

**Strong Workforce Program**  
**Energy, Construction and Utilities**  
**Regional Advisory Meeting Proceedings**  
**Building Electrification**  
**August 11th, 2022**  
**Virtual - Zoom**

## **Introduction**

The Los Rios Community College District, in partnership with Valley Vision, and in collaboration with Sierra College and Yuba Community College District, invests Strong Workforce funding to organize and convene Regional Advisories. The objectives of the Regional Advisories are to build strong relationships between employers, educators, and workforce that:

- Provide timely information on skills gaps and workforce needs, informing partners on major industry trend information;
- Improve the efficiency of the advisory process for educators and employers;
- Reflect a regional view of workforce needs and assets;
- Provide opportunities for more systemic, ongoing engagement that includes workforce partners in key industry sectors.

Regional Advisory meetings help inform decisions on needed investments and enhancements for Career Education (CE) programs to help fill the growing demand for middle-skill positions. This meeting proceedings report includes key findings, best practices, and minutes from the Fall 2022 Energy, Construction, and Utilities (ECU) Regional Advisory meeting focused specifically on building electrification and energy efficiency related occupations.

Valley Vision supports a robust talent pipeline through our multiple 21st Century Workforce initiatives. We prepare our regional workforce for the future by addressing skills gaps, advancing research, aligning efforts and strengthening systems. Valley Vision's workforce efforts are supported by the Sacramento Employment and Training Agency (SETA), Golden Sierra Workforce Development Board (WDB), North Central Counties Consortium, Yolo WDB, City of Sacramento, local community college districts and others.

The Strong Workforce program provides Career Education opportunities to increase social mobility and fuel regional economies with skilled workers.

## Key Findings

- The City's building electrification ordinance is projected to lead to increased workforce demands in residential and commercial construction, renewable energy, manufacturing, and utilities. The jobs in construction will require skills associated with adding retrofits to existing buildings, greening, and weatherization. Renewable energy construction occupations will include electrifying new and existing buildings and energy-efficient upgrades.
- The City of Sacramento has a goal of carbon neutrality by 2045 and will be adopting a building electrification ordinance in 2023 in efforts to reduce greenhouse gas emissions, make renewable energy more affordable, and ensure buildings are more resilient and safe. The ordinance will consist of policies that lead to the equitable transition of all buildings to electricity over time.
- Labor market data from the Center of Excellence indicates a demand for retrofit and construction jobs related to building electrification. Furthermore, the job demand outpaces supply and annual job openings exceed the community college education awards for these occupations. This data provides an opportunity to strengthen the pipeline of individuals into these jobs by attracting non-traditional workers into high-earning positions that pay above the living wages for a single adult or single adult family.
- There are a variety of occupations that will be impacted by building electrification policies. The building electrification workforce can be classified into four key occupational groups: existing building retrofits; new building construction; greening and weatherization; and gas and electric infrastructure and utilities. Electricians, plumbers, pipefitters, HVAC/R technicians and new building construction laborers, managers, and inspectors are expected to be the occupations most impacted by these policies.
- Traditional Labor Market Information on the electrification workforce accounts for unionized and non-unionized positions. This data contrasts with job posting data from job sites because jobsite postings don't account for positions within trade union organizations. As such, job posting data may not accurately reflect hiring trends in the construction industry. Job posting data shows that the top employers are mostly HVAC companies and staffing agencies.

## Meeting Proceedings

### Welcome and Introduction

Renee John, Director of Workforce at Valley Vision, started the advisory by framing the focus of regional advisories - to develop and maintain partnerships between educators and industry partners, encourage collaboration to inform current industry trends and development, and inform community college curriculum. She also introduced Dr. Shiinder Gill, the new Assistant Director of Employer Partnerships for the North Region California Community Colleges whose role is to connect industry and employer partners with training and education programs offered at community colleges throughout the North Region.

### State Legislative Drivers Supporting Building Electrification

Workforce demands are shifting across our region in response to the climate crisis, economic drivers, and policy mandates. Angelina Olweny, Project Associate at Valley Vision, highlighted some of the key government agencies and policies impacting the ECU sector, including:

- The California Energy Commission develops standards and programs for newly constructed and existing buildings by establishing building codes to improve energy efficiency in buildings.
- Title 24, Part 6 (Energy Code) regulates building energy efficiency requirements for residential and non-residential buildings, including newly constructed projects, additions, and alterations.
- Title 24, Part 11 (CALGreen) code promotes the design and construction of buildings with a positive environmental impact and enhances sustainable construction practices.
- Title 24, 2.5 - 5 contains additional regulations related to energy efficiency standards for residential and non-residential buildings that apply to building design and construction, electrical design and construction, mechanical design and construction, and plumbing design and construction.
- California Public Utilities Commission (CPUC) regulates utilities and services including electrical energy and natural gas.

### The City of Sacramento Building Electrification Strategy

The City of Sacramento shared information on the building electrification strategy they are developing in preparation for an ordinance that will go into effect in 2023. The electrification ordinance will consist of policies that lead to the equitable transition of all buildings to electricity over time. The adoption of the electrification ordinance aims to ensure that the City is meeting its goal of zero greenhouse gas emissions by 2045.

The City identified that electrification policies would improve community health by removing air-polluting gas appliances from buildings. Additionally, building electrification could lead to energy affordability through long-term cost savings as gas rates are predicted to increase dramatically over time. Laura Tuller, an Associate Planner of the City of Sacramento's Community Development Department, pointed out that existing building electrification strategies will impact the sector's workforce and the need for electricians, HVAC technicians, and general construction laborers to meet the projected demand for residential and commercial building retrofits.

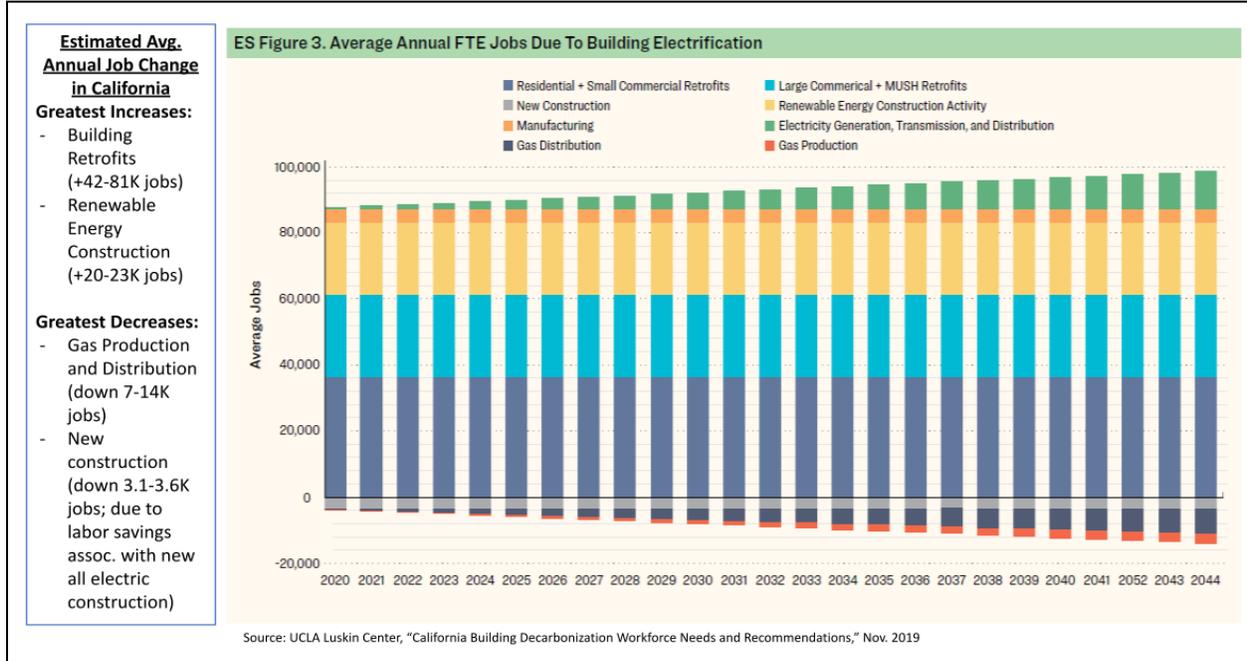
### California's Building Decarbonization Workforce Needs

Ebony Benzing, Research Manager at the North/Far North Center of Excellence, presented data from the UCLA Luskin Center on the job demands of building electrification occupations throughout California. The data highlighted the impact of California building decarbonization policies on employment and projected job

growth data.

Research on California’s building decarbonization workforce needs shows that building retrofits and renewable energy construction jobs will see the greatest growth within the next 24 years (UCLA Luskin Center). Figure 1 shows that there will be approximately 42,000 to 81,000 jobs added in building retrofits and 20,000 to 23,000 jobs added to renewable energy construction between 2020 to 2044 (UCLA Luskin Center).

Figure 1: Estimated Average Annual Job Changes in California due to Building Electrification Policies



**Traditional Labor Market Information in the Greater Sacramento Region**

Benzing also presented research on projected building electrification workforce needs in the seven-county, Greater Sacramento region. She classified the building electrification workforce into four key occupational groups: existing building retrofits; new building construction; greening and weatherization; and gas and electric infrastructure and utilities. The labor market information shared focused predominantly on occupations within existing building retrofits and new building construction, as detailed in Figure 2.

Figure 2: Greater Sacramento Building Electrification Workforce

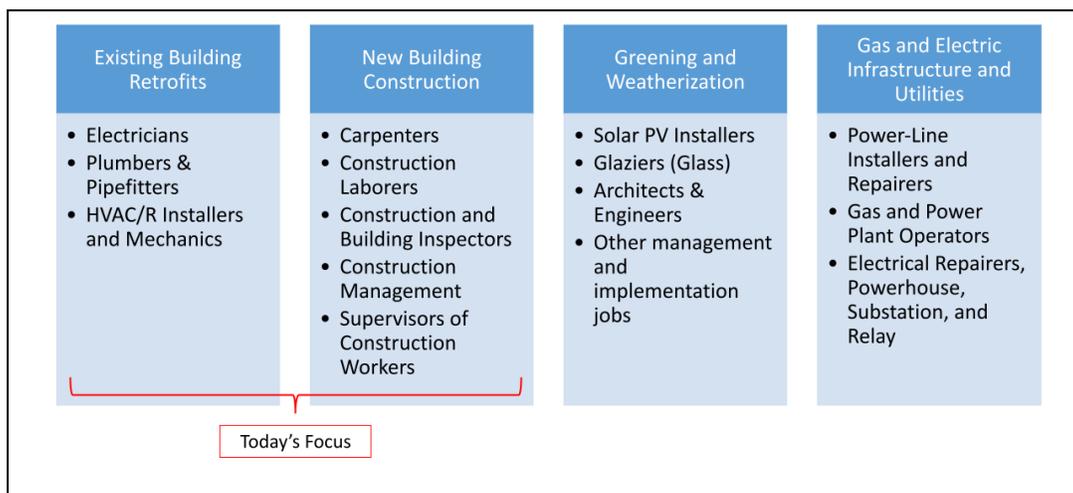
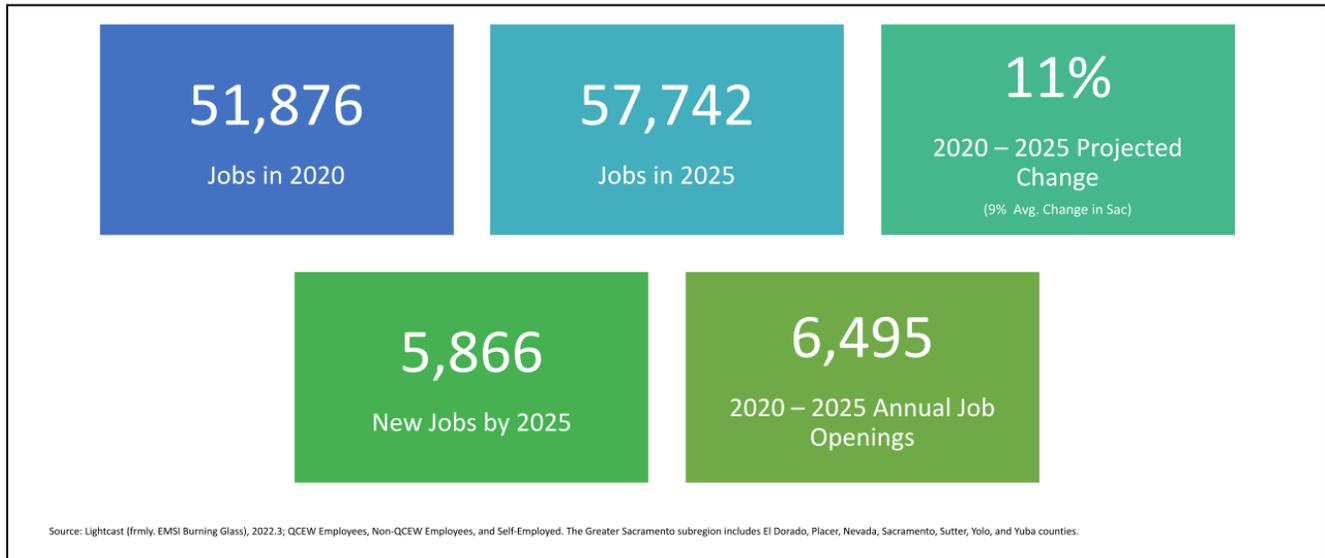


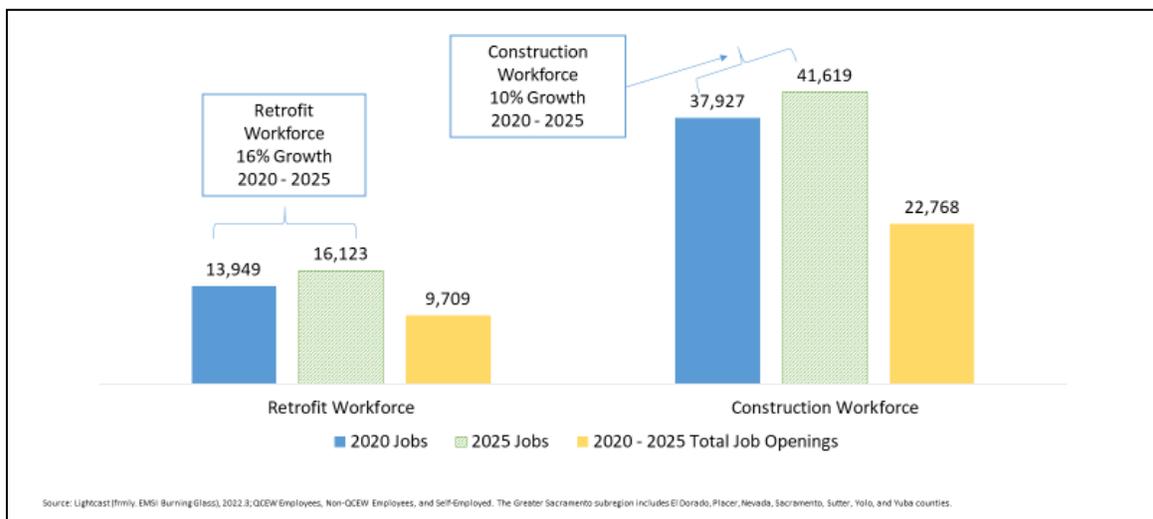
Figure 3 shows that the projected job growth from building electrification retrofits and new construction workforce in the Greater Sacramento region is 11%, an average of 6,500 job openings annually between 2020 and 2025.

*Figure 3: Building Electrification Retrofit and Construction Workforce*



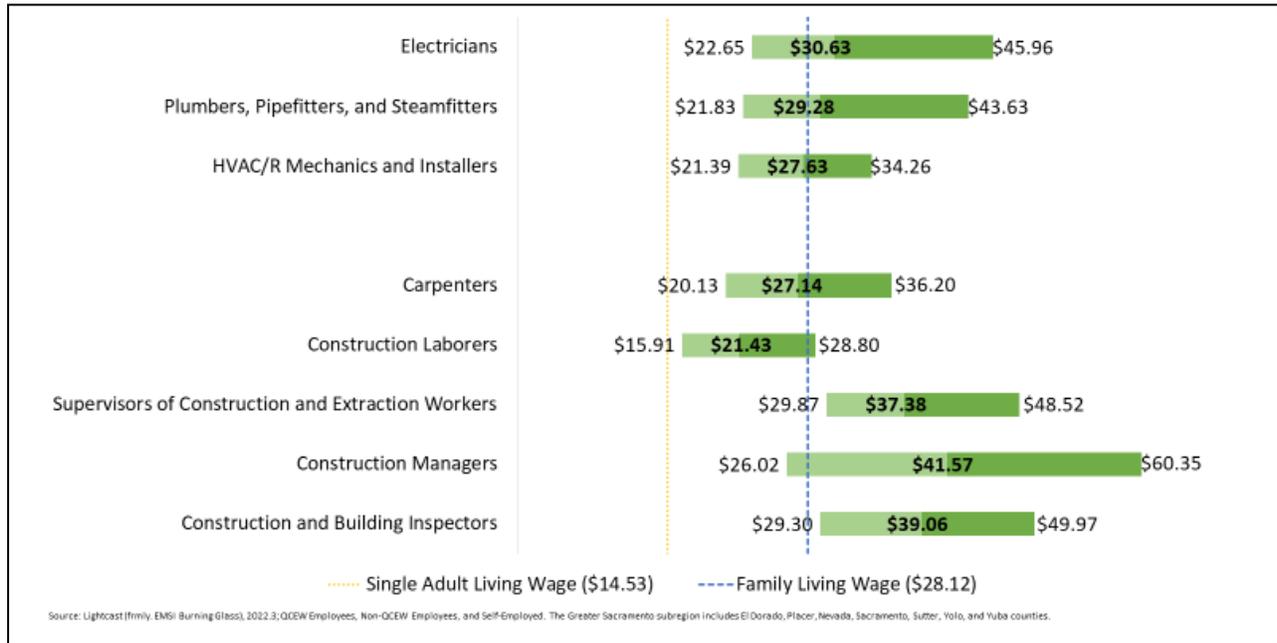
By comparison, there are fewer retrofit jobs, both currently and projected, compared to construction jobs, as detailed in Figure 4. However, there is a higher projected job growth rate for retrofit occupations between 2020 and 2025. The projected job growth rate for retrofit occupations is 16% compared to 10% for the construction workforce between 2020 and 2025. The data also indicates more construction job openings compared to retrofit positions over the same five-year period, which illustrates the overall demand for construction positions.

*Figure 4: Projected Job Growth and Demand for the Building Electrification Workforce*



Benzing then went on to compare the entry level wage range of these occupations to the living wages for single adults and a single adult family with one school-age child. Figure 5 indicates that the majority of occupations associated with the existing building retrofits and new building construction workforce pay entry-level wages that exceed the living wage for a single adult and meet the living wage of single adult families in the Greater Sacramento region.

Figure 5: Greater Sacramento Hourly Earnings vs. Wages



**Industry Panel Discussion**

In response to building electrification policies and labor market trends, Renee John facilitated an industry panel discussion featuring the following representatives that support the building electrification retrofits and construction workforce.

- **Scott Blunk**, Electrification Strategist, Sacramento Municipal Utility District
- **Rick Larkey**, Technical Director, North State Building Industry Foundation
- **Hilary Tellesen**, Workforce Program Manager, GRID Alternatives
- **Rick Wylie**, President, Villara Building Systems



## Panel Overview

**Sacramento Municipal Utility District (SMUD)** is the sixth largest community-owned public electric utility in the United States, serving Sacramento County and parts of Placer County. SMUD's purpose is to enhance the quality of life for their customers and community by providing reliable and affordable electricity, and leading the transition to a clean energy future. The company provides utility services from generating, distributing, and billing to marketing electricity that they produce. SMUD has approximately 2,200 employees in the region.

**North State Building Industry Foundation (BIA Foundation)** is an advocate and intermediary for residential construction, commercial construction, and manufacturing. The organization works with 550 employers in the region to promote programs that enable them to be engaged in meeting their workforce needs. Their initiatives include apprenticeships, education programs, placement services, and partnerships with social organizations that lead to meaningful connections and employment placement opportunities for residents.

**GRID Alternatives** is a solar installation nonprofit whose mission is to build community-centered solutions to advance economic and environmental justice through renewable energy. The organization also has a solar training program to help connect community members to clean energy jobs, training over 46,302 people to date. The company strives to build equity in a thriving solar industry.

**Villara Building Systems** offers a wide range of building services from heating and cooling to plumbing and solar installations for Residential and Commercial properties in Northern and Central California. They also specialize in home electrification, specifically home batteries and integrated heat pumps. Villara employs approximately 1,300 staff within the region.

## Current Workforce Needs

The industry employer panel shared many workforce demand insights that aligned with the projected occupational needs identified in the labor market data presented by Ebony Benzing. Scott Blunk expressed that SMUD is continuing to invest in building electrification, electric vehicles, battery storage, and virtual power plants, as they work to decarbonize their grid. On the other hand, although Rick Larkey from the BIA Foundation expects consistent workforce demands within the industry, he expressed concerns due to continued job shortages and current inflationary pressures. Rick Wiley, from Villara, shared that they are seeing growth in new apartment construction, replacement of residential energy systems/equipment, and electrification of buildings. Hillary Tellesen, from GRID Alternatives, shared that the solar job growth rate in 2021 was 10.2% (based on the Interstate Renewable Energy Council's Solar Job Census) and that solar jobs have nearly doubled since 2011 as people look for alternatives to finite energy resources.

## Occupational Demands, Desired Skills, and Credentials Needed

Construction company representatives on the panel stated that they seek individuals who have an interest in the trades and the physical ability to execute physical tasks. Wiley also seeks individuals with customer service skills who can interface with the public to address any issues with the company's products and services. In addition to hiring externally, Villara provides apprenticeships to about 150 individuals annually, equipping

entry-level candidates with the skills they need for their respective positions. As electrification policies are implemented, Larkey shared that Home Energy Rating System raters and building inspectors will be important to guiding the industry. Blunk stated that SMUD is looking for all skills, from building electrification, electric vehicles, and battery storage to line workers and office administration. Additionally, Blunk identified the need for electricians, as well as contractors adept at replacing heat pumps, as municipalities implement electrification strategies and plans.

### **Recruitment and Partnerships**

With the high need for skilled workers across the industry, strong partnerships are crucial for job recruitment and training. Villara's youth program with Elk Grove Unified School District introduces high school students to trade occupations, providing internships and direct employment opportunities. BIA Foundation supports recruitment efforts for all of its members, including Villara, through promotions, internships, and education. SMUD has a robust internship and recruitment program that recruits candidates and provides opportunities for long-term positions in the company. GRID Alternatives leverages its relationships with community partners such as Job Corps and California Conservation Corps to reach priority populations who could benefit from career development opportunities through their solar training program.

### **Community College Programs**

The advisory concluded with an overview of the educational programs that help supply our regional electrification workforce, including programs at Sierra College and Cosumnes River College. In addition to their construction management program, Sierra College has non-certificate electrical, plumbing, and mechanical programs. These programs are introductory and broad in scope to give prospective candidates exposure to careers in these fields. Sierra College also offers a tuition-free, six-week construction bootcamp that exposes participants to the different trades associated with residential construction. Students who participate in the bootcamp gain OSHA 10 certification and are placed in an externship after completion. The programs mirror construction job settings which in turn helps students anticipate responsibilities on the job. Other programs offered connect students to adjacent careers in office management and project management. Sierra College has industry partners who have the capacity to employ students who complete these college programs.

Cosumnes River College's construction program gives students hands-on experience in the trades and is designed to get students out into the field within two semesters. Additionally, Cosumnes offers an architecture program that focuses on sustainable design. The vast majority of students in this program successfully transfer to 4-year colleges to obtain a bachelor's degree in architecture. Cosumnes leverages industry partnerships to keep their curriculum up to date with the pace of industry changes. Other programs available include a building inspection program and a welding program. Additionally, Cosumnes offers maker space classes that teach students advanced manufacturing and construction design.

## **Conclusion**

The attendees were given the following contact information of Valley Vision staff and were invited to reach out with networking requests:

- Shinder Gill, PhD, Assistant Director Employer Partnerships for Energy, Construction and Utilities, North Region California Community Colleges - **[gills@crc.losrios.edu](mailto:gills@crc.losrios.edu)**
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