Jobs for the Future

Unequal Opportunities: Examining Quality and Diversity in Green Jobs

AT A GLANCE

Addressing disparities in green jobs is crucial for an inclusive transition. The report analyzes disparities in job quality and workforce demographics to inform strategies for equitable employment.

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About JFF

Jobs for the Future (JFF) drives transformation of the U.S. education and workforce systems to achieve equitable economic advancement for all. jff.org

About JFF's Language Choices

JFF is committed to using language that promotes equity and human dignity, rooted in the strengths of the people and communities we serve. We develop our content with the awareness that language can perpetuate privilege but also can educate, empower, and drive positive change to create a more equitable society. We routinely reevaluate our efforts as usage evolves. info.jff.org/language-matters

Acknowledgements

CREST
An Ares Charitable Foundation Initiative

About Climate-Resilient Employees for a Sustainable Tomorrow (CREST)

CREST is a five-year, $25 million career preparation and reskilling initiative of the Ares Charitable Foundation (the Ares Foundation) that aims to help close the gap between the demand for a skilled workforce for green jobs and the number of people prepared for these opportunities. Working with our partners and local communities, the Ares Foundation can deepen our impact, harness new opportunities, and help create a green, resilient future that benefits generations to come.

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Introduction

Recent U.S. investments in green technologies present the opportunity to achieve several historic goals—accelerate the transition to a sustainable economy, improve the overall quality of jobs, and disrupt persistent segregation in the workforce.[1]

In order to realize these goals, however, new Jobs for the Future (JFF) research shows that employers, educators, regional leaders, and policymakers will need to make significant changes to disrupt bias in hiring and spread economic opportunity more evenly. Our analysis found that the quality of jobs and the diversity of the workforce across the green transformation cycle varies widely, with women, Black workers, and Hispanic workers underrepresented in jobs with the highest pay, best benefits, and lowest risk.[2] We also identified promising strategies to respond to and close these gaps.

To ensure a just transition to a green economy, we must focus not only on eliminating industry practices that are bad for the planet but also on eliminating practices that are bad for workers. While the specific approaches must vary by job type, our data analysis provides insights that can inform training, recruitment, and advancement strategies to ensure all green jobs are quality green jobs with on-ramps for people from backgrounds that have been excluded.

While public policy can play an important long-term role in this agenda, we believe that employers are best positioned to take swift action. Employers can establish new industry norms and take immediate steps to ensure that the transition to a green economy prioritizes both environmental sustainability and quality career opportunities for all.

Taking a Deeper Look at the Green Transformation Cycle

The foundation of this new research was our 2023 report about trends in the green labor market, *Growing Quality Green Jobs: Driving Economic Advancement in the Green Economy*.[3] That report explored how the integration of green skills has been creating more green jobs across the economy than conventionally thought. It also introduced four stages of green job transformation, based on the level of green-skill integration—seed, scaling, established, and at risk. *(See "Green Transformation Cycle.")*

Our new analysis of 74 occupations across the scaling, established, at-risk jobs of the green transformation cycle with more than 16.2 million workers shows the reach of the green economy. We found that not everyone has the same experience in these jobs. Seed jobs are by nature nascent and dynamic, meaning similar occupational data is not yet available, but we can take lessons from the other job types to apply in making sure these jobs are built on an equitable foundation. This list of 74 occupations is not meant to be exhaustive, but representative of jobs that are transforming along with the emerging green economy.

Green Transformation

The cycle describes the four stages of green job transformation, in which occupations adopt or resist the integration of green skills.

Seed jobs are integrating green skills but are in early economic adoption. It's too early to tell what the trajectories of seed jobs will be, and so they were not included in our analysis.

Scaling jobs are integrating green skills and showing significant economic growth. They are widely considered newer green jobs.

Established jobs have already integrated green skills, are widespread within the economy, and have traditionally been identified as green.

At-risk jobs are existing jobs that are not adopting green skills and are likely to be eliminated as the economy greens.

Comparing Scaling, Established, and At-Risk Jobs

Racial and gender gaps in employment and job quality exist at all three stages of green job transformation that we evaluated—scaling, established, and at-risk.

Scaling Jobs

Overall, scaling jobs offer the highest pay, the best benefits, and the lowest safety risks of all three categories. But scaling jobs, which are newer and less widespread than established jobs, also have the highest educational requirements and the lowest representation of Black and Hispanic workers.

And while scaling jobs have the highest representation of women of any stage, women are vastly underrepresented in all three categories of green jobs. Women hold about 22% of the jobs across the categories despite being 47% of the overall workforce.[4]

Scaling jobs also have the highest representation of Asian workers, but their proportion of the workforce across all three categories has remained virtually stagnant for 20 years.

Established Jobs

Established jobs, such as electricians and insulation workers, are the most common green jobs, and they're likely to keep growing. In addition, relatively few of these roles require a bachelor's degree, so they're more widely accessible. However, these jobs employ few women and offer middling job quality compared to scaling jobs. They also have the highest turnover rates of any green job category.

At-Risk Jobs

Our analysis found at-risk jobs to be the lowest quality, and the most likely to be eliminated as the economy becomes greener. They have the highest proportion of Black and Hispanic workers, making these groups the most vulnerable to potential unemployment as well as the daily challenges of a low-quality job.

Compared to scaling jobs, both established and at-risk jobs have significantly higher illness and injury rates but less access to paid sick leave and other health care benefits. Approximately 42% of established jobs and 79% of at-risk jobs require outdoor work with direct exposure to the elements including extreme heat, rain, and cold, compared to only 25% of scaling jobs.

What Is a Quality Green Job?

A quality green job is a green job that provides a living wage and strong benefits as well as the stability, flexibility, autonomy, and opportunity that all people need to thrive. This definition is rooted in JFF's *Quality Jobs Framework*.

For this paper, we focused on the framework's measurable elements—compensation, job structure, individual agency, and workplace culture.

Compensation   **Structure**   **Culture and Agency**

We did not find reliable data on economic advancement and, therefore, did not examine it. More information on our research methods can be found in the Appendix.

While a greener economy will be good for the environment, evidence shows that not all green jobs are inherently good for the people they employ. The following sections offer a detailed look at the compensation, structure, culture, and agency of jobs at different stages of the green transformation cycle.

Scaling Jobs

While scaling jobs offer promising opportunities, it's imperative to address systemic barriers and biases to ensure equitable access and advancement for all workers.

TOTAL ANALYZED

26 occupations employing 5.7 million people

Overview: These jobs are increasingly adopting green skills, and opportunities are proliferating. The greatest concentrations of these jobs are in the government and professional, scientific, and technical services sectors.

Example Titles: Wind energy development managers; sustainability specialists; project management specialists; heating, air conditioning, and refrigeration mechanics and installers; and solar sales representatives and assessors.

Education: Most of these jobs require a postsecondary credential, and nearly one-third require a bachelor's degree (31%).

How Do Scaling Jobs Compare to Established and At-Risk Jobs?

Compensation: Scaling jobs have the highest median wage, at $86,214 annually. They also have the most access to every benefit category we examined (health insurance, retirement contributions, paid leave, subsidized childcare, subsidized commuting, flexible schedules, employee assistance programs, financial planning, and student loan repayments).

Structure: Scaling jobs have the lowest injury and illness rates. Their exposure to extreme heat was higher than at-risk jobs, but they had lower exposure to other dangerous conditions, such as extreme cold and to hazardous materials, compared to established or at-risk jobs.

Culture and Agency: Scaling jobs have the lowest turnover rates, at about 41%. The automation risk is also lower than average and much lower than that of established and at-risk jobs.

Who Works in Scaling Jobs?

Gender	35% of these workers are women. • The highest percentage across any of the job types.
Race	Most workers are white (66%). Hispanic, Black, and Asian workers represent roughly 14%, 10%, and 7% of the workforce respectively. The remaining 4% of workers identify as Hawaiian/Pacific Islander, Native American, or as two or more races. • These are the lowest percentages for Hispanic and Black workers in any job type, and the highest percentage of Asian workers.
Age	The majority of workers in these jobs are between the ages of 35 and 44.

The Typical "Scaling" Worker

- The typical worker in a scaling job is a white man earning what constitutes a living wage in 44 states, and he receives strong employer-provided benefits.

- Demand for his role is growing, and he faces a low risk from automation.

- He has some exposure to extreme heat but he and his colleagues have lower rates of illness and injury than workers in other job categories we analyzed.

- Where his workforce is diversifying, he sees more women and Asian workers joining the team.

Why It Matters

Scaling jobs have the best job quality across the three categories by far, but these jobs also have the highest educational threshold for entry.

Scaling jobs are still new, but across the broader U.S. labor market, research has consistently shown the low number of Black and Hispanic workers in these types of higher-quality jobs is not due to a lack of interest or skills but persistent discrimination.

- Some of this discrimination shows up in hiring. For example, on average across two dozen field studies of hiring practices, white applicants receive 36% more callbacks than equally qualified Black candidates and 24% more callbacks than Hispanic candidates.[5]

- Hiring through a centralized human resource department and the increased scrutiny that comes with governmental contracting have both been shown to help close those hiring gaps.[6]

While scaling jobs may have the largest percentages and numbers of women and Asian workers, simply having access to these jobs is not enough to successfully build a career.

- Across both the private and public sectors, Asian people, and Asian women in particular, are underrepresented in leadership roles, especially in executive positions.[7]

- Across the U.S. labor market, women experience a wage gap, earning roughly 83 cents for every dollar earned by their male counterparts. In addition, the average pay for an occupation has been shown to dip as more women enter the field.[8]

Taking these labor market trends into account, companies hiring for scaling roles should take steps to support equitable advancement and pay across demographics.

Established Jobs

Though established green jobs provide stability, tackling issues of low compensation, high turnover, and limited benefits is essential to ensure a fair and sustainable workforce.

TOTAL ANALYZED

25 occupations employing 6.3 million people

Overview: These jobs are common and frequently identified as green across many industries. The greatest concentrations of these jobs are in the transportation and warehousing and manufacturing sectors.

Examples: Recycling and reclamation workers, brownfield redevelopment specialists and site managers, electricians, and industrial machinery mechanics.

Education: Most of these jobs require a high school diploma, but 36% still require a postsecondary credential.

How Do Established Jobs Compare to Scaling and At-Risk Jobs?

Compensation: Workers in established jobs earn an annual median salary of about $64,000— roughly $20,000 lower than scaling jobs and $20,000 higher than at-risk jobs. Compared to the other job categories, these workers have the lowest access to personal leave, sick leave, paid family leave, or vacation. They also had the least access to employee assistance programs.

Structure: Workers in established jobs experience similar injury and illness rates as those in at-risk jobs—over ten times the rate for scaling jobs. They also have the most exposure to extreme heat, extreme cold, and loud noise.

Culture and Agency: Established jobs have the highest turnover rates, at 79%. The automation risk is higher than average but lower than the automation risk for at-risk jobs.

Who Works in Established Jobs?

Gender	20% of these workers are women.
Race	Most workers are white (59%). Hispanic, Black, and Asian workers represent roughly 19%, 15%, and 4% of the workforce respectively. And the remaining 3% of workers identify as Hawaiian/Pacific Islander, Native American, or as two or more races. • While Black and Hispanic workers make up a larger percentage of the at-risk workforce, there are more actual workers from these demographic groups in established jobs (about 930,000 and 1.2 million workers respectively).
Age	The majority of workers in these jobs are between the ages of 25 and 44.

The Typical "Established" Worker

- The typical worker in an established job is a white man earning what constitutes a living wage in only 8 states.

- He has access to health care and retirement benefits, but low access to paid leave or mental health supports.

- Demand for his role is growing, yet he also faces the highest turnover rates and an above-average risk of automation.

- The demographic makeup of his workforce has barely changed in 20 years.

Why It Matters

- Projections based on past hiring trends, real time job posting figures, and the integration of green skills into job descriptions all indicate that most established jobs will likely survive the transition to a green economy. That stability should be heartening from a training and education perspective, but it is undercut by the instability of the jobs themselves, where turnover and safety risks are high, and relatively few structures exist to support workers' mental and physical health.

- Workers in established jobs will still need resources, and time, to support continuous learning as they integrate new green technologies, standards, and policies into their work.

- Established jobs are what most people think of when they think of green jobs. They are positioned to set expectations and standards for what green jobs can and should be. Improving the quality of established jobs could create a ripple effect on the green jobs and industries being built up around them.

At-Risk Jobs

Workers in at-risk jobs, facing the highest risk of displacement amidst the green transition, urgently require support to transition to better quality green jobs with increased pay, benefits, and stability.

TOTAL ANALYZED

23 occupations employing 4.2 million people

Overview: At-risk jobs are unlikely to adapt and begin integrating green skills. Most of these jobs are in the transportation and warehousing sector. Because these jobs are the most vulnerable in a green economy transition, they will require deeper interventions along job pathways to support workers in the short and long term. Since 2018, the number of job postings for these roles has decreased by approximately 37,000.

Examples: Heavy and tractor-trailer truck drivers, bus and truck mechanics and diesel engine specialists, gas plant operators, and mobile heavy equipment mechanics.

Education: These jobs have the lowest barrier to entry, with most jobs only requiring a high school diploma.

How Do At-Risk Jobs Compare to Established and Scaling Jobs?

Compensation: At-risk jobs have the lowest annual median compensation at $46,551. They also have the lowest access to most of the benefits we examined, including paid sick leave (21 percent of workers do not have access to paid sick leave compared to 6 percent of workers in scaling jobs).

Structure: At-risk jobs have similar injury and illness rates as established jobs—more than ten times the rate for scaling jobs. These workers have the most exposure to the elements and to hazardous contaminants. They also have the lowest ability to independently pause their work outside of structured breaks.

Culture and Agency: At-risk jobs have turnover rates of about 66%, which is lower than the turnover rate of established jobs (79%) but higher than scaling (41%). Compared to scaling or established jobs, they have the highest automation risk.

Who Works in At-Risk Jobs?

Gender	7% of these workers are women.
Race	Most workers are white (60%). Hispanic, Black, and Asian workers represent roughly 19%, 16%, and 3% of the workforce, respectively. These are the highest percentages for Hispanic and Black workers in any job type examined. • The remaining 3% of workers identify as Hawaiian/Pacific Islander, Native American, or as two or more races.
Age	The majority of workers in these jobs are between the ages of 45 and 54.

⚠ The Typical "At-Risk" Worker

- The typical worker in an at-risk job is a white man whose annual earnings do not meet the definition of a living wage in any state.

- He also receives few benefits that might support financial stressors, including limited health care and leave time despite facing the highest safety concerns among the job categories we analyzed.

- Demand for his role is declining, with significant turnover and a high risk of automation.

- Where his workforce is diversifying, he tends to see more Black and Hispanic individuals joining the team.

Why It Matters

- At-risk jobs are the most accessible jobs with the lowest educational threshold to entry of the three job categories, but they also have the lowest compensation levels.

- Even though these jobs are unlikely to become green, we kept them as part of our analysis because the 4.2 million people working in these jobs will feel outsized impacts from a transition to a green economy. Studies currently show that currently fewer than 1% of workers in legacy industries are transitioning to green jobs and are far more likely to move into similar non-green roles or become unemployed.[9] These transitions will also be felt unevenly, as Black and Hispanic workers are overrepresented in at-risk roles.

- With an estimated more than 2.9 million green jobs being created every year, employers cannot rely solely on attracting recent graduates. It's essential to also consider strategies for recruiting and retraining experienced talent such as workers in these at-risk occupations.[10]

The Time to Act Is Now

At a time when diversity, equity, and inclusion initiatives are under attack across the United States, it's increasingly important to collect and review the type of data in this report. The trends highlighted above reflect how we, as a nation, value specific skills—and certain workers. They also reflect the long-term impact that occupational segregation has had—and continues to have—on individuals, families, and communities.[11]

Multiple public policy tools have been used to expand access to jobs for women and people of color, with varying levels of success. These include pre-apprenticeship programs, project labor agreements, and community benefits agreements with goals for hiring individuals who meet geographic, demographic, or socioeconomic criteria.[12]

However, the green transformation is happening so quickly—already affecting the 16.2 million people employed in the occupations we analyzed here—that we cannot wait for policy changes to work on their own. Employers must also take action to ensure that equity is at the foundation of their talent and business strategies.

Creating a greener economy that serves everyone will take more than ensuring access to green job opportunities. We must also work to ensure that those green jobs are of a quality worth striving for. This means taking a hard look not only at compensation but also at business culture, worker health and safety, and practices that support career growth over time.[13]

We believe that a regional approach offers the best chance of spreading the necessary changes. It must be rooted in communities and businesses working within their local contexts to collectively confront historical wrongs, address modern inequities, and work toward a better future.

Sign up to stay informed of the release of our talent strategies guide for small- and medium-sized businesses.

Appendix

Research Methods

JFF and Burning Glass Institute (BGI) partnered to determine how best to identify and quantify the economic transformation underway as the United States transitions to a low-carbon economy. We relied on Lightcast tools, including the online job postings data set, along with publicly available job trend data, employment and wages data from the U.S. Bureau of Labor Statistics (BLS) Occupational Outlook Handbook, and the Occupational Employment and Wage Statistics data set.

To select priority occupations for this analysis and their classification in the green transformation cycle, BGI analyzed Lightcast job postings data and measured the average year-over-year change in the relative importance of green skills within the overall skill profile of these roles between 2018 and 2022. JFF then analyzed related job quality and demographics data for each occupation and across the different stages of the transformation cycle, primarily using BLS data (see "Data Points Examined and Their Sources" below).

Data Limitations

While illustrative of patterns across green jobs, the demographic data we analyzed is limited and incomplete. It reflects the demographic categories the BLS uses, which do not include individuals who identify as nonbinary or gender nonconforming. It also does not reflect—in size or demographics—the full picture of undocumented workers contributing to these industries. Additional data could provide greater insights on other demographic trends such as for individuals with disabilities, individuals who have been incarcerated, or for veterans.

We did not include variables related to economic advancement in our analysis because of the limited data available. We also considered, but did not ultimately include, certain variables related to job agency and culture, such as mean days of on-the-job training required, percentage of workers covered by a union, and level of employee autonomy. These variables must be considered within their specific context, whether relative to the occupation, employer, or region. A variable such as autonomy, for example, may indicate a high level of self-sufficiency or signal a lack of supervision. JFF continues to explore what publicly available data can best provide insights consistent with our job quality framework.

Job Titles Included in This Analysis

Category	Job Titles Analyzed
Scaling Jobs	• Agricultural Technicians • Bicycle Repairers • Computer Network Support Specialists • Electrical and Electronics Installers and Repairers, Transportation Equipment • Electrical and Electronics Repairers, Commercial and Industrial Equipment • Electrical and Electronics Repairers, Powerhouse, Substation, and Relay • Electronic Equipment Installers and Repairers, Motor Vehicles • Emergency Management Directors • Energy Auditors • Environmental Compliance Inspectors • Geothermal Technicians • Heating, Air Conditioning, and Refrigeration Mechanics and Installers • Hoist and Winch Operators • Hydroelectric Plant Technicians • Maintenance Workers, Machinery • Mining and Geological Engineers, Including Mining Safety Engineers • Network and Computer Systems Administrators • Photonics Technicians • Project Management Specialists • Quality Control Analysts • Solar Energy Systems Engineers • Solar Photovoltaic Installers • Solar Sales Representatives and Assessors • Sustainability Specialists • Wind Energy Development Managers
Established Jobs	• Agricultural Inspectors • Biofuels/Biodiesel Technology and Product Development Managers • Brownfield Redevelopment Specialists and Site Managers • Carpet Installers • Data Warehousing Specialists • Electricians • Environmental Science and Protection Technicians, Including Health • Forest and Conservation Workers • Grounds Maintenance Workers, All Other • Industrial Ecologists • Industrial Machinery Mechanics • Insulation Workers, Floor, Ceiling, and Wall

Category	Job Titles Analyzed
Established Jobs	- Logging Workers, All Other - Nuclear Engineers - Plasterers and Stucco Masons - Recycling and Reclamation Workers - Refuse and Recyclable Material Collectors - Soil and Plant Scientists - Surveying and Mapping Technicians - Terrazzo Workers and Finishers - Transportation Planners - Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation - Transportation, Storage, and Distribution Managers - Urban and Regional Planners - Water and Wastewater Treatment Plant and System Operators
At-Risk Jobs	- Bus and Truck Mechanics and Diesel Engine Specialists - Chemical Equipment Operators and Tenders - Chemical Plant and System Operators - Continuous Mining Machine Operators - Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic - Excavating and Loading Machine and Dragline Operators, Surface Mining - Extraction Workers, All Other - Foundry Mold and Coremakers - Gas Plant Operators - Geological Technicians, Except Hydrologic Technicians - Heavy and Tractor-Trailer Truck Drivers - Light Truck Drivers - Mining and Geological Engineers, Including Mining Safety Engineers - Mobile Heavy Equipment Mechanics, Except Engines - Nuclear Power Reactor Operators - Petroleum Pump System Operators, Refinery Operators, and Gaugers - Power Distributors and Dispatchers - Power Plant Operators - Pump Operators, Except Wellhead Pumpers - Rotary Drill Operators, Oil and Gas - Service Unit Operators, Oil and Gas - Stationary Engineers and Boiler Operators - Taxi Drivers

Data Points Examined and Their Sources

Domain	Variable	Source
Occupation	Occupation Name	Burning Glass Institute analysis, selected based on BGI's proprietary "greenness measure," or the relative importance of green skills within the overall skill profile of the occupation between 2018 and 2022, as well as frequency of job postings
Demand	2021 Employment Levels	BLS 10-Year Employment Projections (2021–2031)
Demand	BLS projected 10-year change	BLS 10-Year Employment Projections (2021–2031)
Access	Typical education of someone employed in the occupation	BLS 10-Year Employment Projections (2021–2031)
Access	Typical work experience of someone employed in the occupation	BLS 10-Year Employment Projections (2021–2031)
Demographics	Gender and Race	BLS/CPS Labor Force Statistics (2021)

💲 Compensation		
Pay	Median annual salary as of 2021	BLS 10-Year Employment Projections (2021 – 2031)
Health Care Benefits	Percent of private workers with access to health care benefits	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Retirement Benefits	Percent of private workers with access to all retirement benefits	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Combination of Benefits	Percent of private industry workers with access to no medical care and no retirement benefits	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Leave Benefits	Access to personal leave, sick leave, paid family leave, or vacation	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Leave Benefits	Percent of private industry workers with access to paid family leave	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Leave Benefits	Paid holidays: average number of days	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Leave Benefits	Percent of workers with access to paid sick leave	BLS National Compensation Survey, Employee Benefits in the United States, March 2023

Domain	Variable	Source
Financial Benefits	Percent of private industry workers with access to financial planning	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
	Percent of private industry workers with access to student loan repayment	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Quality of Life Benefits	Percent of private workers with access to childcare (fully or partially subsidized by their employer)	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
	Percent of private workers with access to subsidized commuting	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
	Percent of private workers with access to employee assistance programs	BLS National Compensation Survey, Employee Benefits in the United States, March 2023

Structure

Domain	Variable	Source
Pacing	Percent of workers, without the ability to pause work (workers who can't take a short, unscheduled break, such as to make a personal phone call or clear one's head, without getting someone to cover their responsibilities)	BLS Occupational Requirements Survey
	Percent of private workers with access to flexible work schedules	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Injury Rate	Rate of injury/illness per 100 workers. Injury or illness is defined as a condition or significantly aggravated preexisting condition caused by or attributable to the work environment.	BLS Survey of Occupational Injuries and Illnesses Data, Table R98

Domain	Variable	Source
Exposure to Outdoor Climates	Percent of workers, exposed to outdoors	BLS Occupational Requirements Survey
Exposure to Climate Extremes	Percent of workers, exposed to extreme cold	BLS Occupational Requirements Survey
	Percent of workers, exposed to extreme heat	BLS Occupational Requirements Survey
	Percent of workers, exposed to loud noise	BLS Occupational Requirements Survey
	Percent of workers, exposed to hazardous contaminants	BLS Occupational Requirements Survey

👥 Culture and Agency

Turnover	Turnover Rate	Lightcast 2024.1 analysis calculated by comparing total separations to total jobs. Separations data is published at the industry level and modeled to occupation via staffing patterns showing the occupational makeup of an industry.
	Percent of private workers with access to flexible work schedules	BLS National Compensation Survey, Employee Benefits in the United States, March 2023
Automation Risk	Automation Index	Lightcast 2024.1 analysis of an occupation's risk of being affected by automation using four measures: • % of time spent on high-risk work • % of time spent on low-risk work • Number of high-risk jobs in compatible occupations • Overall industry automation risk The automation index is presented as a scale with a base of 100. An automation index greater than 100 indicates a higher-than-average risk of automation; an automation index less than 100 indicates a lower-than-average risk of automation.

Endnotes

1. It is anticipated that the Bipartisan Infrastructure Law (BIL), the Inflation Reduction Act (IRA), and the CHIPS and Science Act will collectively create 18.7 million jobs, with an average of 2.9 million jobs created annually. See: Robert Pollin et al., Employment Impacts of New U.S. Clean Energy, Manufacturing, and Infrastructure Laws (Amherst, MA: Political Economy Research Institute, University of Massachusetts, Amherst, September 2023), https://develop-peri.umass.edu/images/publication/BIL_IRA_CHIPS_9-18-23-1.pdf.

2. In this paper, JFF uses the U.S. Census Bureau terms "Hispanic" and "Asian," although they do not align with our publishing guidelines for using equitable and inclusive language when writing about people. When we share insights or data from individuals or organizations whose language choices differ from our own, we use their terms to preserve accuracy. See our Language Matters Guide for more information.

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11. Laura Sullivan et al., Not Only Unequal Paychecks: Occupational Segregation, Benefits, and the Racial Wealth Gap (Waltham, MA: Institute on Assets and Social Policy, Heller School for Social Policy and Management, Brandeis University, April 2019), https://www.appam.org/assets/1/7/occupational_segregation_report_40219.pdf; Kate Bahn and Carmen Sanchez Cumming, "U.S. Occupational Segregation by Race, Ethnicity, and Gender" (Washington, DC: Washington Center for Equitable Growth, July 2020), https://equitablegrowth.org/wp-content/uploads/2020/07/063020-occup-seg-fs.pdf.

12. For more information, see: Erin Johansson and Benjamin Woods, Building Career Opportunities for Women and People of Color: Breakthroughs in Construction, Jobs With Justice Education Fund and the Tradeswomen Committee of North America's Building Trades Unions, November 2016, https://www.jwj.org/wp-content/uploads/2016/12/JWJEDU_NABTU_Report_2016_OnlineVersion_small.pdf; Dale Belman and Matthew M. Bodah, Building Better: A Look at Best Practices for the Design of Project Labor Agreements., EPI Briefing Paper, August 11, 2010 (Washington, DC: Economic Policy Institute) https://files.epi.org/page/-/pdf/BP274.pdf; and Congressional Research Service, Project Labor Agreements, June 28, 2012, https://www.everycrsreport.com/files/20120628_R41310_731846eb1c5bc373a7ea40ebd566f72ded8a8771.pdf.

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