

INFRASTRUCTURE WORKFORCE FACT SHEET: CALIFORNIA

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B | Brookings Metro

Additional data, findings, and recommendations are available in the main report, [Seizing the U.S. infrastructure opportunity: Investing in current and future workers](#).

This fact sheet explores major infrastructure workforce needs in California, with an emphasis on the transportation and energy sectors—the two main employers for this workforce. To help leaders better understand the current landscape of actors and actions involved in these issues, the fact sheet briefly summarizes: levels of infrastructure employment; challenges in hiring, training, and retention; and opportunities for innovation that invest in current and future workforce development.

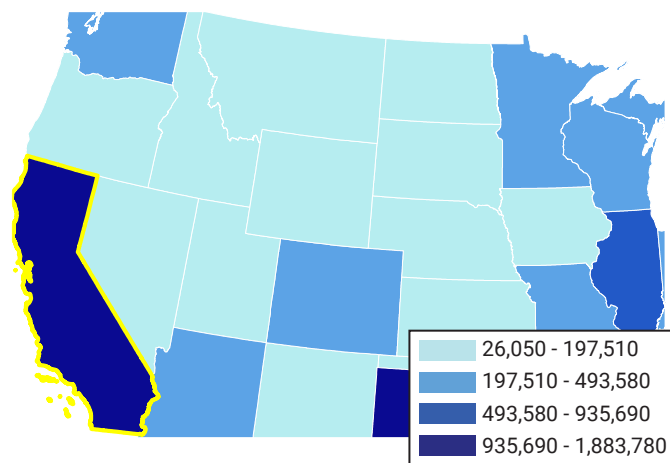
Ultimately, leaders involved in infrastructure construction, operation, and maintenance need to collaborate with those involved in workforce development (and vice versa). On the infrastructure side, these leaders include the California Department of Transportation (Caltrans), the California Energy Commission, and the California Environmental

Protection Agency at the state level, as well as numerous local entities. On the workforce side, leaders include the California Labor and Workforce Development Agency and the California Workforce Development Board, as well as educational institutions, labor groups, community-based organizations, and others. Major employers include the Los Angeles County Metropolitan Transportation Authority, Bay Area Rapid Transit, Southern California Edison, Pacific Gas and Electric, and San Diego Gas and Electric, among others.

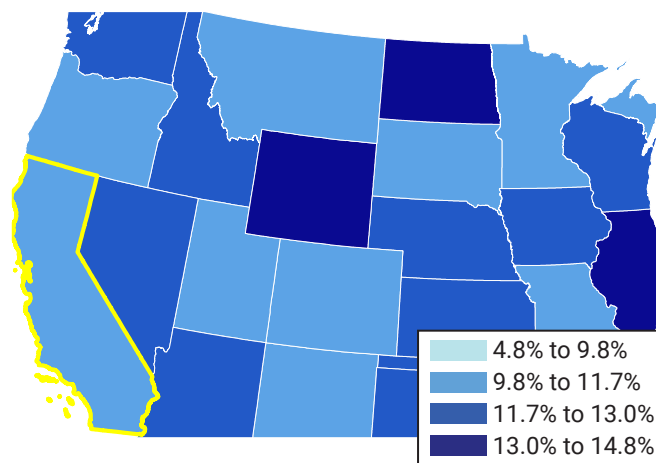
LEVELS OF INFRASTRUCTURE EMPLOYMENT

California employs nearly 1.9 million infrastructure workers, representing 11.5% of its entire workforce. This total ranks first nationally, demonstrating the expanse of California's labor market in general and its massive energy facilities, trade and logistics assets, and more. However, this share of the workforce ranks 31st, similar to states such as Utah, New Mexico, and Oregon, and speaking to the wide variety of other service industries and activities in the region.

Total infrastructure employment, 2021



Infrastructure share of total employment, 2021



SOURCE: Brookings analysis of BLS Occupational Employment Statistics

Similar to most states, the largest infrastructure occupations include those involved in trade and logistics, such as material movers and truck drivers. Other sizable occupations include those involved in the skilled trades and other infrastructure design and operation activities, such as electricians and civil engineers. As the main report describes, this means that investments in on-the-job training and work-based learning opportunities are crucial to support this workforce.

CHALLENGES IN HIRING, TRAINING, AND RETENTION

Employers and workers in California face a variety of challenges in filling these jobs:

- Despite its massive economy and variety of industries beyond infrastructure, California is still facing mounting labor market difficulties, [particularly around inequality](#). Growth in low-wage jobs combined with struggles to grow and fill middle-wage jobs has led to soaring income inequality. For example, 31% of the state's workers make less than \$15 per hour.
- This [inequality also stretches across demographic groups and geographies](#), with Black and Latino or Hispanic workers disproportionately filling low-wage jobs while bigger economic gaps emerge between coastal and inland parts of the state. Struggles to afford and access training, adapt to new technologies, and transition to new careers amid high costs of living are common.
- Even with the country's largest and most diverse population, there are still [widespread staffing shortfalls](#) facing many infrastructure employers. For example, [46% of construction contractors](#) are currently experiencing project delays due to labor shortages.
- The situation is even more dire in the transportation sector, [especially among transit agencies](#) still adapting to post-pandemic ridership declines and operational fluctuations. [LA Metro](#) and [Bay Area Rapid Transit](#) have faced bus driver shortages, leading to service reductions.

OPPORTUNITIES FOR INNOVATION

Several ongoing or emerging efforts are advancing infrastructure workforce development and offer guidance for other potential actions in years to come:

- To counter the state's rising tide of inequality, California's leaders have formed a new ["Social Compact"](#) that will guide workforce development strategies in coming years, including in the infrastructure sector. As part of this new approach, leaders are aiming for greater equity and mobility for disadvantaged workers in a variety of ways: increasing employer-based training, boosting jobs in clean energy, expanding the safety net, improving job quality, and more.
- The California Workforce Development Board's [Unified Strategic Workforce Development Plan](#) complements many of these aims through sector strategies, regional partnerships, earn-and-learn opportunities, supportive services, and integrated program delivery, among other efforts.
- State leaders are looking to carry out these efforts through a "High Road Workforce Development Agenda." For example, the [High Road Training Fund](#) represents a partnership between the California Workforce Development Board, the California Labor and Workforce Development Agency, and the California Governor's Office of Social Innovation to [support infrastructure jobs](#).
- The transportation sector has executed on many workforce development efforts. For example, [Caltrans](#) has invested in on-the-job training, supportive services, and pre-apprenticeship programs, while numerous local efforts are emerging in [Los Angeles](#), [San Francisco](#), and [elsewhere](#).
- Clean energy workforce development remains a priority across the state as well. The California Energy Commission has emphasized [zero-emission technologies and training](#), while Pacific Gas and Electric has developed an [Energy Efficiency Business Plan](#) that emphasizes career awareness and training