matter, or they lack connection to instructors or mentors
- Systems and funding structures are too complicated. Approval timelines, regulatory hurdles and fragmented pathways slow progress. The problem is not always lack of funding; it’s lack of coordination and simplicity.
- A unified workforce ecosystem Is needed that connects K-12 education, community colleges, TCATs, universities, unions and industry employers.
- Successful programs already exist, but they are isolated, hard to navigate and are not systematized.
- Tennessee needs an integrated workforce roadmap, not disconnected success stories.



## PANEL: **Wraparound Services – Mitigating Barriers to Employment**

**Moderator:** Naomi Asher, *President, The Maven Consulting*

**Panelists:**

Shannon Rosedale, *Senior Policy and Research Coordinator, Tennessee Department of Human Services*

John Shefner, Ph.D., *Director, Community-University Research Collaborative Initiative (CURCI) and Professor, University of Tennessee*

Dawn Carlock, *Vice President, Roane Alliance*

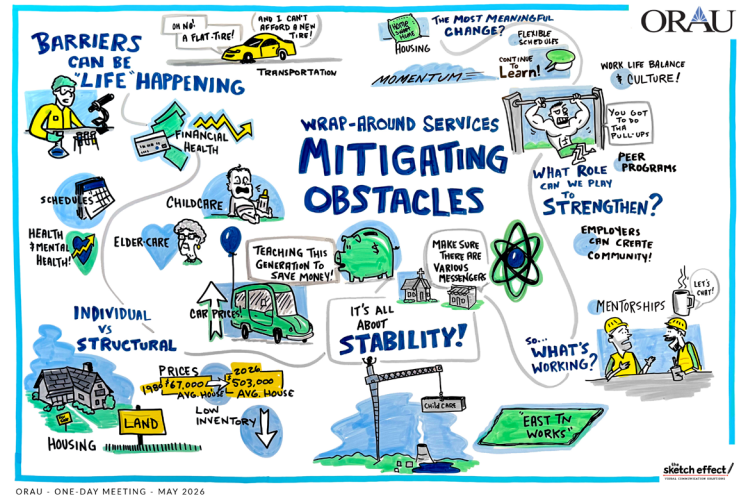
Abigail Gibbons, *Mobility Mentor, Boys & Girls Clubs of the Tennessee Valley, in partnership with the East Tennessee Collaborative program*

Sara Rymer, *Business Agent, Painters #437*



## KEY TAKEAWAYS AND OPPORTUNITIES

- Workforce challenges are increasingly “life challenges”
- Panelists repeatedly emphasized that the issue is not simply training availability. Tennessee and the broader region already have strong workforce pipelines. The larger issue is whether people can realistically participate and persist while managing childcare, transportation, housing instability, healthcare, benefits eligibility and family caregiving responsibilities.
- The “benefits cliff” is a major workforce barrier. Workers who earn more through certifications or promotions can suddenly lose childcare assistance, SNAP benefits, housing supports and transportation aid. This creates a disincentive to pursue advancement and contributes to workforce stagnation.
- Retention matters as much as recruitment, and need to include flexible scheduling, support systems, and a strong and supportive workplace culture. This is especially necessary for women, single parents, adult learners, workers transitioning careers, and workers in underrepresented populations.
- Childcare assistance is an urgent need as lack of adequate childcare is a barrier to recruitment, retention, scheduling and career advancement.
- Speakers suggested employer-supported childcare, on-site childcare models, public-private partnerships and flexible shift scheduling.
- Housing affordability is becoming a workforce and economic competitiveness issue. Workers cannot afford to relocate, and entry-level workers struggle to save. Meanwhile, trade workers can move elsewhere for better affordability but housing shortages threaten long-term workforce growth.
- Communication gaps and general career awareness are limiting workforce participation. Many people do not know what careers exist, what apprenticeships are or what they pay, what support services are available or how to navigate workforce systems.
- There is a great need for trusted community messengers (someone who looks like me), better outreach, local partnerships and more direct communication to underserved populations.
- Workforce development requires cross-sector partnerships among state government, employers, labor unions, community colleges, universities, nonprofit organizations, faith-based organizations and workforce agencies.
- The workforce conversation is evolving beyond wages. Modern workforce development is a “whole-person” challenge and workforce development strategies need to include mental health, family stability, flexibility, inclusion, transportation, community support and work-life balance.





## SPOTLIGHT: **Veterans' Programs**

Kristen Rawson, *Manager, Y-12 National Security Complex Operations Center and SkillBridge expert*

### KEY TAKEAWAYS AND OPPORTUNITIES

- The SkillBridge program is a major workforce opportunity. Thousands of military members transition every year, and programs like SkillBridge allow employers to connect with disciplined, trained, mission-driven talent before they leave military service.
- Veterans bring highly transferable skills, including leadership, adaptability, work ethic, teamwork, integrity, problem-solving under pressure, respect for structure, technical confidence and a global perspective.
- The transition from military to civilian employment can be intimidating, and employers can help by learning how to interpret military experience and translating it into civilian job qualifications.
- SkillBridge is not just a hiring tool; it is an extended interview, a training opportunity and a way to build loyalty and retention with people who want meaningful work.
- Employers, schools, unions and workforce organizations were challenged to think creatively about how veteran talent can fit into skilled trades, nuclear work, construction and other high-demand fields.



## CLOSING REMARKS

Molly Cripps, *Director, Office of Energy Programs (OEP), Tennessee Department of Environment and Conservation (TDEC)*

### KEY TAKEAWAYS AND OPPORTUNITIES

- Tennessee is positioning itself as a national leader in nuclear innovation
- Tennessee is actively competing to become home to a proposed U.S. Department of Energy (DOE) “Nuclear Lifecycle Innovation Campus.”
- The state responded to a DOE Request for Information (RFI) with a highly collaborative proposal involving agencies, industry, workforce partners, and economic development organizations.
- Tennessee is considered among the top contenders nationally, alongside states like Idaho, Utah, and Nebraska.
- Existing nuclear infrastructure gives Tennessee a competitive advantage as the state already has a robust nuclear ecosystem in place, including operational facilities, demonstration projects, research capabilities, workforce assets, and available industrial property.
- Tennessee’s strength lies not only in future plans, but in the fact that many projects are already active or committed.
- Nuclear growth represents decades of workforce opportunity. The expansion of nuclear energy and related industries will create long-term demand for skilled trades and workforce development.
- This is not a short-term construction boom, but a multi-decade economic opportunity for Tennessee and the broader region.





- State agencies are aligned in supporting industry growth, including environment and conservation, economic and community development, and labor and workforce agencies. Tennessee's nuclear strategy is a statewide collaborative effort, not a single-agency initiative.
- Workforce development requires practical flexibility and reducing barriers for workers, like flexible interviewing (over lunch or dinner) to assist with childcare and other life needs.
- Collaboration is central to Tennessee's strategy. Strong partnerships exist among DOE, TVA, ORAU, Tennessee Nuclear Network, education institutions, workforce organizations, economic development groups, and labor and trades groups.

