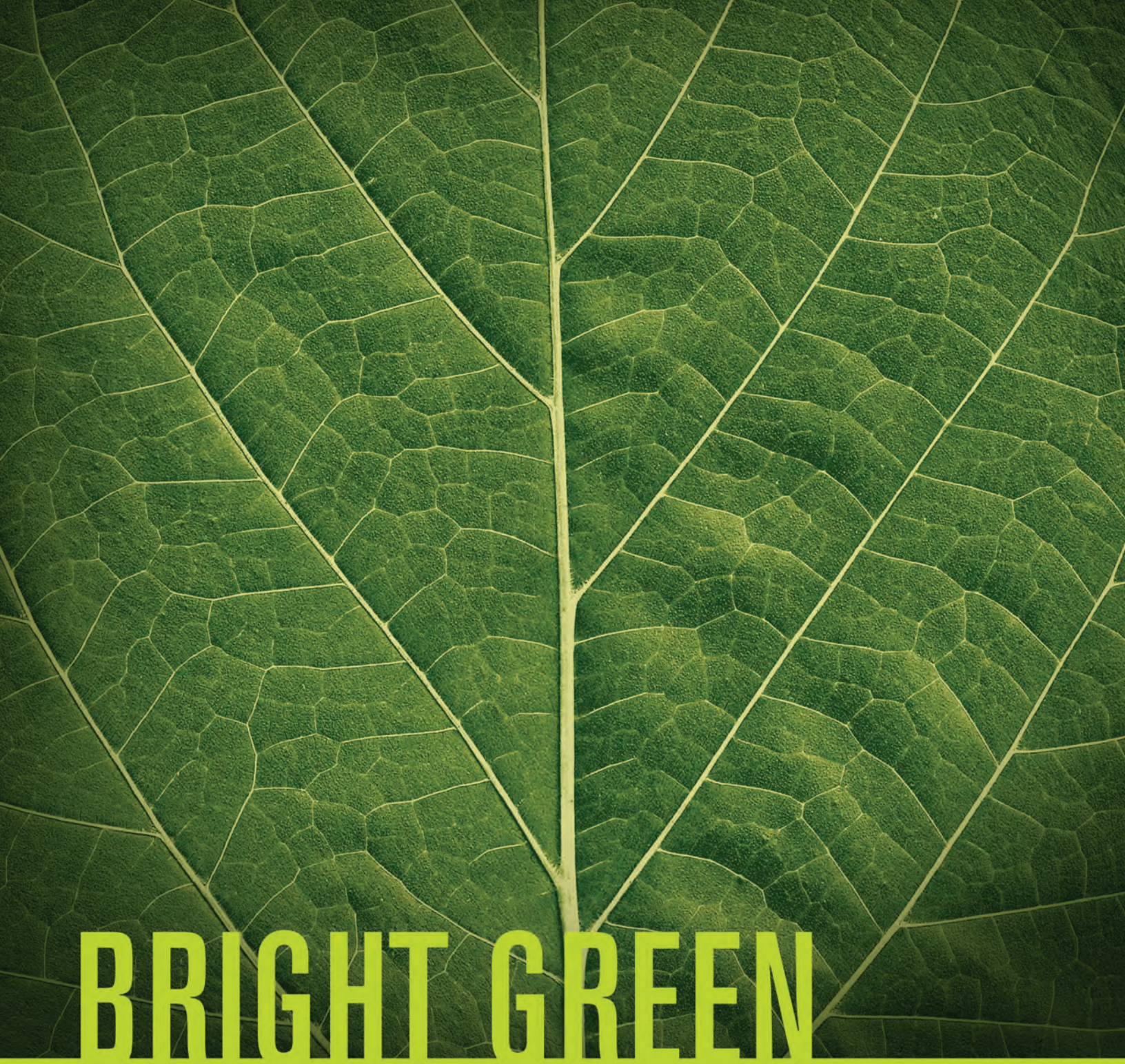

BRIGHT GREEN

FIVE METROPOLITAN AREAS WHERE THE LATINO WORKFORCE AND THE CLEAN ECONOMY OVERLAP

NCLR
National Council of La Raza

The National Council of La Raza (NCLR)—the largest national Hispanic civil rights and advocacy organization in the United States—works to improve opportunities for Hispanic Americans. Through its network of nearly 300 affiliated community-based organizations, NCLR reaches millions of Hispanics each year in 41 states, Puerto Rico, and the District of Columbia. To achieve its mission, NCLR conducts applied research, policy analysis, and advocacy, providing a Latino perspective in five key areas—assets/investments, civil rights/immigration, education, employment and economic status, and health. In addition, it provides capacity-building assistance to its Affiliates who work at the state and local level to advance opportunities for individuals and families.

Founded in 1968, NCLR is a private, nonprofit, nonpartisan, tax-exempt organization headquartered in Washington, DC, serving all Hispanic subgroups in all regions of the country. It has regional offices in Chicago, Los Angeles, New York, Phoenix, and San Antonio and state operations throughout the nation.

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Bright Green

Five Metropolitan Areas where the Latino Workforce and the Clean Economy Overlap

By Catherine Singley Harvey

Acknowledgments

This publication is the result of a collaborative effort of staff at the National Council of La Raza (NCLR). Catherine Singley Harvey, Senior Policy Analyst at NCLR, is the primary author. Gregory Wersching, Editor, and Beatriz Rodriguez Delgado, Graphic Designer and Project Coordinator, prepared this work for publication.

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Contents

Introduction

More than three years after the official end of the Great Recession, the future of the United States economy is still clouded in uncertainty. Will unemployment ever return to 5% or less? When will incomes for the middle class rise again? Which industries will solidify America's global competitive edge? In the midst of these questions, one thing is clear: the face of the American workforce is changing rapidly. Today, 15% of the U.S. labor force is Hispanic. Latinos will make up 18% of the workforce by 2018 and fully one in three U.S. workers by 2050. Without a doubt, the strength of the American economy is increasingly dependent on the strength of the Latino workforce.

The growth of the Latino workforce has important implications for another major trend that promises to define the future of the American economy: the intentional move to environmental sustainability. Consumers, private businesses, and government actors are engaged in efforts to reduce pollution, conserve natural resources, and shift from fossil fuels to more efficient and renewable energy sources. In many ways, policy is lagging behind public opinion and trends that are already well under way in the U.S. marketplace. Yet there is an unmistakable momentum building at all levels of government to advance measurable outcomes for the "clean economy," from urban agricultural initiatives to state renewable energy portfolio standards to federal air quality regulations. The fundamental concept of "green jobs"—broadly defined as occupations that contribute to efforts to improve the environment—has permeated the public discourse as a way of describing how policy decisions about energy and the environment affect the U.S. labor market.

Given the compounding forces driving the clean economy, from climate change and environmental pollution to social unrest in oil-rich nations, it is likely that the emergence of green jobs are more than a passing fad; rather, they are a reality with the potential to shape the 21st-century labor market. In fact, recent evidence suggests that states with economies more reliant on green jobs have weathered the recent economic downturn better than less green states. This inevitability makes the intersection of the clean economy and the Latino workforce a topic ripe for analysis. Data show that Latinos recognize the employment potential in the clean economy. In a 2012 national poll of Hispanic voters, 87% of Latinos surveyed said they would prefer to work in a clean energy industry than at a fossil fuel company or an oil refinery, assuming equal wages and benefits. Still, community forums conducted by the National Council of La Raza (NCLR) have uncovered frustration among some Latinos who perceive tremendous obstacles to getting green jobs and participating in the clean economy.

This report offers a glimpse into the future of the U.S. economy, as it relates to a large and rapidly growing Latino workforce in a robust green economy. By comparing the occupational and educational profiles of the Hispanic workforce and the clean economy in five metropolitan areas, it is possible to gauge the degree to which Latinos are participating in the clean economy. These local labor markets offer early clues about policy interventions that could better align the fastest-growing segment of the labor force with some of the fastest-growing sectors of the economy. The five "bright green" metro areas described in this report are:

- Knoxville, Tennessee
- McAllen-Edinburg-Mission, Texas
- Little Rock-North Little Rock-Conway, Arkansas
- Albuquerque, New Mexico
- Los Angeles-Long Beach-Santa Ana, California

While this research makes an important contribution to the body of knowledge about the emerging American economy, it illustrates only part of the whole picture of what is necessary for Latino workers to fully contribute to the clean economy. This analysis is focused on occupational distribution and education as predictors of employment in specific locales. While geographic proximity to jobs, education, and relevant experience are indeed strong determining factors for employment, there are other important factors that impact employment outcomes. Latinos in particular are more likely than other workers to face barriers to employment, including limited access to affordable transportation, education, training, relevant social networks, and opportunities to improve their English proficiency. In addition, institutions that provide postsecondary education and job training, including community-based organizations, play a vital role in helping individuals break down these barriers and find jobs in emerging industries.

** The terms "Hispanic" and "Latino" are used interchangeably by the U.S. Census Bureau and throughout this document to refer to persons of Mexican, Puerto Rican, Cuban, Central and South American, Dominican, Spanish, and other Hispanic descent; they may be of any race.*

Bright Green Metro Areas

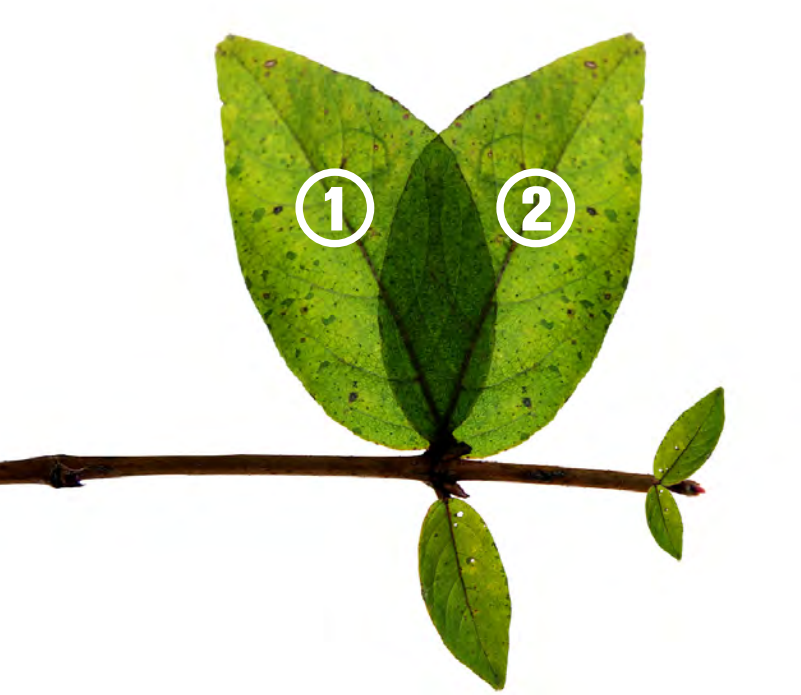
The science of counting jobs has garnered renewed interest in an economic recovery dampened by a scarcity of jobs. As of November 2012, the ratio of unemployed workers to job openings in the U.S. was more than three to one. Likewise, scholars and government agencies have devoted considerable resources to defining green jobs in order to quantify them. Few estimates, however, are useful to decision-makers in the business and government sectors, primarily because they are national in scale or based on narrow definitions that are difficult to apply.

In contrast, the five metro areas detailed in this report are based on actual—not hypothetical—private sector employment and a comprehensive definition of green jobs developed by the Brookings Institution, as published in their groundbreaking report, Sizing the Clean Economy, in 2011. The Brookings Institution relies on a unique database that it developed in partnership with Battelle's Technology Partnership Practice, a research and development company. The Brookings-Battelle database combines data from private business and government surveys to arrive at a more realistic estimate of employment in the clean economy in 100 metropolitan areas in the U.S.

For the purposes of this report, a metro area is considered "bright green" if it is ranks in the top ten largest, most concentrated, or fastest-growing Hispanic workforces and the largest, most concentrated, or fastest-growing clean economies, as defined by the Brookings-Battelle database. As Figure 1 illustrates, bright green areas meet at least one of the Hispanic workforce criteria and one of the clean economy criteria. It may surprise casual observers that Little Rock, Arkansas and Knoxville, Tennessee rise to the top of the list. In both of these places, it is the rapid growth in the adult Hispanic population combined with their unique green economies that elevated them to the list. For more details on selection criteria and the characteristics of traditional large Latino metro areas such as New York City, see the Appendix.

** See interactive mapping tool at http://www.brookings.edu/research/interactives/aggregate-clean-economy#/?ind=1&geo=2&vis=0&dt=1&z=0&x=0&y=0.*

Figure 1. Selection Criteria for Bright Green Metropolitan Areas



1. HISPANIC WORKFORCE

- Large Number of Hispanic Working-Age Adults
- Large Share of Hispanics in Overall Workforce
- Fast-Growing Hispanic Working-Age Adult Population

2. CLEAN ECONOMY

- Large Number of Green Jobs
- Large Share of Green Jobs in Overall Economy
- Fast-Growing Green Economy

Source: Demographic data is based on analysis of the 2000 and 2010 Decennial Census and the 2008–2010 American Community Survey three-year micro data by the Institute for Women's Policy Research (IWPR). Green jobs data are based on the Brookings-Battelle Clean Economy Database, July 2011, http://www.brookings.edu/~/media/Files/Programs/Metro/clean_economy/0713_clean_economy_database.zip (accessed July 2012). See Appendix for more details.

Findings

The following analysis of bright green metro areas finds some encouraging indications that Latinos are already contributing to the clean economy in vastly different locales, from Knoxville, Tennessee to Los Angeles, California. In some places there is strong overlap between the major occupations that make up a local clean economy and the top occupations that employ Latinos. Highlights include:

- Office and administrative support jobs in Knoxville, TN, McAllen, TX, Albuquerque, NM, and Los Angeles, CA
- Construction and extraction jobs in McAllen
- Production jobs in Little Rock and Los Angeles
- Transportation and material moving jobs in Los Angeles and Little Rock

Latinos are also overrepresented in some of the top clean economy occupation groups in these areas. This is true in locales where Hispanics make up the vast majority of working-age adults, such as McAllen (91% Hispanic), but also where the Latino adult population is small but growing rapidly, such as Little Rock (5% Hispanic).

However, certain bright green metro areas show some degree of mismatch between the occupation profile of Latino workers and that of the green economy. In Albuquerque, for instance, office and administrative support occupations are the only area of overlap between the top Latino occupations and the top occupations that make up the local clean economy. That is not to say that Latinos are not well positioned to contribute to Albuquerque's clean economy; on the contrary, Latinos are overrepresented in three out of the top five green jobs categories in the metro area compared to their share of the overall workforce, which is 44% Latino. This finding simply points to the fact that the majority of Latinos are employed in occupations other than the jobs that make up Albuquerque's growing clean economy at this point in its development.

Another important finding is that most green occupation groups pay higher median wages than traditional Latino occupations. A simple comparison of the top Latino jobs and top green jobs throughout this report illustrates this trend. The wage advantage in the clean economy is true outside of traditional Latino occupations as well. The Brookings Institution finds that "median wages in the clean economy—meaning those in the middle of the distribution—are 13 percent higher than median U.S. wages." While the wage benefit in green jobs is clear, Latinos tend to be underrepresented in the highest-paying green jobs, even in metro areas where the Hispanic occupation profile closely mirrors that of the clean economy. One example is management occupations in McAllen, Texas, which pay a median hourly wage of $35.59, far higher than other occupations that make up McAllen's clean economy. Latinos make up 80% of the workers employed in management jobs in McAllen, while they represent 91% of all workers in McAllen.

Comparing the educational distribution of Hispanic adults and clean economy employees offers more insight into whether Latinos in the bright green metro areas are employed in green jobs. The Brookings Institution and the Economic Policy Institute find that green jobs tend to be more accessible than other jobs in the U.S. economy to workers without a four-year college degree. This is a positive aspect of the clean economy for Latino adults, 88.1% of whom have less than a bachelor's degree. The majority of jobs in the clean economy in all five bright green metro areas requires less than a bachelor's degree. In Knoxville, 56% require less than a bachelor's degree; 80% in McAllen; 78% in Little Rock; 70% in Albuquerque; and 78% in Los Angeles. However, in some areas there is a fault line in job access for workers who have only earned a high school degree or less versus those who have a two-year degree or some college experience. Competition for green jobs is likely to be more difficult for Latinos in bright green metro areas because their educational attainment is generally lower than that of the workforce overall.

Policy Implications

This labor market analysis provides a mix of positive news and early warning signs about the inevitable convergence of the growing green economy and Latino workers. The bright green metro areas offer tremendous potential for those Latino workers who are already employed in relevant occupations or possess the educational requirements to qualify for jobs in the clean economy. Yet the distributional comparisons of Latinos and the clean economy points to some wide gaps that must narrow in order to ensure that the clean economy has a reliable workforce to sustain it in the coming decades. Policymakers interested in advancing America's policies to improve environmental quality, reduce pollution, and shift to cleaner sources of energy should take note of the human capital needs of Latino workers. Improving opportunities for Latinos to work in

the clean economy would also improve their wages and future employment prospects as green jobs continue to grow.

One necessary policy response is a concerted effort by companies and public, private, and nonprofit training providers to recruit and train incumbent Latino workers to transition from their current occupations into green jobs that are functionally similar. Success in this effort would require a more finite analysis of current business demands, as well as clear lines of communication between local workforce development and business development systems.

A second, more expansive policy response is a comprehensive commitment by all levels of government and business to invest in adult education and training that helps more Latinos attain postsecondary education, either as an associate's degree or equivalent college credentials. Given that the vast majority of green jobs are accessible to workers who possess some college experience but not necessarily a four-year degree, moving more Latinos into adult education and training programs that prepare them for the interim level of education required would open doors for millions of workers.

Progress is possible. Even low-wage Latino workers are considerably better educated today than they were just a few decades ago; in 1979, about 62% of low-wage Latino workers had less than a high school degree, but that number was just 40% in 2011. Exceeding these gains will require shared responsibility by businesses and government. The publicly funded workforce development system is largely governed by the Workforce Investment Act (WIA), which is a federal policy. Yet Hispanics often face a combination of challenges including limited educational attainment, limited basic skills, and limited English proficiency. A one-size-fits-all approach combined with severe funding constraints has meant that those who need the system's benefits most to prepare for employment and careers are least likely to receive them.

Congress is currently considering reauthorizing WIA and making much-needed reforms to better meet the needs of today's American workforce, but some proposals look to consolidate programs to improve the system's effectiveness. In fact, for Latinos—as well as veterans, the disabled, and other groups with special needs—program consolidation puts them at risk of even lower access to services. A better answer is to improve coordination among these crucial programs.

Overall, policies to advance environmental quality, energy efficiency, and related green initiatives should be paired with investments that are well targeted toward Latino workers. Only through this comprehensive approach will the green future indeed be bright.

Profiles of Bright Green Metro Areas

Knoxville, Tennessee

The major metropolitan area with the fastest-growing clean economy in the country is Knoxville, Tennessee. On average, Knoxville experienced a 14.6% annual increase in the number of clean economy jobs between 2003 and 2010. In 2010, there were 16,135 green jobs in the Knoxville area. Knoxville also ranked second in terms of growth in its Latino working-age population between 2000 and 2010. Over the decade, Knoxville's Latino workforce grew by 12.7% to 9,953 people. The overlap of rapid growth in clean economy jobs and the Hispanic workforce makes Knoxville a bright green metro area with great potential for Latinos to contribute to the growth of the clean economy.

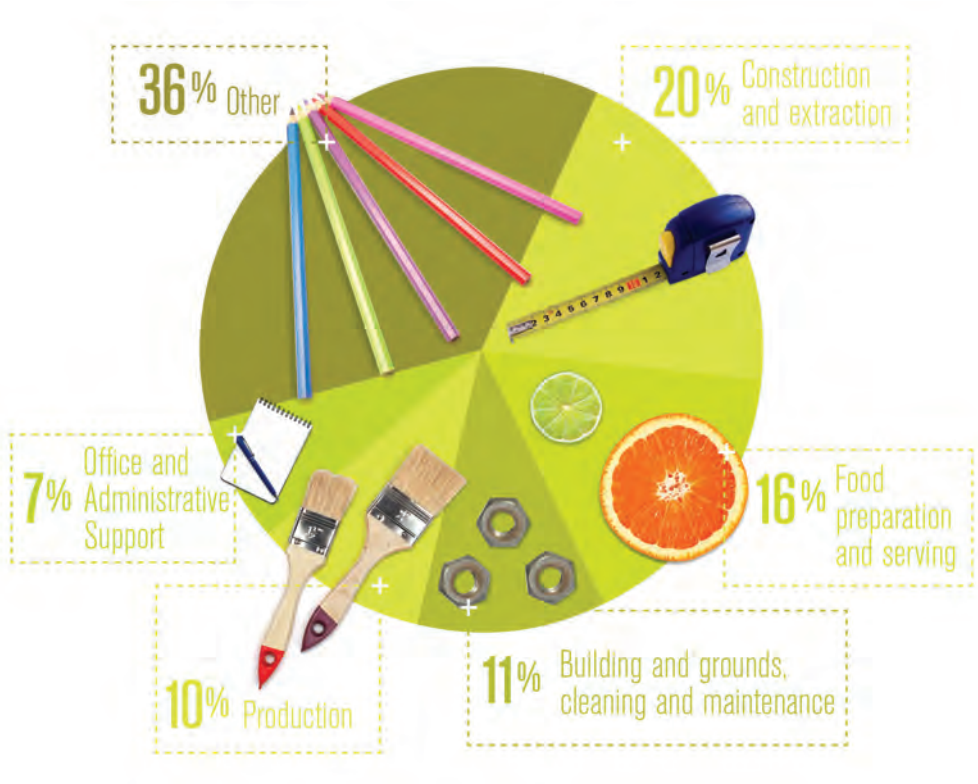
More details about the businesses that are helping Knoxville's clean economy grow can be found in the Knoxville profile created by the Brookings Institution at http://www.brookings.edu/about/programs/metro/clean-economy.

Knoxville's clean economy growth is fueled in large part by the professional energy services sector, which includes businesses that conduct research and provide services related to energy efficiency. In order to better understand how Latinos are participating in Knoxville's clean economy and opportunities for this workforce to contribute to future growth, it is useful to compare the occupational and educational profiles of Latino working-age adults to the types of jobs and educational requirements of Knoxville's clean economy.

Occupations

The majority of Latino workers in Knoxville are concentrated in five major occupation groups, as shown in Figure 2. Approximately one in five (20%) Latinos in Knoxville work in construction and extraction occupations. Based on their current occupational distribution, Latinos are not especially well positioned to participate in Knoxville's clean economy. The one exception is in office and administrative support occupations, which make up 14% of the jobs in Knoxville's clean economy. Approximately 7% of Latino workers in Knoxville work in office and administrative support occupations. This overlap presents an opportunity for Latinos to work for green companies using the skills and expertise they already possess.

Figure 2. Occupational Distribution of Hispanic Workers in Knoxville



Source: IWPR analysis of U.S. Census Bureau, American Community Survey, 2008–2010 three-year microdata.

Among the other top occupations in Knoxville's clean economy, which are listed in Table 2, Latinos are underrepresented in all but one: architecture and engineering jobs. Approximately 3% of Knoxville's workers employed in architecture and engineering are Hispanic, which is about equal to their share of the entire Knoxville workforce.

The mismatch between the jobs that Latinos hold and the jobs that are helping Knoxville's clean economy grow has consequences for Latino workers' wages. As seen in Tables 1 and 2, the median hourly wages for most of the top Latino occupations are generally lower than the wages paid to workers in the occupations most commonly found in Knoxville's clean economy.

Table 1. Top Hispanic Occupations in Knoxville

Occupations	Median Hourly Wage
Construction and Extraction	$16.56
Food Preparation and Serving	$8.83
Building and Grounds Cleaning and Maintenance	$9.30
Production	$14.38
Office and Administrative Support	$13.55

Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011. Wage data for the Knoxville metropolitan area are from the Bureau of Labor Statistics, Occupational Employment Statistics, Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, May 2011, http://www.bls.gov/oes/current/oes_28940.htm#11-0000 (accessed October 2012).

Table 1. Top Hispanic Occupations in Knoxville

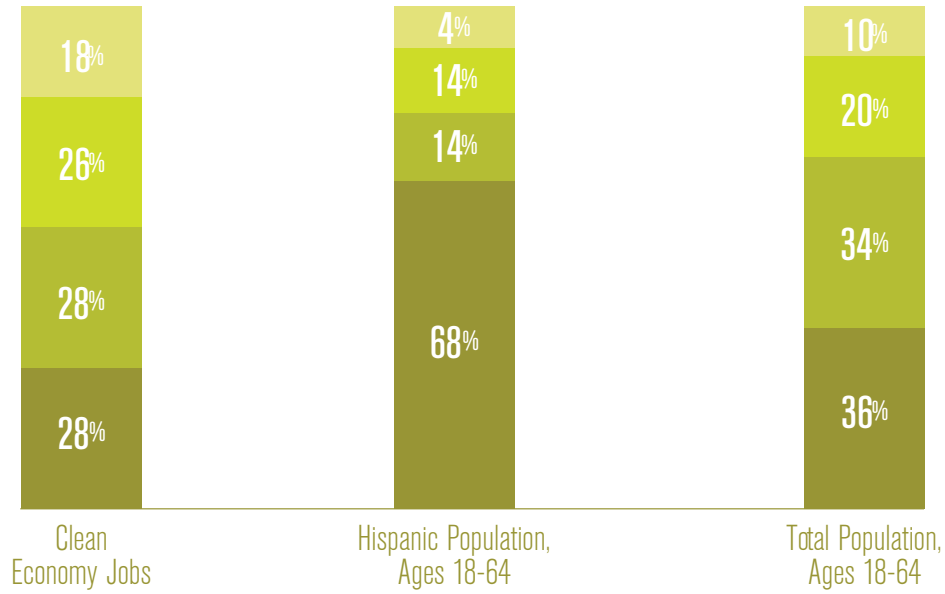
Occupations	Median Hourly Wage	Hispanic Representation
Life, Physical, and Social Science	$28.61	○
Office and Administrative Support	$13.55	○
Architecture and Engineering	$34.69	●
Management	$36.74	○
Business and Finance	$27.51	○

★ *Overrepresented compared to their share of all occupations*
● *Proportionately represented*
○ *Underrepresented*

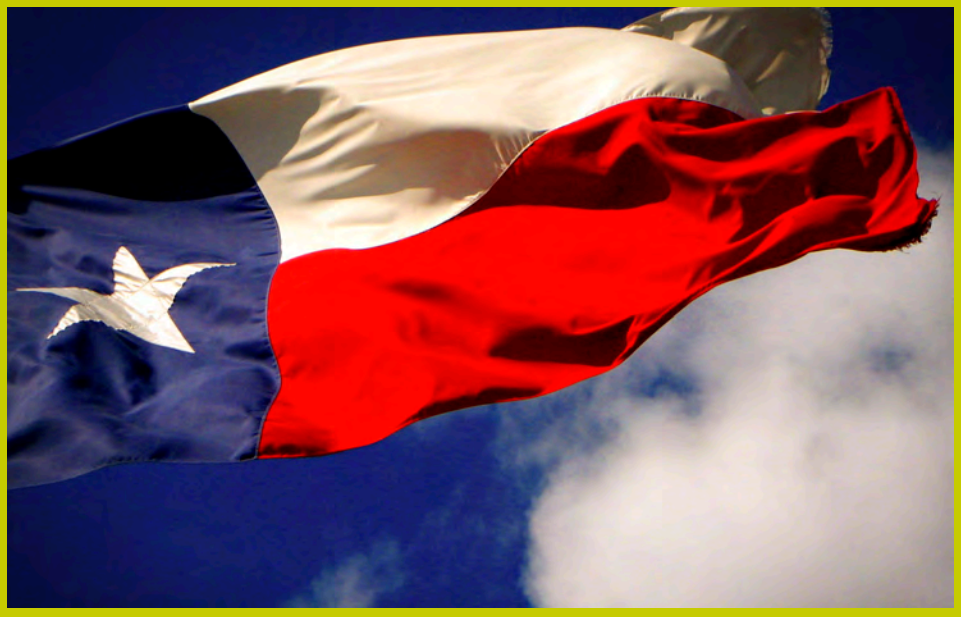
Education

Given the considerable difference in earning potential between the jobs that Latinos in Knoxville currently hold and the jobs that make up Knoxville's clean economy, it is important to consider how attainable a transition to green jobs would be for Knoxville's Hispanic workforce. Of the five bright green metropolitan areas, Knoxville has the greatest mismatch between the educational attainment of the Latino workforce and the educational demands of the clean economy jobs. In other words, the bulk of Knoxville's Hispanic workforce would need to achieve a higher level of formal education in order to be better positioned to contribute to the clean economy.

The vast majority of Latino workers in Knoxville (68%) has a high school education or less; this group would qualify for only 28% of Knoxville's clean jobs (see Figure 3). However, an equal share of Knoxville's green jobs (28%) is accessible to adults at the next level of formal education: those without a four-year degree but who have some college or an associate's degree. Workers with some college experience are qualified for a majority (56%) of the jobs in Knoxville's clean energy industry. Improving access to two-year colleges, including community colleges and technical degree programs, for Latinos in the Knoxville area would greatly expand their potential to contribute to Knoxville's clean economy.



McAllen, Texas



Numbering nearly 304,000, Latinos compose about 91% of the working-age population in the metropolitan area encompassing McAllen, Edinburg, and Mission, Texas. The concentration of Latino workers in McAllen is the greatest of any of the metropolitan areas with remarkable green economies; therefore, McAllen emerges as one of five bright green metropolitan areas in the country. McAllen's clean economy ranks seventh in terms of growth: 960 new green jobs were added in the McAllen area between 2003 and 2010. Overall, this amounts to an 8.5% average annual growth in clean jobs. The bulk of McAllen's green job growth occurred in public mass transit, which experienced employment growth of 60%, followed by regulation and compliance and nuclear energy, which both grew by about 13.2% annually.*

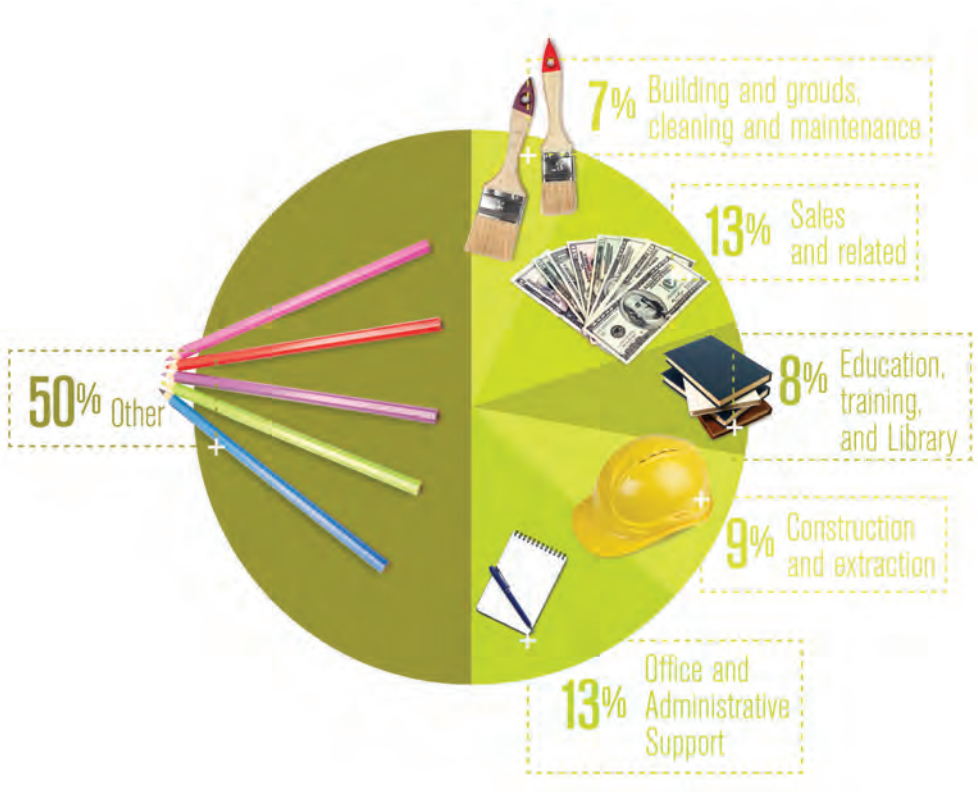
** More details about the businesses that are helping McAllen's clean economy grow can be found in the McAllen profile created by the Brookings Institution at http://www.brookings.edu/about/programs/metro/clean-economy.*

Occupations

Given their massive presence in McAllen's workforce, Latinos undoubtedly contribute to the metro area's clean economy. In fact, Latinos are proportionately represented or overrepresented in four of the five top green occupation groups in McAllen, as seen in Figure 4. The occupational profile of the clean economy aligns fairly well with that of the Hispanic workforce. Specifically, Latinos employed in construction and extraction occupations and in office and administrative support occupations are well positioned to contribute to McAllen's clean economy, since these are two of McAllen's top green occupational categories and top Latino occupations. A notable distinction between the workers in these occupation groups is that the majority of Latinos in McAllen's construction and extraction jobs are immigrants (61.1%), whereas Latinos in McAllen's office and administrative support occupations are more likely to be born in the U.S. (77.7%). Overall, the majority of McAllen's Hispanic workforce is U.S.-born (58.5%).

The Brookings-Battelle database considers nuclear energy part of the clean economy "because of the technology's carbon-reducing effects." For more information about the Brookings-Battelle methodology, see Jonathan Rothwell, et al., Methodological Appendix for Sizing the Clean Economy: A National and Regional Green Jobs Assessment (Washington, DC: Brookings Institution, 2011), 13.

Figure 2. Occupational Distribution of Hispanic Workers in Knoxville



Source: IWPR analysis of U.S. Census Bureau, American Community Survey, 2008–2010 three-year microdata.

Unlike the other bright green metro areas, there is not a significant wage disparity between the occupation groups that make up McAllen's clean economy versus the occupation groups that employ the most Hispanic workers. Of the top five Latino occupations, most pay between $9 and $13 per hour (see Table 3). Education, training, and library occupations pay the highest median hourly wage ($22.78). McAllen's most common green jobs pay in the same range, with the exception of management occupations, which have a median wage of $35.59 (see Table 4).

Table 3. Top Hispanic Occupations in McAllen

Occupations	Median Hourly Wage
Sales and Related	$9.11
Office and Administrative Support	$10.76
Construction and Extraction	$13.07
Education, Training, and Library	$22.78
Building and Grounds Cleaning and Maintenance	$9.34

Table 4. Top Occupations in McAllen's Clean Economy

Occupations	Median Hourly Wage	Hispanic Representation
Transportation and Material Moving	$9.31	★
Office and Administrative Support	$10.76	●
Construction and Extraction	$13.07	★
Production	$9.98	★
Management	$35.59	○

★ *Overrepresented compared to their share of all occupations*

● *Proportionately represented*

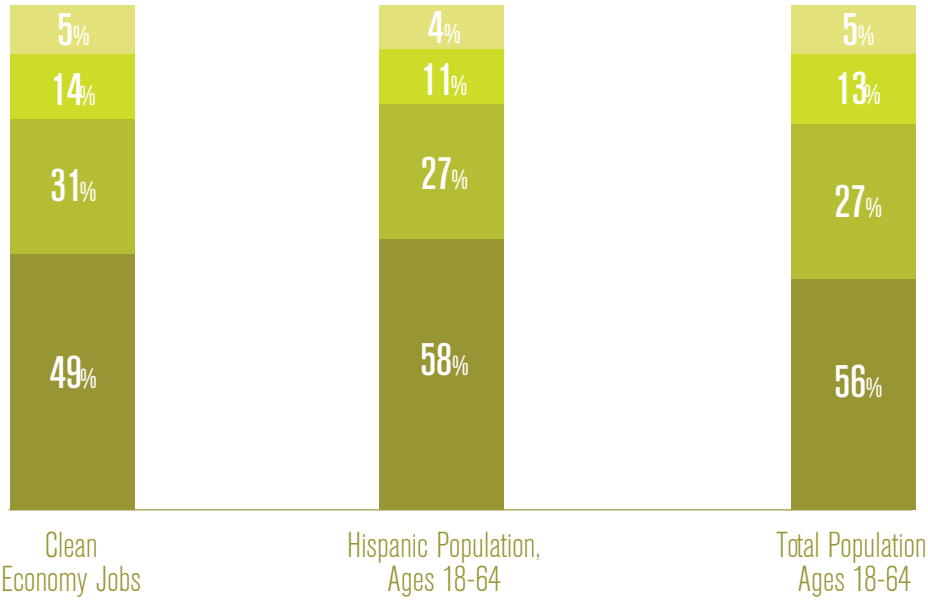
○ *Underrepresented*

Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011. Wage data for the McAllen metropolitan area are from the Bureau of Labor Statistics, Occupational Employment Statistics, Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, May 2011, http://www.bls.gov/oes/current/oes_32580.htm#11-0000 (accessed October 2012).

Education

In terms of educational qualifications, green jobs in the McAllen area are relatively accessible to Latinos, although there is room for improvement. Four out of five green jobs in McAllen do not require a bachelor's degree, as Figure 5 shows. In fact, 49% of McAllen's green jobs are open to workers with a high school education or less and an additional 31% will accept workers with an associate's degree or some college. Competition could be tough for Latinos, however, given that the majority of Latino workers (58%) would be qualified for only 49% of McAllen's green jobs.

Figure 5. Educational Profile of Green Jobs and Working-Age Populations in the McAllen-Edinburg-Mission Metropolitan Area



Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011.

Little Rock, Arkansas

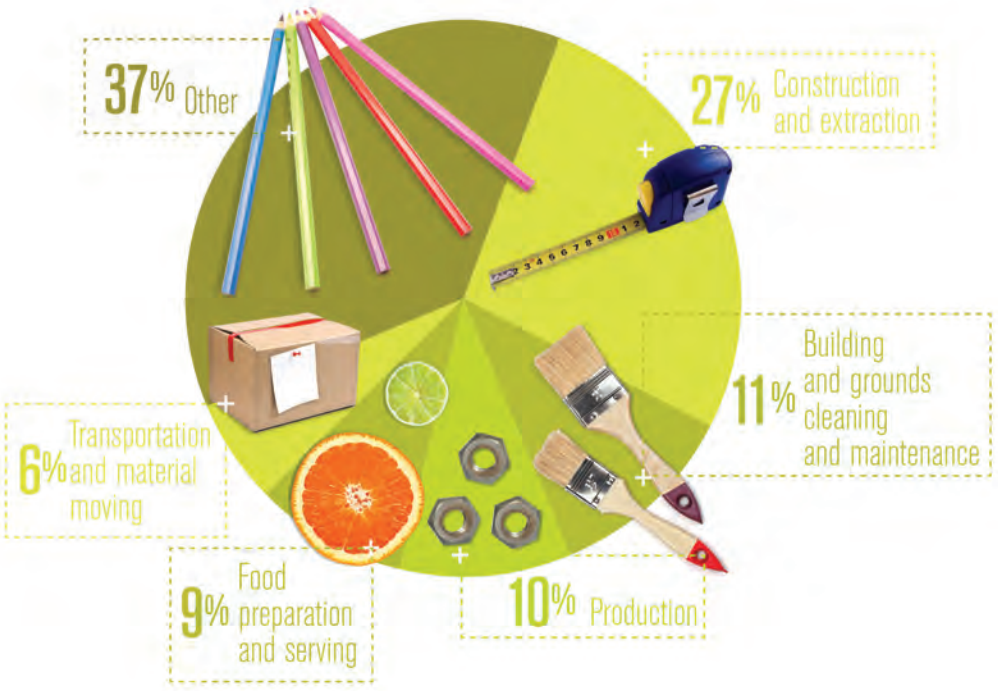
The metropolitan area of Little Rock, North Little Rock, and Conway, Arkansas is characterized by rapid growth in green jobs and in the working-age Hispanic population, making it one of the five bright green metropolitan areas in the U.S. Of the 100 metro areas with significant clean economies and Latino populations, Little Rock experienced the fourth-fastest growth in its clean economy—an average annual employment gain of 10.5% between 2003 and 2010—and in its adult Latino population, which grew by 9.9% from 2000 to 2010. Approximately 17,133 Latinos adults live in the greater Little Rock area. Little Rock has about 11,934 green jobs. Businesses that make green consumer products, such as environmentally certified cosmetics and furniture, constitute the largest and fastest-growing segment of Little Rock's clean economy.•

** More details about the businesses that are helping Little Rock's clean economy grow can be found in the Little Rock profile created by the Brookings Institution at http://www.brookings.edu/about/programs/metro/clean-economy.*

Occupations

Based on their occupational distribution, Latinos are fairly well positioned to contribute to Little Rock's green economy. Nearly one-third (27%) of the Hispanic workforce in Little Rock is employed in construction and extraction occupations, which represent only 3% of the occupations in Little Rock's clean economy. However, two other top Latino occupations are vital to the local clean economy: production, and transportation and material moving. Production jobs, which include everything from power plant operators to welders, make up 27% of the jobs in Little Rock's clean economy. Approximately 10% of Latinos are locally employed in production occupations. Another 6% of the Latino workforce is employed in transportation and material moving occupations, which compose 16% of Little Rock's clean economy. Included in this category are bus drivers, packaging workers, and recyclable material collectors. The share of foreign-born Latinos in Little Rock's production jobs (80.8%) is nearly twice that of transportation and material moving occupations (45.5%).

Figure 6. Occupational Distribution of Hispanic Workers in Little Rock



Source: IWPR analysis of U.S. Census Bureau, American Community Survey, 2008–2010 three-year microdata.

While there are notable areas of overlap between Little Rock's green jobs and the occupations Latinos currently hold, there is considerable progress to be made to ensure better Latino representation in Little Rock's clean economy. Overall, Latinos make up about 5% of the working-age population in Little Rock. As shown in Table 6, Latinos are overrepresented in the top two clean occupations but underrepresented in the next three groups. For example, Latinos make up double their share (8%) of the workforce in production occupations but only 2% of the workers in office and administrative support occupations. Office and administrative support jobs represent almost as large a share of Little Rock's clean economy (15%) as transportation and material moving (16%). More opportunities in green jobs would be available to Latinos if there was parity in employment in office and administrative support jobs in Little Rock.

Table 5. Top Hispanic Occupations in Little Rock

Occupations	Median Hourly Wage
Construction and Extraction	$16.32
Building and Grounds Cleaning and Maintenance	$9.37
Production	$13.63
Food Preparation and Serving	$8.72
Transportation and Material Moving	$13.45

Table 6. Top Occupations in Little Rock's Clean Economy

Occupations	Median Hourly Wage	Hispanic Representation
Production	$13.63	★
Transportation and Material Moving	$13.45	★
Office and Administrative Support	$13.59	○
Management	$35.64	○
Sales and Related	$11.44	○

★ *Overrepresented compared to their share of all occupations*

● *Proportionately represented*

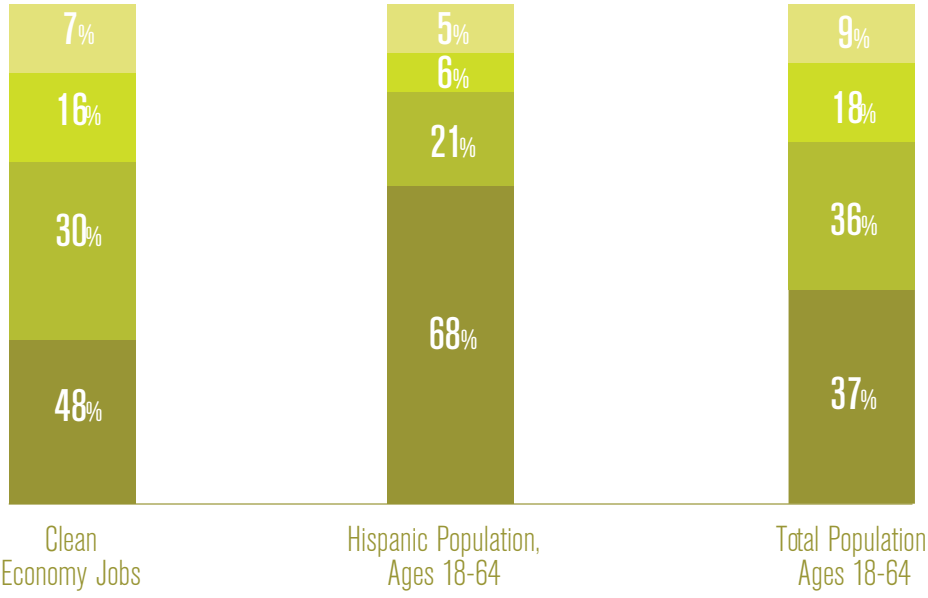
○ *Underrepresented*

Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011. Wage data for the Little Rock metropolitan area are from the Bureau of Labor Statistics, Occupational Employment Statistics, Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, May 2011, http://www.bls.gov/oes/current/oes_30780.htm#41-0000 (accessed October 2012).

Education

As with all of the bright green metro areas, education is an important proxy for determining the degree to which Latinos are currently participating in—or have the potential to contribute to—the local clean economy. Similar to McAllen, Texas, about half of the jobs in Little Rock's clean economy will accept workers with a high school degree or less (see Figure 7). However, competition for green jobs is likely greater for Latinos in Little Rock than for Latinos in McAllen. The majority (63%) of the total Little Rock workforce could outcompete Latinos for green jobs because they have completed more education than most Latino adults, who only possess a high school degree at most.

Figure 7. Educational Profile of Green Jobs and Working-Age Populations in the Little Rock-North Little Rock-Conway Metropolitan Area



Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011.

Albuquerque, New Mexico

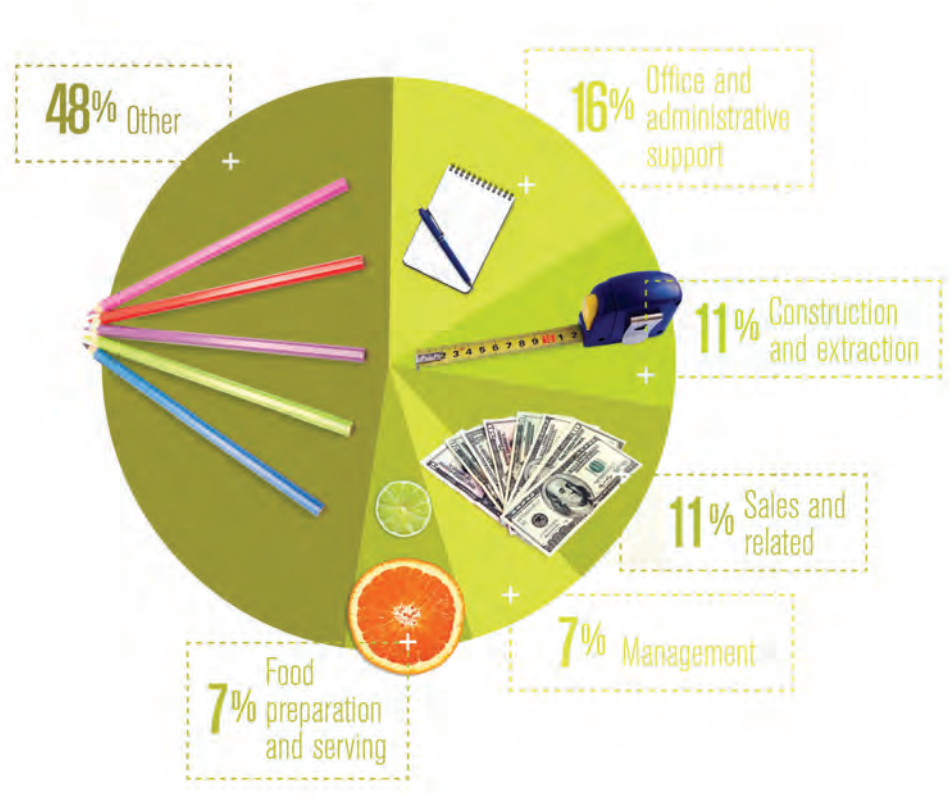
Albuquerque is a bright green metropolitan area because it has the seventh-largest share of working-age Latinos and the ninth-fastest annual growth in clean economy jobs. Approximately 43.7% of Albuquerque's adult population is Hispanic. The area experienced a growth rate in green jobs of approximately 7.8% between 2003 and 2010, mainly in solar thermal (23.3% growth) and products made with recycled paper or metal (23% growth). The largest segments of Albuquerque's clean economy are conservation and waste management and treatment.*

** More details about the businesses that are helping Albuquerque's clean economy grow can be found in the Albuquerque profile created by the Brookings Institution at http://www.brookings.edu/about/programs/metro/clean-economy.*

Occupations

Like Knoxville, office and administrative support jobs make up the single major occupation category where Albuquerque's Latino workforce and its green economy overlap. About 15% of Albuquerque's green jobs are in this category, and these jobs employ about 16% of the area's Hispanic workforce. Latinos are overrepresented in other top green jobs categories in Albuquerque, including transportation and material moving occupations (53% Latino) and production occupations (50% Latino). Compared to their overall share of Albuquerque's workforce, Latinos are proportionately employed in protective service occupations, which make up 8% of Albuquerque's green jobs. Based on the occupations they currently hold, many Latinos are likely contributing to Albuquerque's clean economy or are in a position to serve a similar function at a green employer.

Figure 8. Occupational Distribution of Hispanic Workers in Albuquerque



Source: IWPR analysis of U.S. Census Bureau, American Community Survey, 2008–2010 three-year microdata.

Still, more Latinos stand to benefit from higher wages by shifting into the occupations that most contribute to Albuquerque's clean economy. As shown in Table 8, none of the major occupations in Albuquerque's clean economy pay a median wage less than $13 per hour. In contrast, two top Hispanic occupation groups, food preparation and serving and sales and related occupations, pay less than this wage at $8.99 per hour and $11.59 per hour respectively (see Table 7).

Table 7. Top Hispanic Occupations in Albuquerque

Occupations	Median Hourly Wage
Office and Administrative Support	$14.29
Construction and Extraction	$17.05
Sales and Related	$11.59
Management	$38.97
Food Preparation and Serving	$8.99

Table 8. Top Occupations in Albuquerque's Clean Economy

Occupations	Median Hourly Wage	Hispanic Representation
Transportation and Material Moving	$13.07	★
Office and Administrative Support	$14.29	★
Business and Finance	$27.61	○
Production	$15.33	★
Protective Service	$15.64	●

★ *Overrepresented compared to their share of all occupations*

● *Proportionately represented*

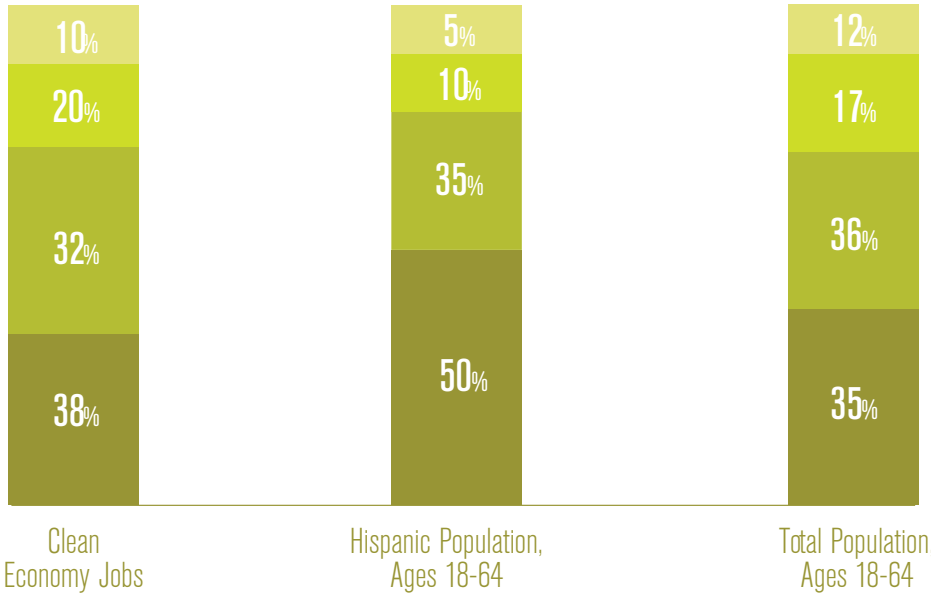
○ *Underrepresented*

Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011. Wage data for the Albuquerque metropolitan area are from the Bureau of Labor Statistics, Occupational Employment Statistics, Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, May 2011, http://www.bls.gov/oes/current/oes_10740.htm#33-0000 (accessed October 2012).

Education

Education is one of the strongest predictors of Latino workers' ability to transition into occupations that support Albuquerque's green economy. Albuquerque's adult Hispanic population faces major educational barriers to qualifying for the area's green jobs. Of the five bright green metro areas, Albuquerque ranks second only to Knoxville in the proportion of jobs in its clean economy that require a bachelor's degree or more. One-third of Albuquerque's clean economy jobs require at least a bachelor's degree; meanwhile, only 15% of Albuquerque's Hispanic adults have a bachelor's degree. The majority of Albuquerque's green jobs (70%) are accessible to workers without a bachelor's degree, which describes 85% of Albuquerque's Hispanic working-age population. However, half of Albuquerque's Hispanic workforce lacks any college experience at all, which puts them at a significant disadvantage when competing for the relatively small share of Albuquerque's green jobs (38%) that are open to workers with only a high school degree or less.

Figure 9. Educational Profile of Green Jobs and Working-Age Populations in the Albuquerque Metropolitan Area



Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011.

Los Angeles, California

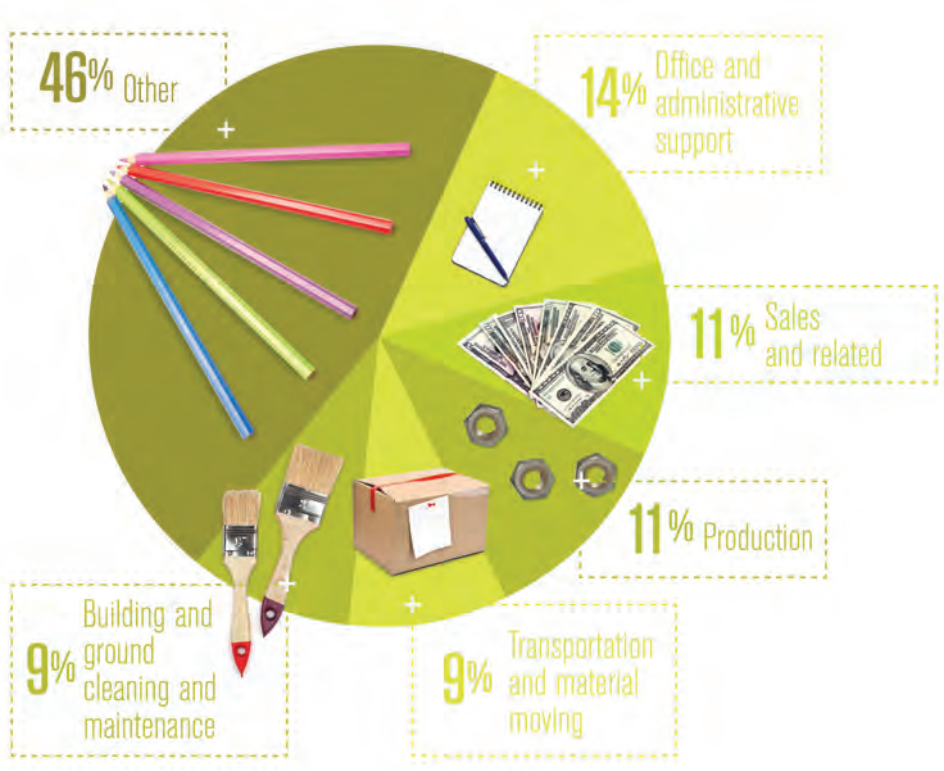
Of the 100 top metropolitan areas with significant clean economies and Latino working-age populations, the Los Angeles-Long Beach-Santa Ana metropolitan area has the second-largest clean economy and the ninth-largest share of Latinos in its working-age population (41.6%), making it a bright green metro area. Overall, the Los Angeles area has the largest population of working-age Latino adults: 2.87 million Latinos between the ages of 18 and 64. There are 89,592 green jobs in the Los Angeles metropolitan area. The clean economy of Los Angeles depends mainly on waste management and treatment, public mass transit, and organic food and farming. While smaller in terms of employment, wind, solar thermal, and fuel cells are the three fastest-growing segments in the metropolitan area.*

** More details about the businesses that are helping Albuquerque's clean economy grow can be found in the Albuquerque profile created by the Brookings Institution at http://www.brookings.edu/about/programs/metro/clean-economy.*

Occupations

Given their immense share in Los Angeles's workforce, Latinos undoubtedly make up a significant portion of employees in the area's clean economy. Additional evidence to support this notion is found in the significant overlap in the occupational distribution of Latino workers and the local clean economy. Three of the top five occupations in Los Angeles's clean economy rank among the top five Latino occupations (compare Table 9 and Table 10). Latinos are fairly well positioned to contribute to green jobs in office and administrative support occupations, which employ 14% of the Los Angeles metro area Hispanic workforce and 15% of the people employed in the local clean economy. The same goes for production occupations, which employ 11% of the Hispanic workforce and make up 17% of employment in the green economy. The top occupational category in Los Angeles's clean economy is transportation and material moving, which employs 22% of the area's workers in the clean economy. About 9% of the Latino workforce is employed this occupational group.

Figure 10. Occupational Distribution of Hispanic Workers in Los Angeles



Source: IWPR analysis of U.S. Census Bureau, American Community Survey, 2008–2010 three-year microdata.

As with several other bright green metro areas, there are some occupations in Los Angeles's clean economy that tend to pay higher wages than the top Hispanic occupations. This is true of two occupation groups in Los Angeles: construction and extraction occupations, which pay a median hourly wage of $23.31, and installation, maintenance, and repair occupations, which pay a median hourly wage of $21.45. While Latinos are overrepresented in these occupations compared to their share of the labor force overall—they make up 68% of construction workers and 53% of installation workers—these occupation groups combined only employ 11% of the local Hispanic workforce. Continued growth in Los Angeles's clean economy could boost Latino employment in these occupation categories, with positive effects on workers' wages.

Table 9. Top Hispanic Occupations in Los Angeles

Occupations	Median Hourly Wage
Office and Administrative Support	$16.72
Sales and Related	$13.54
Production	$12.89
Transportation and Material Moving	$13.01
Building and Grounds Cleaning and Maintenance	$11.00

Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011. Wage data for the Albuquerque, NM metropolitan area are from the Bureau of Labor Statistics, Occupational Employment Statistics, Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates, May 2011, http://www.bls.gov/oes/current/oes_31100.htm#37-0000 (accessed October 2012).

Table 10. Top Occupations in Los Angeles's Clean Economy

Occupations	Median Hourly Wage	Hispanic Representation
Transportation and Material Moving	$13.01	★
Production	$12.89	★
Office and Administrative Support	$16.72	○
Construction and Extraction	$23.31	★
Installation, Maintenance, and Repair	$21.45	★

★ *Overrepresented compared to their share of all occupations*

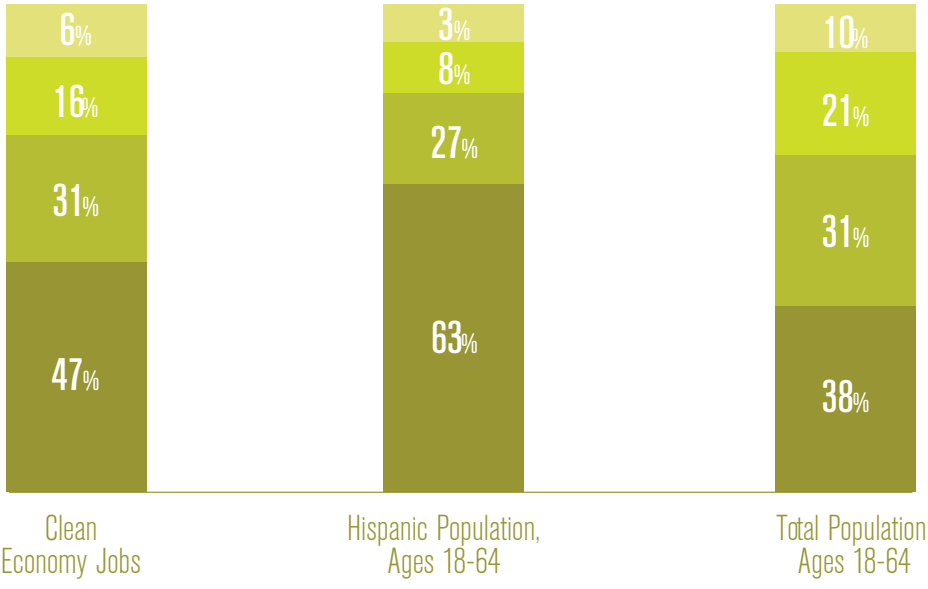
● *Proportionately represented*

○ *Underrepresented*

Education

The educational profile of the Latino workforce and the educational requirements of green jobs in the Los Angeles metropolitan area closely resemble those of Little Rock. In both places, a relatively smaller share of Latinos is educationally prepared to compete for jobs that require a bachelor's degree or higher. In the Los Angeles area, 11% of Hispanic working-age adults have a bachelor's degree or more, compared to 31% of the overall working-age population (see Figure 11). Approximately 23% of the green jobs in the Los Angeles area require a bachelor's degree or more. Fortunately for many Latinos, just over one-third of Los Angeles's green jobs are open to workers with some college experience or an associate's degree. Approximately 27% of Latino adults in the Los Angeles area would qualify for these jobs, not to mention the 11% whose education exceeds this level. Still, like Knoxville and Little Rock, the greatest challenge is at the low end of the education scale, where more than two-thirds of Latino adults have only a high school degree or less. Better opportunities for Latinos to complete education at the two-year associate's degree level would go far in improving their employment outlook in Los Angeles's clean economy.

Figure 11. Educational Profile of Green Jobs and Working-Age Populations in the Los Angeles-Long Beach-Santa Ana Metropolitan Area



Source: IWPR analysis of the 2008–2010 American Community Survey and the Brookings-Battelle Clean Economy Database, July 2011.

Appendix

A. Selection Criteria for 100 Metropolitan Areas

IWPR used the following metropolitan areas to compare the size and growth of the Hispanic population in 2000 and 2008–2010 for the 100 largest metro areas in the Brookings Institution report, Sizing the Clean Economy. In some cases multiple areas were combined in an effort to maximize the consistency over time.

2000 Decennial Census	2008–2010 American Community Survey	Large Hispanic Population, Ages 18–64	Growing Hispanic Population, Ages 18–64
Albany-Schenectady-Troy, NY	Albany-Schenectady-Troy, NY		X
Atlanta, GA	Atlanta-Sandy Springs-Marietta, GA	X	X
Austin, TX	Austin-Round Rock-San Marcos, TX	X	
Birmingham, AL	Birmingham-Hoover, AL		X
Boise City, ID	Boise City-Nampa, ID		X
Boston, MA Lawrence-Haverhill, MA-NH Lowell, MA-NH Salem-Gloucester, MA	Boston-Cambridge-Quincy, MA-NH	X	
Charleston-N. Charleston, SC	Charleston-North Charleston-Summerville, SC		X
Charlotte-Gastonia-Rock Hill, SC Rock Hill, SC	Charlotte-Gastonia-Rock Hill, NC-SC		X
Chicago-Gary-Lake, IL Aurora-Elgin, IL Gary-Hammond-East Chicago, IN Joliet, IL Lake County, IL	Chicago-Joliet-Naperville, IL-IN-WI	X	
Columbus, OH	Columbus, OH		X
Dallas-Fort Worth, TX	Dallas-Fort Worth-Arlington, TX	X	
Denver-Boulder-Longmont, CO	Denver-Aurora-Broomfield, CO	X	
Des Moines, IA	Des Moines-West Des Moines, IA		X
El Paso, TX	El Paso, TX	X	
Fort Myers-Cape Coral, FL	Cape Coral-Fort Myers, FL		X
Fresno, CA	Fresno, CA	X	
Greenville-Spartanburg-Anderson, SC Anderson, SC	Greenville-Mauldin-Easley, SC Anderson, SC Spartanburg, SC		X

2000 Decennial Census	2008–2010 American Community Survey	Large Hispanic Population, Ages 18–64	Growing Hispanic Population, Ages 18–64
Harrisburg-Lebanon-Carlisle, PA	Harrisburg-Carlisle, PA Lebanon, PA		X
Houston-Brazoria, TX Brazoria, TX	Houston-Sugar Land-Baytown, TX	X	
Knoxville, TN	Knoxville, TN		X
Las Vegas, NV	Las Vegas-Paradise, NV	X	
Little Rock-North Little Rock, AR	Little Rock-North Little Rock-Conway, AR		X
Los Angeles-Long Beach, CA Anaheim-Santa Ana-Garden Grove, CA Orange County, CA	Los Angeles-Long Beach-Santa Ana, CA	X	
Madison, WI	Madison, WI		X
McAllen-Edinburg-Pharr-Mission, TX	McAllen-Edinburg-Mission, TX	X	
Miami-Hialeah, FL Fort Lauderdale-Hollywood-Pompano Beach, FL	Miami-Fort Lauderdale-Pompano Beach, FL	X	
Nashville, TN	Nashville-Davidson- Murfreesboro-Franklin, TN		X
New York-Northeastern New Jersey, NY-NJ Nassau County, NY Bergen-Passaic, NJ Jersey City, NJ Middlesex-Somerset-Hunterdon, NJ Newark, NJ Monmouth-Ocean, NJ Long Branch-Asbury Park, NJ	New York-Northern New Jersey-Long Island, NY-NJ-PA	X	
Oklahoma City, OK	Oklahoma City, OK		X
Omaha, NE-IA	Omaha-Council Bluffs, NE-IA		X
Orlando, FL	Orlando-Kissimmee-Sanford, FL	X	X
Philadelphia, PA-NJ Wilmington, DE-NJ-MD	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	X	
Phoenix, AZ	Phoenix-Mesa-Glendale, AZ	X	
Poughkeepsie, NY Newburgh-Middletown, NY	Poughkeepsie-Newburgh- Middletown, NY		X
Raleigh-Durham, NC Durham, NC	Raleigh-Cary, NC Durham-Chapel Hill, NC		X

2000 Decennial Census	2008–2010 American Community Survey	Large Hispanic Population, Ages 18–64	Growing Hispanic Population, Ages 18–64
Richmond-Petersburg, VA Petersburg-Colonial Heights, VA	Richmond, VA		X
Riverside-San Bernardino, CA San Bernardino, CA	Riverside-San Bernardino-Ontario, CA	X	
Sacramento, CA	Sacramento-Arden-Arcade-Roseville, CA	X	
San Antonio, TX	San Antonio-New Braunfels, TX	X	
San Diego, CA	San Diego-Carlsbad-San Marcos, CA	X	
San Francisco-Oakland-Vallejo, CA Oakland, CA Vallejo-Fairfield-Napa, CA	San Francisco-Oakland-Fremont, CA Vallejo-Fairfield, CA Napa, CA	X	
San Jose, CA	San Jose-Sunnyvale-Santa Clara, CA	X	
Seattle-Everett, WA Tacoma, WA	Seattle-Tacoma-Bellevue, WA		X
Tampa-St. Petersburg-Clearwater, FL	Tampa-St. Petersburg-Clearwater, FL	X	X
Tulsa, OK	Tulsa, OK		X
Washington, DC-MD-VA	Washington-Arlington-Alexandria, DC-VA-MD-WV	X	
Wichita, KS	Wichita, KS		X

B. Selection Criteria for Bright Green Metropolitan Areas

NCLR designated five bright green metro areas based on their rank in the top 100 metro areas selected by IWPR.

Metropolitan Area	Rank Out of Top 100 Metropolitan Areas					
	Number of Hispanic Adults Ages 18–64•	Percent Hispanic, Adults Ages 16–64 †	Growth in Hispanic Adults Ages 16–64, 2000–2010‡	Number of Green Jobs, 2010	Share of Green Jobs in Overall Economy, 2010	Annual Average Change in Private Sector Employment in Green Jobs, 2003–2010 §
Knoxville, TN			2		2	1
McAllen-Edinburg-Mission, TX		1				6
Little Rock-North Little Rock-Conway, AR			4		8	4
Albuquerque, NM		7				9
Los Angeles-Long Beach-Santa Ana, CA	1	9		2		

** IWPR analysis of U.S. Census Bureau, American Community Survey, 2008–2010 three-year microdata.*

† *Ibid.*

‡ *IWPR analysis of U.S. Census Bureau, Decennial Census, 2000 and 2010.*

§ *All green jobs figures from Brookings-Battelle Clean Economy Database, July 2011, http://www.brookings.edu/~/media/Files/Programs/Metro/clean_economy/0713_clean_economy_database.zip (accessed July 2012).*

C. Clean Economy Profiles of Traditional Hispanic Metropolitan Areas

This table shows the clean economy characteristics of the metropolitan areas with the largest Latino adult populations in the U.S.

Metropolitan Area	Number of Hispanic Adults Ages 18–64•	Percent Hispanic, Adults Ages 16–64 †	Foreign-Born Share of Hispanic Population, Ages 18–64	Number of Green Jobs, 2010	Share of Green Jobs in Overall Economy, 2010 ‡
Los Angeles-Long Beach-Santa Ana, CA	2,871,086	41.6%	60.6%	89,592	1.7%
New York-Northern New Jersey-Long Island, NY-NJ-PA	2,224,627	22.0%	60.1%	152,034	1.8%
Miami-Fort Lauderdale-Pompano Beach, FL	1,223,313	42.4%	72.9%	24,194	1.1%
Houston-Sugar Land-Baytown, TX	1,022,453	32.6%	58.5%	39,986	1.6%
Chicago-Joliet-Naperville, IL-IN-WI	959,573	19.2%	58.9%	79,388	1.8%
Riverside-San Bernardino-Ontario, CA	929,006	44.4%	49.9%	22,532	1.9%
Dallas-Fort Worth-Arlington, TX	842,620	26.0%	61.4%	38,562	1.3%
San Francisco-Oakland-Fremont, CA	572,828	20.7%	58.4%	51,811	2.7%
San Antonio-New Braunfels, TX	536,841	52.8%	23.0%	10,634	1.2%
Phoenix-Mesa-Glendale, AZ	515,862	25.8%	48.3%	22,904	1.3%

** IWPR analysis of U.S. Census Bureau, American Community Survey, 2008–2010 three-year microdata.*

† *Ibid.*

‡ *IWPR analysis of U.S. Census Bureau, Decennial Census, 2000 and 2010.*

§ *All green jobs figures from Brookings-Battelle Clean Economy Database, July 2011, http://www.brookings.edu/~/media/Files/Programs/Metro/clean_economy/0713_clean_economy_database.zip (accessed July 2012).*

Endnotes

[1] *U.S Department of Labor. The Hispanic Labor Force in the Recovery. Washington, DC, 2012, www.dol.gov/_sec/media/reports/HispanicLaborForce/HispanicLaborForce.pdf (accessed November 2012); and U.S. Census, "Population Projections," 2008 National Population Projections: Summary Tables, Table 4, http://www.census.gov/population/projections (accessed November 2012).*

[2] *Ethan Pollack, Counting Up to Green: Assessing the Green Economy and Its Implications for Growth and Equity (Washington, DC: Economic Policy Institute, 2012), http://www.epi.org/publication/bp349-assessing-the-green-economy/ (accessed October 2012).*

[3] *Myers Research and Project New America, 2012 National Latinos and the Environment Survey, http://www.sierraclub.org/ecocentro/survey/ (accessed August 2012).*

[4] *League of Conservation Voters and NCLR, "Latinos and Clean Energy in Colorado" (telephonic town hall, June 5, 2012, Colorado); NCLR, "Hon. Federico Peña Emphasizes Voting and Civic Participation in Remarks to Denver's Hispanic Community," news release, June 27, 2012; and National Council of La Raza, "Las Vegas Town Hall Seeks Opportunities for the Latino Workforce in Clean Energy," news release, October 13, 2011.*

[5] *Economic Policy Institute, "Not enough jobs for too many people: the job-seekers ratio, December 2000–October 2012," http://stateofworkingamerica.org/charts/job-seekers-ratio-total/ (accessed December 2012).*

[6] *U.S. Bureau of Labor Statistics, "Measuring Green Jobs," http://www.bls.gov/green/ (accessed October 2012); and Erich C. Dierdorff et al., Greening the World of Work: Implications for O*NET-SOC and New and Emerging Occupations (Raleigh, NC: National Center for O*NET Development, 2009), http://www.onetcenter.org/green.html (accessed July 2012).*

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[9] *NCLR analysis of U.S. Bureau of Labor Statistics, Current Population Survey, Annual Social and Economic Supplement, 2012. Janelle Jones and John Schmitt, "Low-Wage Latino Workers," Center for Economic and Policy Research, http://www.cepr.net/index.php/blogs/cepr-blog/low-wage-latino-workers (accessed April 2012).*

[10] *Elizabeth Moore and Emma Oppenheim, Learning in Context: Preparing Latino Workers for Careers and Continuing Education (Washington, DC: NCLR, 2010), http://www.nclr.org/index.php/publications/learning_in_context_preparing_latino_workers_for_careers_and_continuing_education/ (accessed July 2012).*

[11] *Neil Ridley, Workforce Investment Act: Strengthening Priority of Service for Low-Income Adults through WIA Reauthorization (Washington, DC: Center for Law and Social Policy, 2010) http://www.clasp.org/admin/site/publications/files/WIAServices.pdf (accessed October 2012).*

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