The Avenue

BROOKINGS

How clean energy jobs can power an equitable COVID-19 recovery

Joseph W. Kane and Ranjitha Shivaram Thursday, September 10, 2020

This July, Democratic presidential candidate Joe Biden released his $2 trillion climate plan, touching on many interconnected themes, from clean energy to resilient infrastructure to environmental justice. But the plan's emphasis on jobs was most apparent. "When I think about climate change, the word I think of is 'jobs,'" Biden said in his announcement.

Investing in infrastructure and creating more jobs remain areas of bipartisan interest at the federal level, especially given their potential to stimulate the economy after COVID-19. Biden's plan goes one step further by linking infrastructure job creation to climate action, specifically in the transition to a clean energy economy.

Mitigating or reducing greenhouse gas emissions is crucial to address climate change. A transition to clean energy is a big part of that, through shifting the country to clean energy sources, enhancing energy efficiency, and minimizing environmental impacts. Several federal climate proposals, including the Green New Deal, have aimed to accelerate this transition while generating more jobs, and Biden's plan reaffirms the importance of social and economic equity. People, not projects, are the foundation for addressing an increasingly extreme climate.

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Connecting workers with the skills, training, and career opportunities that will allow the country to combat climate change will not only support more jobs, but also power a more equitable and enduring recovery from the COVID-19 pandemic. The current recession has only increased the urgency, as millions of unemployed workers could benefit from long-term opportunities related to clean energy. But federal leaders cannot simply propose big ideas; they must specify how prospective workers will fill clean energy jobs.

As previous Brookings Metro research on advancing inclusion through clean energy jobs has shown, policymakers need to recognize and invest in careers that offer equitable wages, promote transferable skills, and pose lower formal educational barriers to entry. Clean energy jobs offer all three benefits, making them crucial for the post-pandemic recovery. In this post, we build off of our past research to outline the next steps for policymakers to connect more workers to these opportunities. Maximizing the impact of Biden's climate plan (or any national plan) depends on clear worker definitions, targeted workforce investments, and strong local collaborations.

Clean energy jobs pay well and have fewer educational barriers to entry

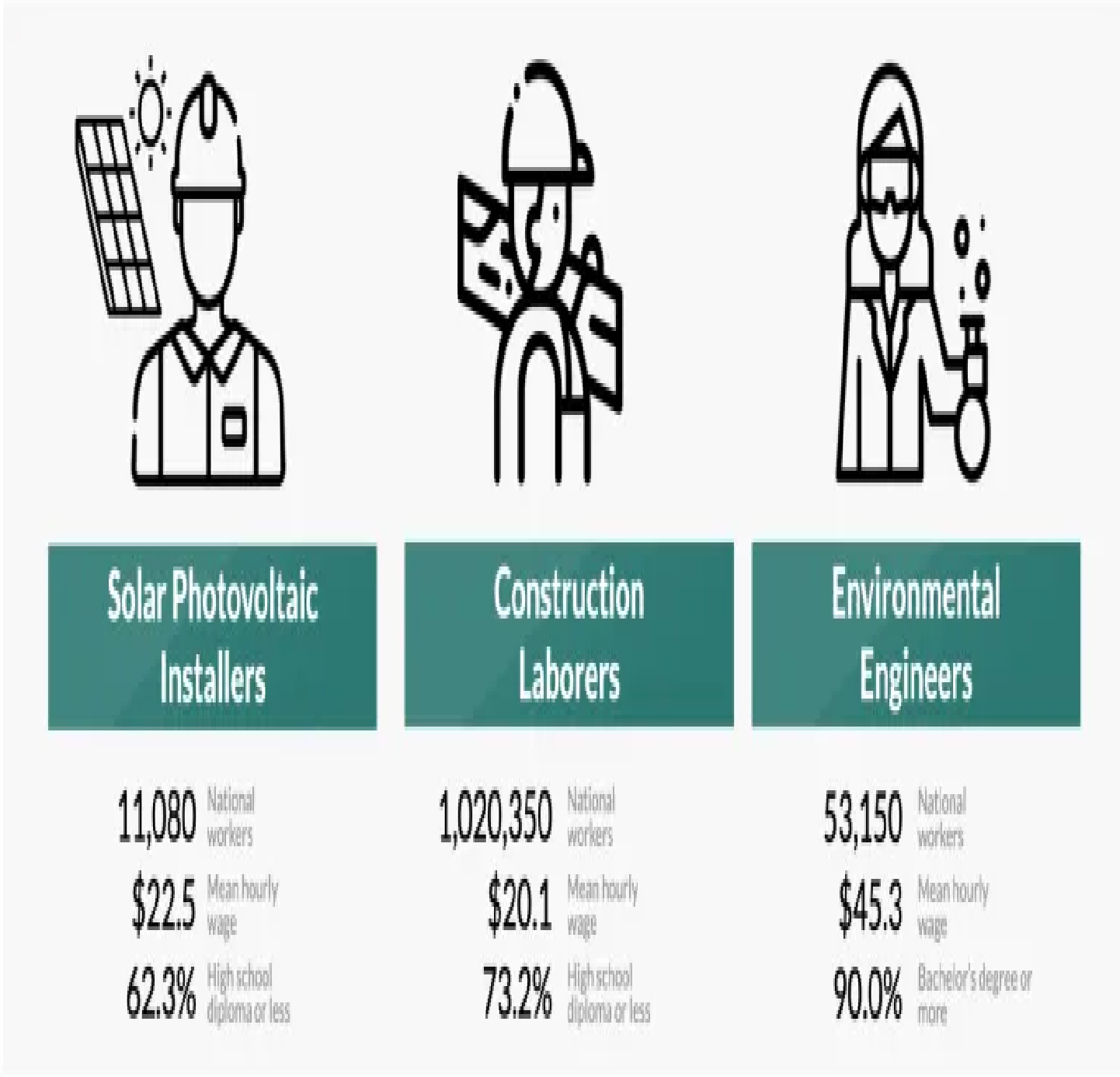
Just as our clean energy needs are wide and varied, so too are our related workforce needs. Captured under the "clean energy economy"—an expansive set of services and activities with a clean energy focus—these jobs have gained greater attention over the past decade, with several studies and surveys aiming to better identify, measure, and monitor their growth.

When we think of clean energy workers, we might typically visualize power plant operators or electricians. But these positions are just the beginning. Clean energy workers are infused within every sector of our economy. Workers involved in clean energy production, transmission, and distribution are obvious, including fast-growing occupations such as solar photovoltaic installers. But the clean energy economy also employs a vast array of workers who construct, operate, and maintain our built environment. Buildings accounted for nearly a third of total U.S. end-use energy

consumption in 2019, and construction workers who make buildings more energy efficient are critical to the clean energy transition. Also included are workers in environmental management, such as engineers and conservation scientists.

Clean energy occupations are numerous, varied, and infuse the entire economy

National statistics: Mean hourly wage: $25.72; 32.2% High school diploma or less



What's easy for policymakers to overlook is just how many clean energy occupations pay higher wages while posing lower formal educational barriers to entry compared to all jobs nationally. Nearly two-thirds of solar installers (62.3%) have a high school diploma or less, as do nearly three-quarters of construction workers (73.2%)—both significantly higher than the national share for all occupations (32.2%). These occupations also tend to pay higher wages, especially for workers just starting out their careers or at lower ends of the income spectrum; for example, despite having lower educational requirements, solar installers have a mean hourly wage of $22.50, close to the national mean of $25.72. The opportunity for well-paying clean energy jobs is clear, and it is time to seize it.

Fostering a diverse and inclusive clean energy workforce

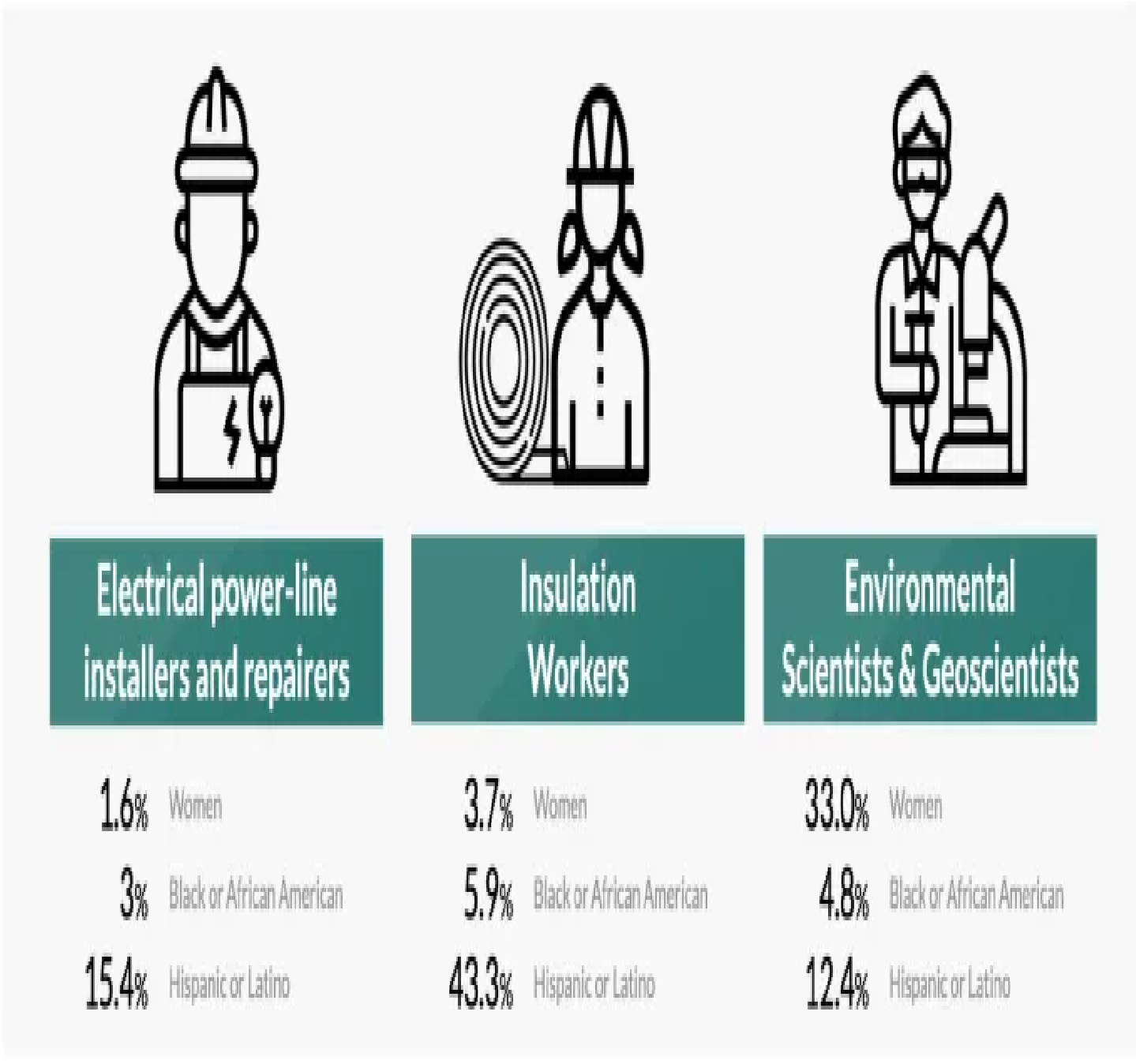
Even before COVID-19 hit, the challenge has been connecting more workers to these careers. Many clean energy jobs are projected to grow fast in the next decade, despite recent losses during the pandemic. But counting whether jobs are going up or down misses a more pressing point: the specific types of workers affected. Concentrating on larger industry trends can overshadow the current lack of racial and gender diversity throughout the clean energy economy.

Promoting a truly inclusive economic recovery must center on these gaps. The lack of women is especially stark in many skilled trades positions, such as electrical power-line installers (1.6%) and insulation workers (3.1%), relative to the national average (47%). At

the same time, the share of Black workers falls well below the national average of 12.3%, with shortfalls evident across a variety of positions in science, technology, engineering, and math (STEM) fields, such as environmental scientists (4.8%).

The clean energy workforce is projected to grow overall, but needs to address diversity, equity, and inclusion

National shares for comparison: Women: 47%; Black: 12.3%, Latino or Hispanic: 17.6%



This data confirms that current hiring, training, and retention policies are not delivering the gender and racial diversity the country needs. A wave of projected retirements and replacement needs in many positions underscores a need to connect with a new generation of talent, similar to what other infrastructure employers in transportation and water are facing. Retraining and connecting displaced workers in traditional energy industries (coal, oil, and gas) with careers in clean energy deserves much greater attention, especially given the potential mismatch in the geographic location and current skillset of existing energy workers. This transition is bound to be a painful one for a large swath of workers whose skills and labor have powered economic growth so far, so we need more robust policies to ensure that their future needs are met.

Targeting education, expanding training, and forging stronger local collaborations

Federal leaders should seize our current moment and create long-term platforms for economic equity and growth, centered around a more diverse range of workers in the clean energy economy. But, in isolation, federal efforts can only do so much. Federal plans and investments must support the needs of states and localities, where most workforce development innovations and collaborations continue to take place.

While Biden's climate plan highlights this point, the difficult reality is that state and local leaders are operating in a highly uncertain and constrained environment—fiscally, technically, and otherwise. Spending cuts will likely hinder action on education and training, to say nothing of impending job losses. But these challenges do not lessen the need for state and local innovations; they are only heightening it. Demonstrating greater

federal leadership and providing more federal funding around these innovations would offer a good start, especially when it comes to modernizing energy science curricula, better aligning education and training opportunities, and expanding community engagement.

Modernizing energy science curricula should emphasize the STEM skills needed for so many different positions across the clean energy economy. These curricula also need to be more flexible for a greater variety of students and prospective workers. This means

providing more extracurricular, supplemental, and short-term educational opportunities at universities, community colleges, and through additional non-degree postsecondary certificate programs structured to meet the needs of disconnected youth. For example, the U.S. Department of Energy's Brookhaven National Laboratory has widened the availability of such offerings with several educational partners, while local institutions such as Lane Community College in Oregon have started more nimble, online energy degree programs.

Better aligning education and training is also essential for equipping clean energy workers with the skills they need to succeed on the job. Sector plans and partnerships centered around clean energy jobs can help raise visibility around the issue, including greater coordination among state and local employers, educators, community organizations, and other workforce development leaders. A continued focus on work-based learning—through internships, pre-apprenticeships, and mentorships—can expose more students and prospective workers to clean energy careers. Philadelphia's PowerCorpsPHL offers one such model to consider.

Finally, reaching underrepresented students and workers is a necessity for expanding recruitment. Ongoing community outreach through demonstration projects and events can raise visibility among younger workers, revealing the range of career opportunities in the clean energy economy. Technology bootcamps such as Black Girls Code can also elevate awareness and expose students to STEM careers. Connecting with neighborhood groups, churches, veterans organizations, and other outlets can reach workers who may otherwise overlook a clean energy career transition.

The model for future federal action is starting to take shape; federal investments can help scale and replicate local innovations centered on the needs of a more diverse group of individuals looking to grow their careers. But it will take a combination of national, state, and local leadership to fill clean energy jobs and connect more individuals with opportunity. Even as the COVID-19 pandemic and recession deepen, these leaders should see clean energy as an equitable and sustainable platform for recovery.