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ELECTRIFICATION WORKFORCE NETWORK

Energy Action Plan

March 2025



 **Xcel Energy**[®]

PARTNERS IN ENERGY
An Xcel Energy Community Collaboration

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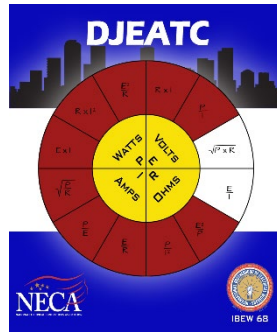


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EXECUTIVE SUMMARY

The *Electrification Workforce Network* is a Denver regional coalition with a mission and vision to foster collaboration between industry stakeholders to increase equitable access to quality jobs in beneficial electrification and energy efficiency.

What is Beneficial Electrification?

Beneficial electrification involves **reducing direct fossil fuel use** in a way that reduces greenhouse gas emissions and keeps costs as low as possible. Upgrading to beneficial electrification technologies **improves community infrastructure and creates quality jobs**. Because of unprecedented investment in beneficial electrification in Colorado, these jobs are in high demand.

Focus Areas

- **2025-2026:** Diverse representation of electricians in the Denver area for key historically underserved populations who are also underrepresented in the beneficial electrification industries, including:



- Women
- Black, Indigenous, and People of Color (BIPOC)
- Nonbinary populations
- Indigenous and Native Tribes
- Youth

- **2026 and Beyond:** Expanding the Network

Network Members

The Electrification Workforce Network is comprised of organizations focused on advancing beneficial electrification and quality jobs. The current composition reflects the network's initial focus on the electrician career pathway with several members who directly support electricians, as indicated below by an "⚡".

- African American Trade Association
- City and County of Denver Climate Action, Sustainability, & Resiliency Office
- Colorado Apprenticeship Hub
- Colorado Community College System
- Colorado Jobs with Justice
- Denver Joint Electrical Apprenticeship and Training Committee ⚡
- Denver Regional Council of Governments
- Energy Outreach Colorado
- Intermountain Electric ⚡
- International Brotherhood of Electrical Workers (IBEW) Local Union 68 ⚡
- Xcel Energy

INTRODUCTION



This Energy Action Plan is a roadmap to strategically guide the Electrification Workforce Network (Network) as they work together to increase access to and quality of beneficial electrification careers. The plan is organized into three components:

- **Introduction** explains why and how the Network was formed.
- **Network Vision & Focus Areas** outlines the Network’s vision for their work moving forward and how they will strategically achieve that vision.
- **Accountability** describes the Network’s structure moving forward and strategy implementation approach.

The Need for an Electrification Workforce Network

Rising Demand for Beneficial Electrification Jobs

In recent years, communities across the nation have set goals to reduce their greenhouse gas (GHG) emissions. Progress toward these goals has been supported by federal, state, utility, and local policy and programming related to energy efficiency and beneficial electrification (especially heat pump installations). Heat pumps reduce GHG emissions primarily by providing highly efficient heating and cooling while being able to use electricity from clean energy sources instead of fossil fuels. Electrification efforts in Colorado also mitigate the need for additional gas infrastructure investments in growing communities.

Specific examples of efforts promoting electrification efforts include:

- The federal Inflation Reduction Act (IRA) is the most significant climate bill in American history, containing \$369 billion in climate and clean energy investments. The bill is expected to reduce net U.S. GHG emissions 42% by 2030. Funds are being delivered through a mix of tax incentives, grants, and loan guarantees primarily between 2022-2031 (Clean Air Task Force, 2022).

- The State of Colorado legislated tax credits for heat pump installations and the purchase or lease of a new electric vehicle (EV) (Colorado Energy Office, 2025).
- Xcel Energy, which provides electric and gas utility service to many Colorado communities, released the first-of-its-kind Clean Heat Plan, which directs more than \$440 million over three years to electrification and energy efficiency measures intended to reduce annual emissions by 725,000 tons (Xcel Energy, 2023).
- Through a \$199 million grant from the IRA funding, the Denver Regional Council of Governments is developing a building decarbonization program that includes a goal of adding 3,800 new workers to the workforce pipeline in careers related to building decarbonization (Denver Regional Council of Governments, 2025).
- The City and County of Denver’s Climate Protection Fund raises \$40 million annually to mitigate the causes of climate change, which includes providing rebates for heat pump installations, energy efficiency improvements, and EV charging stations (City and County of Denver, 2025).

This unprecedented investment requires a skilled workforce to install and maintain the equipment and infrastructure that can leverage clean and renewable energy sources. The impact will largely be felt in the trades industry, increasing the need for workforce training for numerous roles including:

- Insulation installers
- Electricians
- HVAC technicians
- Plumbers
- Energy auditors and inspectors
- EV Auto mechanics

Many of these trades already face workforce shortages. More than one-third of the building electrification workforce in the Denver metro area are above the age of 45, meaning that significant recruitment needs to happen to replace those retiring in the coming years. In addition to filling these gaps, the HVAC workforce will need to grow by 23% per year by 2035 to install the amount of heat pumps needed to realize ambitious climate goals that communities have set (Brendle Group & Collaborative Climate, 2023).

There are many existing workforce development initiatives targeted toward these trades, including college courses, apprenticeships, and technology-specific trainings. In addition to these initiatives, community-based organizations aim to eliminate barriers to employment by providing critical wrap around services for job seekers such as stipends for childcare, transportation, tools, and training reimbursements. However, in order to meet community clean energy goals and adapt to shifting industry trends, these initiatives need to emphasize efficient beneficial electrification technologies. Additionally, these existing career pathways face bottlenecks and barriers that can only be addressed by concerted coordination.

Need for Good Jobs

To build a strong and resilient workforce, the demand is not just for more jobs, but for good, quality jobs. Individuals are seeking jobs that provide stability and security for themselves and their families, contribute meaningfully to their community, and build generational wealth. By

providing good jobs, employers often see greater employee retention, productivity, and engagement, all leading to a competitive advantage in the marketplace.

The Electrification Workforce Network is committed to the following values based on the Good Jobs Principles developed by the Department of Commerce and Labor.

- **Recruitment and Hiring:** Qualified applicants, especially from underserved communities, are recruited based on relevant skills without discrimination.
- **Benefits:** Workers are provided with family-sustaining benefits that promote economic security and mobility.
- **Diversity, Equity, Inclusion, and Accessibility (DEIA):** DEIA is a core value of the workplace, ensuring that race and other social identities are not predictors of how workers are treated or the outcomes of their careers.
- **Empowerment and Representation:** Workers can participate in unions, engage in activity without fear of retaliation, and contribute to decisions about their work.
- **Job Security and Working Conditions:** Workers have a safe, healthy, and accessible workplace, job security, fair schedules, transparent monitoring, and freedom for discrimination.
- **Organizational Culture:** Workers are valued, engaged, and respected.
- **Pay:** Workers are paid a stable living wage that is fair, transparent, and equitable and increases with skill and experience.
- **Skills and Career Advancement:** Workers have equitable access to training, education, and advancement opportunities.

Forming an Electrification Workforce Network

To address the rising demand for good, beneficial electrification jobs, the City and County of Denver's Climate Action, Sustainability, and Resiliency Office (CASR) initiated a collaboration with Xcel Energy Partners in Energy to create a structure for stakeholders to work together to address beneficial electrification workforce gaps. Working closely with the Colorado Apprenticeship Hub, the Denver Regional Council of Governments, Colorado Jobs with Justice, and Energy Outreach Colorado, CASR led the formation of the Electrification Workforce Network.

Bringing Stakeholders Together

To develop the vision and focus areas for this Network, a key group of stakeholders gathered to participate in a six-month planning process led by Xcel Energy's Partners in Energy. The organizations listed in Table 1 participated in the planning process and became members of the Network (see Acknowledgements for list of individual participants). As part of their participation in the planning process, Network members shared their expertise and perspectives and worked together to identify potential opportunities for partnership during implementation of this plan.

Table 1: Network Members as of February 2025

Organization Name	Organization Description	Relevant Experience and Resources for the Network
African American Trade Association	Denver-based organization that supports and empowers African American businesses through networking events, workshops, and advocacy efforts	Represents African American clean energy employers and workers; provides access to skilled labor pool; provides access to professional development opportunities.
City and County of Denver Climate Action, Sustainability, & Resiliency Office	Local government agency working to build a carbon pollution-free, sustainable and climate-resilient Denver for all.	Green Workforce Team supports convening of stakeholders and provides funding and other resources to expand green job opportunities for under-resourced individuals.
Colorado Apprenticeship Hub	Statewide Hub that supports the development and expansion of registered apprenticeships.	Provides expertise about and resources for developing apprenticeship programs.
Colorado Community College System	System of 13 colleges and 35 locations across the state.	Provides a variety of educational and training programs; provides access to a skilled labor pool.
Colorado Jobs with Justice	Coalition of labor, community, faith, and student and youth organizations that come together to advance workers' rights and social justice.	Provides expertise and advocacy for workers' rights. Conducts outreach to increase awareness of apprenticeship opportunities to women and nonbinary people of color, as well as to Indigenous communities.
Denver Joint Electrical Apprenticeship and Training Committee	Training program sponsored by National Electrical Contractors Association (NECA) and the Local Union #68 of the IBEW.	Offers apprenticeships, including on-the-job training for workers to become licensed electricians.
Denver Regional Council of Governments	Planning organization for local governments to establish guidelines, set policy and allocate funding.	Manages \$12M of electrification workforce grants through the CPRG from 2025 – 2029.
Empowercom	Business providing construction services for the Denver area.	Provides careers.
Energy Outreach Colorado	Nonprofit organization dedicated to providing energy assistance and resources to those in need across Colorado.	Connects state and federal funding to employers implementing clean energy projects; has dedicated staff to support workforce initiatives; provides meeting space.
Intermountain Electric	Business that provides comprehensive electrical construction services for the Rocky Mountain region.	Provides careers through an apprenticeship program that provide fair wages, flexible schedules, and commitment to diversity, equity, and inclusion.

Organization Name	Organization Description	Relevant Experience and Resources for the Network
International Brotherhood of Electrical Workers (IBEW) Local Union 68	Local union of Journeyman and Apprentice Electricians serving Denver and surrounding areas, providing members with contract rights including wages and benefits.	Provides perspective of the electrician workers and employers; has expertise in worker rights.
Xcel Energy	Energy utility serving many Colorado communities, including Denver.	Provides facilitation services to the Network; provides training. Is in the process of launching their own Workforce Development program to support beneficial electrification career training and scholarships.

To better understand Network roles, members identified their role along the beneficial electrification workforce pathway during one of the planning workshops, as illustrated in Figure 1.

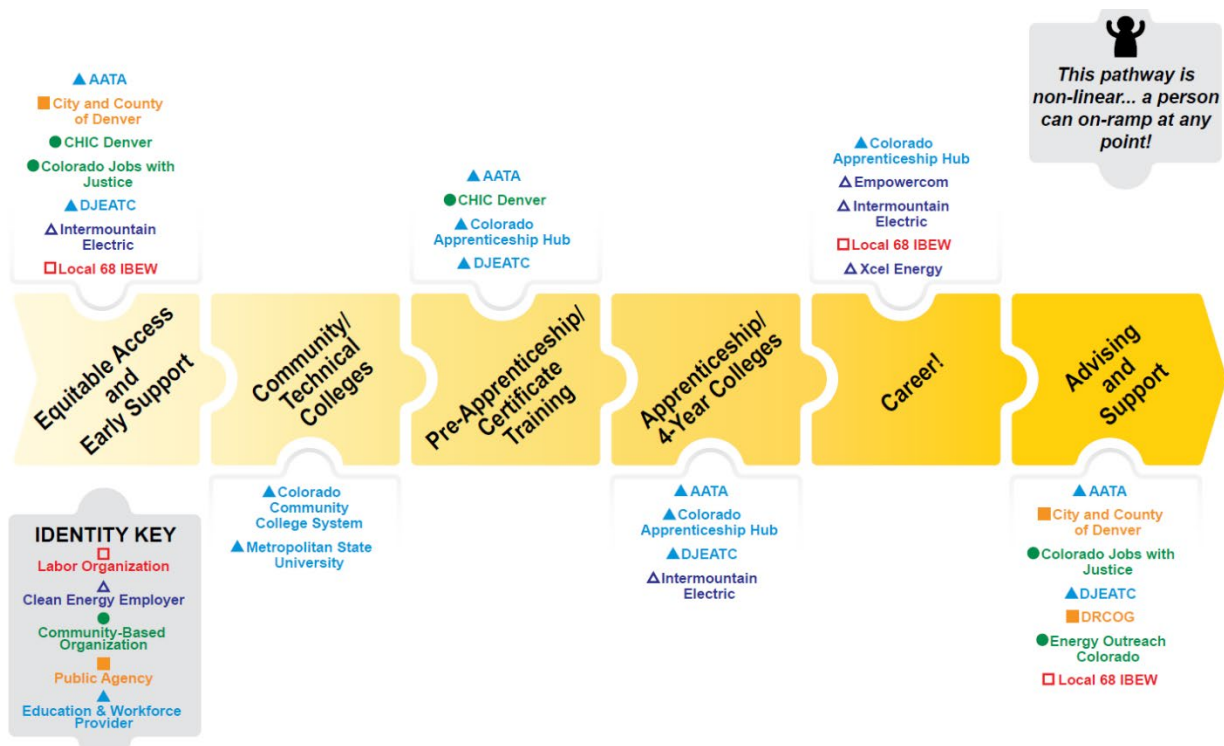


Figure 1: Electrification Workforce Network Stakeholder Mapping Results using Climate Workforce Pathways Framework by Nomada Consulting

The Electrification Workforce Network continues to grow and welcome key stakeholders who are aligned with the Network’s vision. The Electrification Workforce Network joined more than 40 other Colorado communities that have developed action plans through Xcel Energy’s Partners in Energy, an offering that provides resources for community energy planning and plan implementation.



VISION & FOCUS AREAS

Vision

During the planning process, the Network created the following vision statement that reflects the intention of Network members and acts as a north star moving forward.

The Electrification Workforce Network (EWN) is a regional coalition with a mission and vision to foster collaboration between industry stakeholders in order to increase equitable access to quality jobs in beneficial electrification.

Focus Areas

The Network identified two focus areas to prioritize strategies and resources in support of their vision: 1) Diverse Representation of Electricians in the Denver Area and 2) Expanding the Network. The following sections describe the scope of these focus areas and action plan for making progress.

Focus Area 1: Diverse Representation of Electricians in the Denver Area

To ensure efficacy of the Network, it was decided to limit their focus to a target geography, a specific beneficial electrification career path, and key populations. This focus allowed for meaningful stakeholder recruitment and identification of strategic potential initiatives.

Career Path: Electricians

With the advent of beneficial electrification policies and programs, electricians will be one of the most widely affected career paths. Example beneficial electrification projects supported by electricians include the installation and maintenance of electric systems for heat pumps, EV chargers, energy storage systems, and electrified appliances.

Electricians are the largest beneficial electrification workforce type in Colorado with an estimated 16,500 employed as of 2022 and more than 16% of their workforce are nearing retirement at the age of 55 or older. On average, electricians in the Denver area are one of the highest earning beneficial electrification trade occupations, with an annual average wage exceeding \$63,000 (Brendle Group & Collaborative Climate, 2023). Combined, these statistics illustrate that there are opportunities for good, beneficial electrification jobs that this Network can help fill.

Key Populations: Women, BIPOC, Nonbinary, Indigenous and Native Tribes, Youth

The current electrician demographic profile in the Denver area clearly shows that the trade is a white, male dominated workforce (Figure 1 and Figure 2).

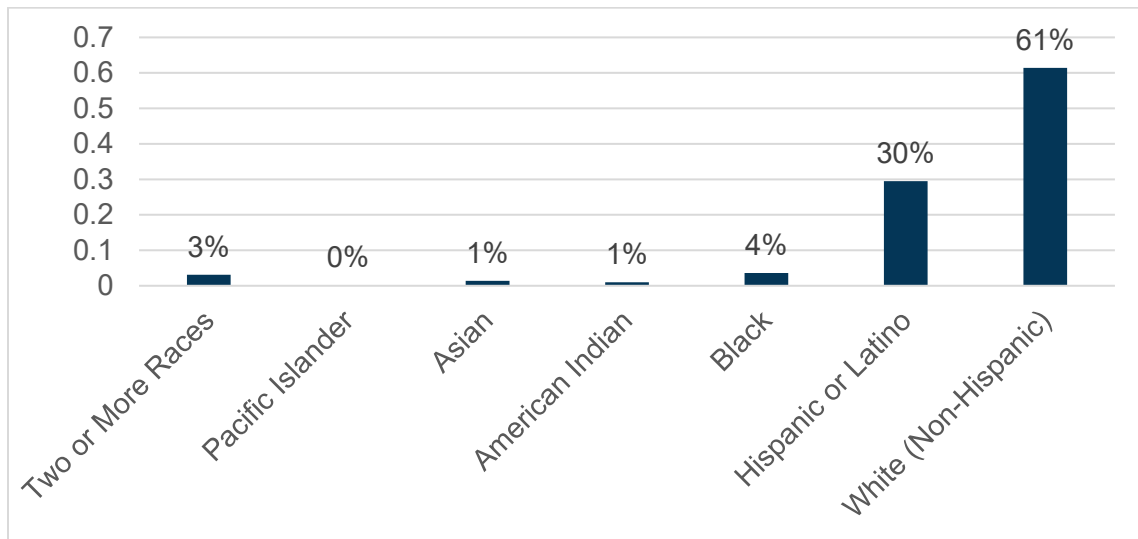


Figure 2: Denver-Aurora-Lakewood MSA Electricians Workforce Race and Ethnicity Profile (Brendle Group & Collaborative Climate, 2023)

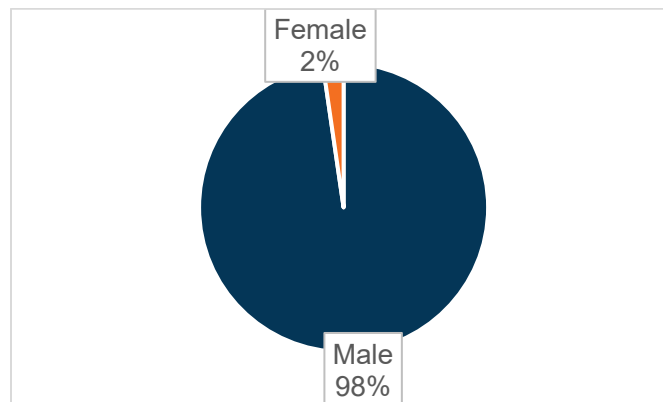


Figure 3: Denver-Aurora-Lakewood MSA Electricians Gender Profile (Brendle Group & Collaborative Climate, 2023)

Aligning with the Department of Labor Good Jobs Principles and in support of building an equitable economy, the Network decided to focus their efforts on populations that fall outside of

the current majority makeup of Denver area electricians. Specifically, the Network is committed to workforce development efforts that support five key populations:

- Women
- Black, Indigenous, and People of Color (BIPOC)
- Nonbinary populations
- Indigenous and Native Tribes
- Youth

Target Geography: Denver Area and Tribal Lands

As the lead entity for the Network, the City and County of Denver CASR established many of the stakeholder relationships that formed this network. Naturally, all stakeholders involved are based or work directly with industry stakeholders in the Denver area. To best leverage the expertise and capacity of the stakeholders, as well as to align with available datasets, the Network set its initial geography to the Denver-Aurora-Lakewood Metropolitan Statistical Area (Denver Area).

Within this geography, the Network commits to focusing on locations where the key populations live and interact. This approach led to the expansion of the target geography to also include the lands of the Southern Ute Tribe and Ute Mountain Ute Tribe, as shown in Figure 4.

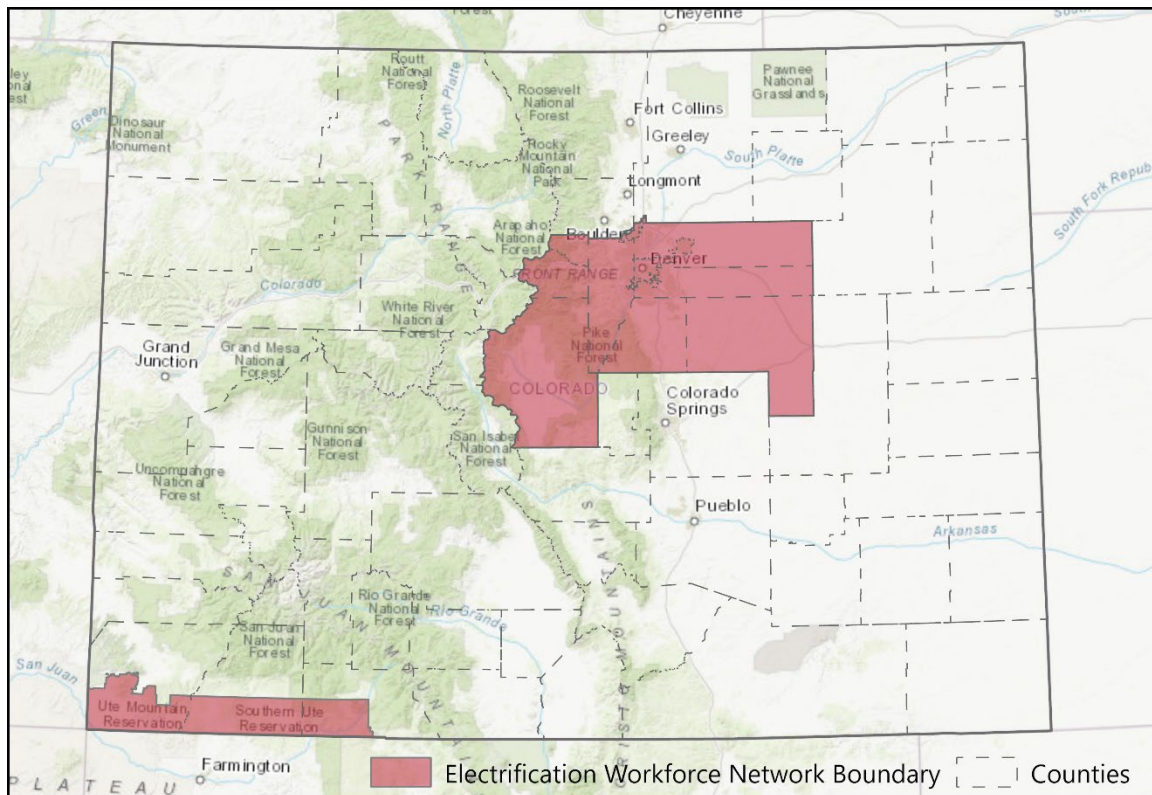


Figure 4: Electrification Workforce Network Boundary

Strategic Solutions

During the planning process, Network members identified a number of challenges facing the key populations developing their electrician career. These challenges helped inform potential

initiatives that the Network could pursue to create strategic solutions. These lists will act as a starting point for the Network to refine and prioritize initiatives for 2025-2026.

Workforce Challenges

- Language access limitations make it difficult to recruit candidates.
- Need for basic skills development and/or high school diploma/GED (e.g., math, reading comprehension).
- Need for communication and soft skills development.
- Lack of social and financial support systems (e.g., mentorship, childcare, purchasing tools).
- Impacted by the Criminal Legal System therefore limiting opportunities for gainful employment and stabilization.
- Transportation barriers (e.g., driver's license, access to vehicle, place of employment/training not within public transit territory).
- Misperceptions about career in the trades (e.g., not for women, not as valuable as pursuing a 4-year degree, experience needed, won't make family-sustaining wages).
- Missing representation on job sites and across the workforce makes the environment less attractive to diverse candidates.
- Shortage of education and training instructors.
- Limited data is available to inform strategy development and ensure impact.

Potential Initiatives

- **For Network Members and Other Workforce Development Partners**
 - Create marketing materials (e.g., flyer, video) explaining what the Network is and how it can support workforce development stakeholders.
 - Create visual, digital resources that job seekers and workforce partners can use to better understand the pathway options for a career as an electrician.
 - Gather and share data to inform strategy development and ensure impact (e.g., How did people hear about the resources? Are job placements successful?).
 - Monthly webinars that highlight a community stakeholder that is connecting the target population into careers in beneficial electrification.
 - Networking events.
 - Development of platform/database that can hold all community resources.
- **For Job Seekers**
 - Develop coordinated outreach strategy for reaching job seekers.
 - Create marketing materials that promote a career as an electrician targeted toward key populations and explain beneficial electrification.
 - Promote success stories that illustrate successful and supported electrician careers.
 - Create materials that help individuals connect beneficial electrification projects (e.g., heat pump installations) with a career in beneficial electrification.
 - Coordinate a career fair(s) for key populations.
 - Create a visual, digital resource that job seekers and workforce partners can use to better understand the pathway options for a career as an electrician.
 - Promote references and access to online resources that job seekers can explore to gain familiarity with careers and vocabulary.

- **For Employers**
 - Promote and ensure execution of community benefit agreements (CBA) with special considerations of key populations.
 - Provide education about beneficial electrification and how to leverage the opportunities for new work.
 - Provide basic information about workforce development opportunities and success stories
- **For Tribal Communities**
 - Collaborate with Tribal leaders and organizations to understand community-specific needs and priorities.
 - Develop outreach strategies that respect Indigenous traditions, languages, and governance structures.
 - Incorporate data on Indigenous labor conditions and economic challenges to inform advocacy strategies.
 - Ensure that partnerships with Tribal communities are built on mutual respect and shared decision-making.

Focus Area 2: Expanding the Network

The Network’s vision encompasses all beneficial electrification jobs and there is a myriad of existing workforce development efforts that touch these occupations. The Network was formed to help cut through this noise and streamline connections in support of job seekers, employers, and the economy as a whole.

Before the Network can expand to support multiple beneficial electrification career pathways, it first needs to develop a successful, replicable model. For these first two years, the Network intends to focus on electricians in order to develop this model. By the end of 2026, the Network will evaluate its model, make refinements, and determine if it is ready to expand to other beneficial electrification career pathways.



IMPLEMENTATION APPROACH

To make this a true action plan, it requires a defined implementation approach that will create clarity and accountability. This section outlines Network roles and methods for evaluating progress.

Network Roles & Responsibilities

Network Members

Network member expectations include:

- Participate in regular (anticipated to be quarterly) in-person meetings.
- Offer subject matter expertise and provide feedback to help shape Network initiatives.
- Contribute to implementation of initiatives identified by the Network.
- Participate in ad hoc coordination among members as opportunities are identified.

Project Management Team

A limited number of Network members will participate with the project management (PM) team to oversee overall management of the Network and provide the needed coordination to ensure the Network stays functional and productive. The PM team must include representation from at least three of the following stakeholder types, with the goal of having all represented: 1) public agency, 2) workforce/education provider, 3) community-based organization, 4) clean energy employer, and 5) labor union.

PM team expectations include:

- Participation in regular (anticipated to be monthly) virtual meetings.
- Preparation for full Network member meetings.
- Decision-making for the Network, referring decisions to the full Network for input as necessary.
 - For decision-making, a quorum (2/3 of the PM team) must be present.
 - For decision-making, a majority vote is required for a decision; however, the PM team should strive for consensus.

Xcel Energy's Partners in Energy

In addition to representing Xcel Energy's role as a clean energy employer on the PM team, Partners in Energy will provide support for the Network through the plan implementation period (2025-2026). Partners in Energy support includes:

- Facilitate PM meetings.
- Support every other month Network webinars.
- Support coordination for quarterly in-person meetings, including a resource fair.
- Lead development of regular communications to Network members.
- Connect the Network to Xcel Energy staff as needed, including the channel manager for the Trade Partner Network and the Workforce Development program manager.
- Facilitate connections with potential future Network members.

Adapting to a Changing Landscape

This Energy Action Plan is a living document. Focus areas will be assessed and refined as needed based on outcomes, emerging programs, and Network members' capacity. Throughout the planning process, the Network worked to build relationships among its stakeholders that will foster the collaboration and cooperation required to successfully navigate the changing beneficial electrification workforce landscape.

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