Utilities and vendors can empower communities with workforce development solutions

By Emily Roberson
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The E Source affordability and equity research team has recognized a labor shortage in the energy industry's skilled trades, which makes it more challenging for utilities to complete projects and reach program goals. Widespread workforce retirements, reduction of vocational programs, financial hardships, and other complications from COVID-19 have only worsened these problems.

At the same time, utilities, governments, and related regulators are reconsidering how the utility industry and adjacent sectors can more equitably distribute the benefits and costs of the transition to a cleaner and more efficient energy system. Utilities are creating and adapting initiatives to address energy equity, often mandated by state and local utility regulators.

According to the American Council for an Energy-Efficient Economy report Meeting the Challenge: A Review of Energy Efficiency Program Offerings for Low-Income Households:

> The average [energy efficiency] program provided services in 2019 to 5% of eligible customers.

The US Department of Energy (DOE) strategic priority page on Energy Equity and Environmental Justice says:

> Majority-Black communities install 69% less rooftop solar than other neighborhoods that have the same income level

And the *Washington Post* article Without access to charging stations, Black and Hispanic communities may be left behind in the era of electric vehicles explains:

> While electric vehicle use is growing rapidly in well-to-do, mostly White communities, minority neighborhoods are being left behind. In the coming age, the lack of charging stations and electric vehicles that depend on them threatens to worsen an already disproportionate exposure to air pollution in minority neighborhoods and relegate Black and Latino drivers to gasoline-powered cars, which, though cheaper to buy, are more expensive to fuel and maintain.

Trade allies (including contractors and HVAC installers) are a vital connection between utilities and their customers. These industry partners can turn prospective energy-savings scenarios into completed projects. However, according to the 2018 Midwest Energy Efficiency Alliance report Winning Contracts and Developing Skills: Supplier Diversity and Workforce Development in the Midwest Energy Efficiency Industry (PDF), the energy services industry lacks diversity in trade ally suppliers, implementers, and other program administrators. In some cases, utilities are partnering with external organizations to recruit and train employees who years ago would have gone under the radar of utility human resources departments for not holding advanced degrees and required certificates.

Coming together for change: Building the business case for energy equity

In August 2023, E Source hosted an equity-focused workshop about building the business case for energy equity. The workshop attracted 20 utility executives. One takeaway from the workshop was that creating jobs in the utility industry can be transformative in underserved communities and help utility companies follow mandates that stimulate equity within the industry.

Fostering energy affordability and equity in the utility space

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Furthermore, workforce development programs can help utility companies meet and exceed goals such as:

- Reducing arrears
- Increasing energy efficiency opportunities
- Addressing employee attrition

Energy efficiency programs that incentivize energy efficiency, distributed energy resources (DERs), energy storage, transportation electrification, and demand response (DR) often have goals related to supporting low- and moderate-income (LMI) customers.

LMI customers' participation in DR programs is critical for supporting resiliency and grid stability. Many demand-side management program implementers exist to help align workforce development programs with the requirements of other utility programs by incorporating recruitment and training initiatives within underserved communities.

In a sponsored solution showcase hosted at the E Source Forum 2023, a panel of thought leaders

representing three vendor organizations addressed how workforce development within underserved communities contributes to positive outcomes within utility programs. Panel participants included Scott Sommers, senior vice president of Client and Corporate Development at Index AR Solutions; Paul Douglas, president of the JPI Group; and Sylvester Criscone, senior vice president of Contractor Management and Administration at HomeServe USA. E Source analyst Vince Ruggeri rounded out the panel.

Key takeaways from the session included the following:

- The utility workforce is aging, which means the retirement of skilled workers and the need to inspire, recruit, and train a new generation of utility workers is inevitable.
- Utilities face a concurrent opportunity to enable LMI customers with jobs that support higher income thresholds.
- By recruiting members of communities with high rates of unemployment or poverty-level income, companies such as JPI Group, HomeServe USA, and Index AR Solutions are helping utilities rapidly address the need for a workforce that can identify with local community members and help populations adopt energy efficiency measures and DR protocols necessary for program success.
- A variety of industry partners are offering job training and outsourcing solutions to meet utilities' needs. Utilities should consider evaluating internal needs and create a suitable evaluation process for vendor selection.

Employee attrition in the utility industry

According to the National Energy Foundation (NEF), 57% of electricians in New York State are set to retire in the next five years. This statistic is also true for other roles critical to delivering power to the masses, including lineworkers.

As in all industries, preventing employee churn is a concept utilities address by outsourcing recruitment and management of certain operations—including contact centers—to agencies with high levels of expertise in staffing. Providing career advancement opportunities can increase employee loyalty and long-term retention across various functions of a utility company.

Federal funding opportunities

Federal funding and related initiatives exist to help utilities address matters related to workforce development for clean energy jobs. Funding opportunities are available through the Inflation Reduction Act (IRA) of 2022 and the Justice 40 initiative, which require 40% of certain federal investments, including those in the IRA, be directed toward disadvantaged communities. Similar funding opportunities are available through state and local governments.

On September 20, 2023, the US government announced an initiative to create 20,000 jobs via an American Climate Corps program to address the growing need to support the utility industry's transition to using cleaner forms of energy for power generation. But 20,000 jobs represent a fraction of the estimated 7 to 8 million roles experts say we'll need to support clean energy goals set forth by the DOE and other legislative groups.

Energy literacy in K–12 schools

What do we mean by energy literacy? Students and their caregivers often lack an understanding of how power is generated. They also don't understand the impact of electricity consumption. Energy literacy is the foundation for establishing interest in jobs that will support decarbonization efforts addressed through energy efficiency and the installation of DERs, including solar panels and battery storage. Energy literacy programs implemented in K–12 schools can be deployed in all communities, including those that are acknowledged to be underserved, and attended by students, including those who come from low-income households.

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Some organizations, including the National Theatre for Children and the NEF, are establishing energy education and conservation campaigns within school systems underpinned by alarming statistics related to energy literacy among K–12 students and dropout rates from institutions providing four-year degrees. For details on these statistics, see results from the NEF's National Energy Literacy Survey.

For years, E Source has collected information about K–12 educational programs, energy challenges to encourage energy efficiency and conservation practices, distribution of energy conservation kits, camps and recreational activities to promote energy literacy and responsible energy consumption, homeschool energy education resources, and related activities that school students and promote energy literacy.

Advanced education and training

At the heart of improving income-growth opportunities and positive utility program outcomes in underserved communities is the notion that utilities can establish partnerships with community colleges and other educational institutions to provide certifications required for installing equipment specified in energy efficiency, DER, and beneficial electrification programs. Trade schools and junior colleges are offering certification programs for HVAC system upgrades, solar panel installations, and similar efforts that support decarbonization goals.

The work trade allies are doing in high schools to ignite excitement about the energy transition and the financial benefits of completing these certificate programs is leading students to explore higher-level education that's often supported through grants and scholarships provided by utility companies. In some cases, certificate holders are making six-figure annual earnings.

Scaling inclusive and diverse workforce development

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Index AR Solutions is one of multiple companies addressing the scalability of training programs through digital modes of education. In some cases, these vendors are offering augmented reality technology to help students enrolled in training programs that provide certifications for heat pump installations,

simulations for utility infrastructure maintenance, and communication guidance for customer touchpoints including contact center operations. New forms of learning—including the use of tablet computers over textbooks—are addressing the evolution in learning styles and a need to support underserved communities with the technologies necessary to help them learn quickly and efficiently using interactive educational tools.

Other trade allies, including HomeServe USA and the JPI Group, are actively recruiting contractors from communities with populations that often can't afford energy efficiency upgrades. With the need to quickly recruit and train workers on new energy efficiency technologies, utilities are partnering with external organizations to manage recruitment; training; and, ultimately, employee satisfaction to reduce high turnover rates that have been traditionally observed in roles supporting energy efficiency programs and contact center operations.

Furthermore, such organizations are championing the positive impact that diversity and inclusion and related workforce development opportunities can have on the communities where these programs are implemented.

The E Source Affordability and Equity practice

E Source has launched the Affordability and Equity practice to better meet the needs of income-qualified and other vulnerable customers and communities. Through working groups like the Low-Income Energy Issues Forum and Equity in a Clean Energy Economy Collaborative, utility leaders and other industry stakeholders share strategies for diverse and inclusive workforce development and other activities necessary to support an equitable clean energy transition for all customers and communities.

By participating in these working groups, utilities and their partners can facilitate more-equitable and impactful workforce development solutions to drive economic development, clean energy project deployment, and program uptake in underserved communities while meeting broader affordability and equity goals and mandates. Topics covered in the Affordability and Equity practice include designing workforce development programs that advance energy equity and creating an effective workforce development program for trade allies.

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