



Metropolitan Policy Program at BROOKINGS

CONTACT:

Allison Courtin, 202-238-3556, acourtin@brookings.edu

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Brookings Releases First-Ever, Metro-Level Analysis of Total U.S. Infrastructure Employment

WASHINGTON, D.C. – The workforce responsible for supporting the nation’s infrastructure, including transportation, water and energy systems, is far larger than currently thought, according to a report released today by the Brookings Metropolitan Policy Program. One in every ten Americans, or 11 percent of the national workforce, holds an infrastructure job, and these jobs stretch across 95 occupations and 42 industries.

Beyond Shovel-Ready: The Extent of Infrastructure Jobs in the U.S. is the first study of its kind to measure the full breadth of infrastructure employment in the United States. Based on 2012 employment data, the report brings to light the fact that infrastructure jobs play a distinct role not only in the construction of the nation’s infrastructure assets but also in their design, operation and governance.

“We have learned through this report that infrastructure is a much more significant factor in a healthy job market than we thought, with more than 14 million workers employed in a large assortment of industries, including utilities, construction and government,” said Joseph Kane, Policy/Research Assistant at the Brookings Metropolitan Policy Program and co-author of the report. “By gaining a full understanding of the actual size and scope of this segment of our economy, policymakers will be in a stronger position to develop targeted solutions to better manage the country’s infrastructure as well as address our jobs deficit.”

The foundation of a functioning economy, infrastructure provides the physical structures needed for such services as water, electricity and waste removal and make it possible for communities to meet the needs of their citizens and compete in the global economy. Only 15 percent of infrastructure workers actually build infrastructure, while 77 percent operate infrastructure systems. Material movers, truck drivers and electricians hold the largest portion, or 30 percent, of infrastructure jobs.

The largest infrastructure labor markets in the country are New York, Los Angeles and Chicago, with more than 1.8 million workers in each of the three metros. However, several key warehousing and logistics hubs rank among the metropolitan areas with the largest share of infrastructure jobs relative to their total employment, including Memphis at nearly 18 percent. The energy and utility centers of New Orleans and Houston also have higher than average shares

of infrastructure workers. Washington, D.C., Austin and Tucson are among metropolitan areas with a wider range of economic specialties and have lower infrastructure shares at around 8 percent.

According to the Brookings report, infrastructure jobs offer more equitable wages compared to other occupations. For example, infrastructure workers at lower ends of the income scale earn 30 percent more than all workers at these levels nationally. At the same time, 59 of the 95 infrastructure occupations pay above-average wages overall, with air traffic controllers, nuclear engineers, and marine engineers/naval architects leading the way.

Many infrastructure jobs also have low barriers to entry, requiring less formal education, which makes them accessible to a larger pool of workers. Only 12 percent of workers employed in infrastructure occupations hold a bachelor's or higher level degree. In addition, 67 of the 95 infrastructure occupations typically require a high school diploma or less for entry and employ nine million workers, ranging from telecommunication line installers to water treatment plant operators. Most workers, over 80 percent, gain their training on the job.

“Our new research exposes how infrastructure is uniquely positioned to simultaneously address income inequality, low skill unemployment and long-term economic competitiveness,” said Robert Puentes, Senior Fellow and Director of Metropolitan Infrastructure Initiative at the Brookings Metropolitan Policy Program and co-author of the report.

Over the next ten years, nearly one-quarter of the entire infrastructure workforce will need to be replaced as retirements increase and other labor shifts take place. Moreover, 1.1 million new jobs are projected to emerge between now and 2022 across all infrastructure occupations. Fast expanding occupations include wind turbine service technicians and solar photovoltaic installers whose employment is projected to expand by more than 20 percent.

“Policymakers have often resorted to stimulus-style spending on infrastructure construction projects as a way to shore up the labor market. This kind of investment provides only short-term jobs, though. With the right investment approach, however, infrastructure offers an extremely effective way to create the kind of long-term, sustainable jobs that will help grow our economy for many years to come,” added Puentes.

The Metropolitan Policy Program at Brookings provides decision-makers with cutting-edge research and policy ideas for improving the health and prosperity of metropolitan areas, including their component cities, suburbs, and rural areas. To learn more, please visit: www.brookings.edu/metro. Follow us on Twitter at [www.twitter.com/brookingsmetro](https://twitter.com/brookingsmetro).