



Realizing the Workforce Potential of Infrastructure Investments

State Strategies to Advance Job Quality and Build Inclusive Workforces in Transportation and Clean Energy

Executive Summary

Recent federal legislation will direct historically significant levels of funding toward transportation and clean energy infrastructure projects over the next decade, including hundreds of billions of dollars in new spending.

- The Infrastructure Investment and Jobs Act of 2021 (IIJA) directs approximately \$591 billion and \$75 billion to transportation and clean energy, respectively, over a five-year period.¹
- The Inflation Reduction Act of 2022 (IRA) invests around \$369 billion for U.S. energy infrastructure modernization, building upgrades, and technology deployment through 2032.²

If deliberate action is taken, this rare level of funding can support an immense number of good quality jobs that could offer economic mobility to many people, including demographic groups that have long been underrepresented in these sectors.

Transportation and clean energy sectors already represent a large share of the U.S. workforce and are anticipated to add hundreds of thousands of additional jobs per year.³ Like occupations across infrastructure sectors today, jobs related to this spending are likely to be largely attainable for workers without bachelor's degrees.⁴ They tend to pay more than occupations with similar education credential requirements and have higher rates of unionization,⁵ a characteristic associated with significant job quality benefits.⁶

While there are numerous positive workforce trends in infrastructure, there are also persistent disparities in the demographic makeup of the U.S. infrastructure workforce broadly and especially in some of the occupations most relevant to these sectors. For example, women and younger workers are vastly underrepresented, and racial/ethnic inequality is stark,⁷ with Black and Latino or Hispanic workers being significantly overrepresented among the lowest-paying occupations in the sectors.⁸ There are also pronounced job quality issues that, left unaddressed, would likely continue on many of the worksites supported by this spending. In construction, a major area of near-term infrastructure work, there are high rates of reported worksite harassment and discrimination,⁹ a job quality issue that contributes to disparities in opportunity to thrive within these sectors.

Because billions of dollars slated for transportation and clean energy funding is flowing through states and comes with significant flexibilities to invest in workforce goals, states have resources and options to prioritize creating high-quality jobs with this spending and to support broad, inclusive paths to these workforces. While these funds will touch a wide range of entities from utilities to local transit agencies to ports, a large share of the totals above will flow through state-level infrastructure agencies (e.g., departments of transportation and state energy offices) via formula and competitive grants. Importantly, state infrastructure agencies also now have more flexibility to use these funds for workforce investments, which are vital to building a larger and more diverse infrastructure workforce. States oversee numerous systems that touch jobseekers that could be leveraged to build diverse paths to infrastructure jobs. At the same time, state infrastructure agencies can set priorities in their spending to drive job quality and workforce access.

This report seeks to help states realize the workforce potential of infrastructure investments and navigate an array of options, many of which are not commonly prioritized.

It is informed by engagement with state infrastructure and workforce leaders led by the Markle Foundation, the Eno Center for Transportation, and the National Association of State Energy Officials (NASEO). This engagement and research highlights the need for state infrastructure and workforce decisionmakers to take action in three areas:



A Framework for State Action: Prioritizing Job Quality and Inclusive Workforce Practices in Infrastructure Implementation

● CATEGORY ● POTENTIAL ACTIONS

1 Deepen Cross-Agency Coordination

Deepen coordination between infrastructure and workforce (plus other key agencies and stakeholders) to align workforce investments with jobs.

- **Create a Memorandum of Understanding (MOU)** to formalize cross-agency partnership
- **Create dedicated staff positions** to facilitate cross-agency collaboration
- **Engage senior leaders in governors' offices** and at the cabinet level in key agencies to help generate buy-in and/or directives to take action
- **Engage additional state systems**, such as departments of education or departments of corrections, to reach jobseekers
- **Meaningfully engage critical non-state stakeholders** from planning to execution

Example: California's cross-agency collaboration to prepare people for jobs after incarceration, including jobs with the state's transportation department

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Augment Workforce Program Funding

Use direct expenditures and grants to boost workforce recruitment, training, and wraparound supports.

- **Develop plans and conduct analyses that identify gaps and challenges** to inform the priorities of state infrastructure workforce investments and targets
- **Scale high-quality training programs** and create new programs
- **Fund supportive services** to address common barriers to completing training
- **Bolster recruitment activities** and raise awareness of career opportunities

Example: Analyzing energy workforce needs and barriers in Pennsylvania

Example: Providing paid training opportunities in infrastructure sectors through Indiana’s Certified State Earn and Learn (SEAL) programs

Example: Ohio's broadband workforce analysis

Example: Diversifying the highway construction workforce through a focus on investing in supportive services for apprentices in Oregon

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Embed Into Procurement

Embed job quality, inclusion, and accountability throughout state spending on infrastructure.

- **Use vehicles to incorporate job quality and workforce inclusion priorities into projects:**
 - Project Labor Agreements or other similar agreements
 - Preferences for employers with strong workforce and job quality practices
- **Incorporate specific preferences or requirements to target priorities:**
 - Apprenticeship utilization requirements
 - Local, economic, or targeted hire provisions
 - Steps taken to address harmful worksite conduct
 - Incentives to partner with worker-serving stakeholders
 - Preferences or supports to improve opportunity for women- and minority-owned businesses in the procurement process
- **Understand and address factors that have been historically critical to success:**
 - Strong oversight and accountability models
 - Involvement of community-based groups, worker-serving organizations, employers, and other critical stakeholders
 - State legislation to support longer-term adoption of provisions in procurement

Example: Embedding local and economic hire in the Colorado Central 70 Project

Example: New Mexico’s apprenticeship utilization requirements for electricity facility construction projects

Example: Virginia’s offshore wind project preference for plans that hire workers from local and historically economically disadvantaged communities

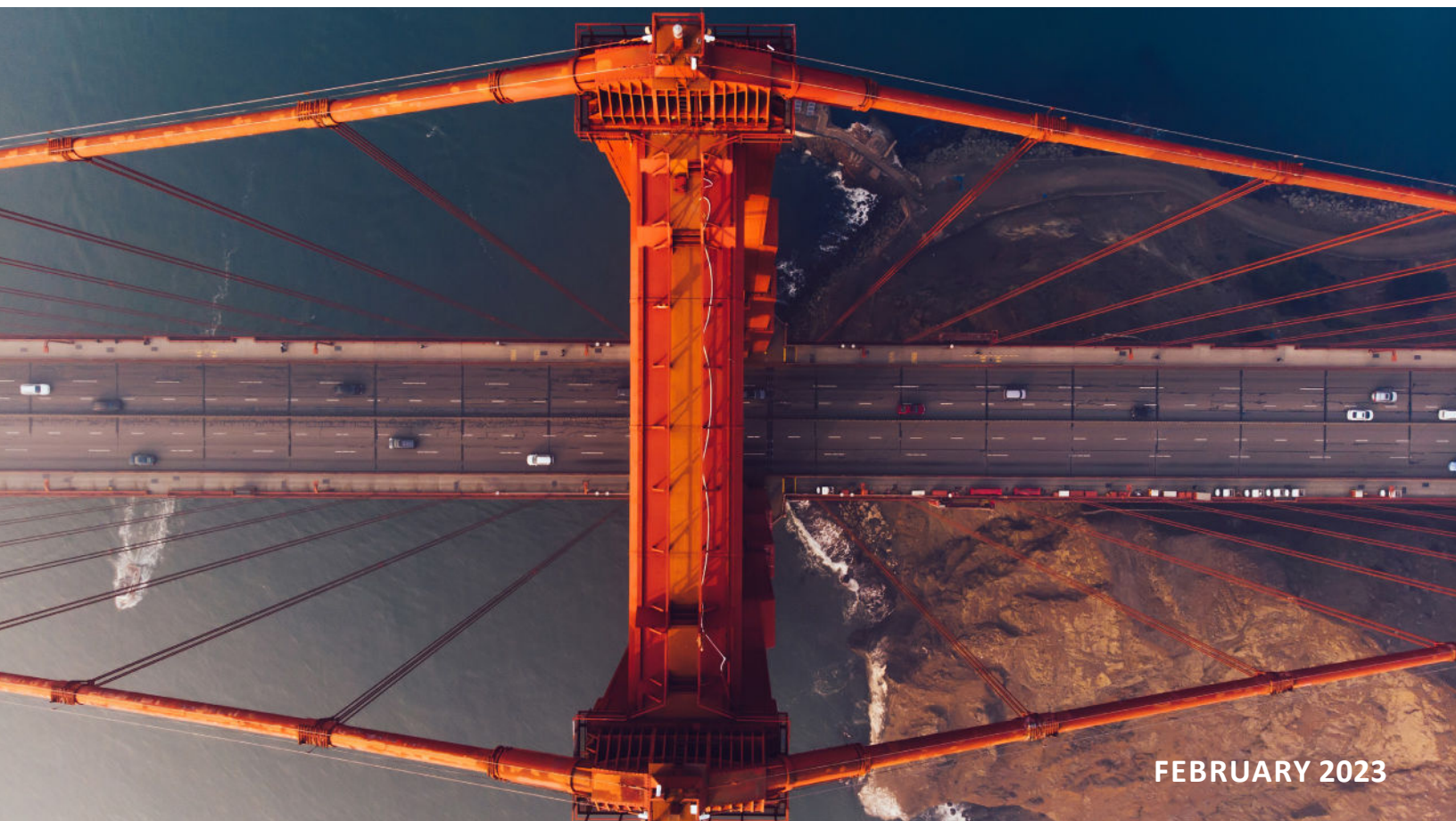
States have a rare opportunity to take advantage of substantial levels of federal funding for transportation and clean energy to build and scale a broad, inclusive, and qualified infrastructure workforce. However, doing so will require a significant pivot from the status quo priorities and processes of many state government agencies. This resource intends to aid state leaders in navigating a complex array of options toward realizing that change.

About The Report

A resource to navigate a wide array of options for states to go beyond the status quo

The full report, *Realizing the Workforce Potential of Infrastructure Investments: State Strategies to Advance Job Quality and Build Inclusive Workforces in Transportation and Clean Energy*, clarifies strategies for states to realize the workforce and job quality potential of infrastructure investments in critical sectors, particularly those poised for significant additional investments through the IIJA and IRA. The report delves into the opportunity before states, including specific funding streams on which to capitalize, and outlines a framework for priority actions that states can take to foster broad opportunity to benefit from good quality jobs connected to state spending in two of the most significant infrastructure sectors. To illustrate that such actions are feasible, the framework elevates many examples of relevant models and uses of these strategies from around the country, including an extensive summary of instances of public infrastructure agencies embedding job quality and workforce aims into competitive procurement processes to influence private sector practices.

This report is informed by an initiative, launched in 2022 and co-led by the Markle Foundation, the Eno Center for Transportation, and the National Association of State Energy Officials (NASEO), that convened state transportation or energy agencies with their counterpart state workforce agencies in six states. The initiative focused on opportunities in transportation in California, Illinois, and Indiana, as well as opportunities in clean energy in Colorado, Massachusetts, and Pennsylvania. The initiative explored ways critical state agencies can leverage incoming federal funds to build sufficient, inclusive transportation and clean energy workforces with a focus on good quality jobs.¹⁰



References

- 1 For the transportation figure, see: Brookings, "[Brookings Federal Infrastructure Hub](#)," 20 Feb. 2022. For the clean energy figure, see: The White House, "[Building a Better America: A Guidebook to the Bipartisan Infrastructure Law for State, Local, Tribal, and Territorial Governments, and Other Partners](#)," May 2022.
- 2 Government Finance Officers Association, "[Infrastructure Investment and Jobs Act \(IIJA\) Implementation Resources](#)," 2022; McKinsey & Company, "[What's in the Inflation Reduction Act \(IRA\) of 2022](#)," 24 Oct. 2022.
- 3 For an aggregation of different estimates for anticipated job demand connected to federal infrastructure spending and estimates of the current size of the infrastructure workforce broadly, see: Kane, Joseph, "[Seizing the U.S. infrastructure opportunity: Investing in current and future workers](#)," Brookings, Dec. 2022.
- 4 Carnevale, Anthony, and Nicole Smith, "[15 Million Infrastructure Jobs: An Economic Shot in the Arm to the COVID-19 Recession](#)," Georgetown Center on Education and the Workforce, 2021.
- 5 Inferred from analyses of the broader infrastructure workforce, not only in transportation and clean energy. For analyses on the infrastructure workforce, see: Kane, Joseph, "[Seizing the U.S. infrastructure opportunity: Investing in current and future workers](#)," Brookings, Dec. 2022.
- 6 McNicholas, Celine et al., "[Why unions are good for workers—especially in a crisis like COVID-19](#)," Economic Policy Institute, 25 Aug. 2020.
- 7 Gruberg, Sharita et al., "[Historic Investments in Good Infrastructure Jobs Can't Leave Women Behind](#)," National Partnership for Women & Families, Sep. 2022; Kane, Joseph, "[Seizing the U.S. infrastructure opportunity: Investing in current and future workers](#)," Brookings, Dec. 2022.
- 8 Kane, Joseph, "[Seizing the U.S. infrastructure opportunity: Investing in current and future workers](#)," Brookings, Dec. 2022.
- 9 Hegewisch, Ariane and Eve Mefferd. "[A Future Worth Building: What Tradeswomen Say About the Change They Need in the Construction Industry](#)," Institute for Women's Policy Research, Nov. 2021.
- 10 In this report, the term "state workforce agencies" is inclusive of state workforce development boards and their staff—which oversee a network of activities with local workforce development boards to coordinate workforce investments in economic regions—as well as workforce and labor agencies involved in delivering labor market information, employer services, training grants, and career navigation and business services. They also often oversee apprenticeship programs.

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